



Foreign Affairs and  
International Trade Canada

Affaires étrangères et  
Commerce international Canada

# **CANADA-KOREA FREE TRADE AGREEMENT**

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## **INITIAL ENVIRONMENTAL ASSESSMENT REPORT**

*SEPTEMBER 2007*

**Canada**

**INITIAL STRATEGIC ENVIRONMENTAL ASSESSMENT  
REPORT OF THE CANADA-KOREA FREE TRADE NEGOTIATIONS**

**TABLE OF CONTENTS**

**EXECUTIVE SUMMARY ..... 3**

**OVERALL ENVIRONMENTAL ASSESSMENT PROCESS ..... 6**

**BACKGROUND ..... 9**

**TRADE AND THE ENVIRONMENT ..... 10**

**ECONOMIC MODELLING KEY FINDINGS ..... 12**

**INITIAL ENVIRONMENTAL ASSESSMENT FINDINGS ..... 14**

**A. TRADE IN GOODS ..... 19**

**B. TRADE IN SERVICES ..... 28**

**C. INVESTMENT ..... 33**

**CONCLUSION ..... 37**

**APPENDIX 1: TOP 25 CANADIAN EXPORTS TO KOREA (000S) ..... 38**

**APPENDIX 2: TOP 25 CANADIAN IMPORTS FROM KOREA (000S) ..... 39**

**APPENDIX 3: ENVIRONMENTAL LEGISLATION AND REGULATIONS ..... 40**

**APPENDIX 4: GLOSSARY ..... 49**

**APPENDIX 5: ACRONYMS ..... 52**

## EXECUTIVE SUMMARY

The Canada-Korea Free Trade Agreement (CKFTA) negotiations were launched on July 15, 2005. A free trade agreement (FTA) between Canada and Korea has the potential to enhance not only Canada's important bilateral economic relationship with Korea, but also to strengthen Canada's presence in the dynamic Northeast Asia region. Canada's interest in Korea lies in three main areas: tapping into the value chains of globally competitive production and supply from Korean corporations; selling raw materials and key competitive technologies and products; and employing Korea as a strategic base from which to establish an export and manufacturing presence in Northeast Asia. An FTA with Korea is expected to generate economic benefits across the Canadian economy. Its impact in relation to the aggregated Canadian economy will be modest, and therefore we expect a correspondingly modest impact on the environment.

In keeping with the 2001 *Framework for Conducting Environmental Assessments of Trade Negotiations* (EA Framework), we are conducting an environmental assessment (EA) of the CKFTA, which is in its initial phase, to assist Canada's policy makers in addressing potential environmental issues arising from the FTA that may affect Canada. Improved understanding of the relationship between trade, foreign direct investment (FDI), economic growth and the environment can assist in the formulation of government policy to reduce potential conflicts between commercial and environmental objectives.

There is a strong correlation between open markets, economic development and enhanced environmental protection. Liberalized rules-based trade and efficiently regulated markets are key building blocks for economic growth and development. In turn, public support for measures to protect the environment generally increases as incomes rise, and wealthier countries are better able to implement effective environmental policies than are poorer countries. Open markets also help to foster the development of new, more environmentally friendly technologies, and liberalized trade and investment help to create the conditions for technology transfer.

The Government of Canada is committed to conducting environmental assessments (EAs) for all trade and investment negotiations using a process that requires interdepartmental coordination and public consultations. This process<sup>1</sup> was developed in response to the 1999 *Cabinet Directive on Environmental Assessment of Policy, Plan and Program Proposals*,<sup>2</sup> which requires all initiatives considered by ministers or Cabinet to be environmentally assessed if their implementation is expected to result in important environmental effects, whether positive or negative. Detailed guidance for applying the Framework is contained in the *Handbook for the Environmental Assessment of Trade*.<sup>3</sup>

This EA was conducted as part of Canada's commitment to achieving a mutually supportive relationship between trade and the environment and its intent is to help Canadian negotiators inte-

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<sup>1</sup> This process is explained in detail in the 2001 *Framework for the Environmental Assessment of Trade Negotiations*. For more information, see <http://www.international.gc.ca/tna-nac/documents/FinalFramework-e.pdf>.

<sup>2</sup> For more information on the 2004 *Cabinet Directive on Environmental Assessment of Policy, Plan and Program Proposals* see [http://www.ceaa-acee.gc.ca/016/index\\_e.htm](http://www.ceaa-acee.gc.ca/016/index_e.htm).

<sup>3</sup> For more information on the *Handbook for Conducting Environmental Assessments of Trade Negotiations* see <http://www.dfait-maeci.gc.ca/tna-nac/documents/handbook-e.pdf>.

grate environmental considerations into the negotiating process by providing information on the environmental impacts of the proposed trade agreement and to address public concerns by documenting how environmental factors are being considered in the course of trade negotiations. Canada's broad environmental objectives in negotiating trade agreements are to preserve Canada's ability to protect the environment, to ensure mutually supportive relationships between trade agreements and multilateral environmental agreements, to stimulate improved allocative efficiency of resources to generate positive environmental impacts, to strengthen the environmental management capacities of Canada's trading partners, and to use this strengthened capacity to combat transboundary pollutants and invasive species that directly affect Canada's environment, economy and health. In order to ensure that Canada's environmental quality is strengthened through liberalized trade, Canada includes trade-related environmental provisions in appropriate sections of the FTA (i.e. preamble, objectives, investment, general exceptions), and negotiates parallel agreements on environmental cooperation.

This EA documents the findings of the Initial EA phase of the CKFTA negotiations, focusing on the potential incremental environmental impacts, if any, of trade-induced economic and regulatory changes in Canada. It applies the analytical methodology outlined in the *EA Framework* that outlines the process for conducting EAs, and acts as a screening process to identify the main environmental issues expected to arise as a result of this free trade initiative. As such, it must be underscored that this is a *strategic* assessment and is intended to inform policy making as the proposed FTA is being negotiated. The Initial EA is, therefore, more of a "forecasting" or "anticipatory" exercise. The findings of this Initial EA will be shared with the interdepartmental EA Committee, which includes representation by the federal departments in the sectors in which increases in production are anticipated. This approach facilitates informed policy development and decision-making throughout the federal government.

The analysis performed for this Initial EA suggests that the elimination of Korean tariffs on industrial goods will have a modest effect on goods trade, given that Korea's tariff rates for most of Canada's non-agricultural exports are between 1% and 8% (although certain tariffs are much higher). While an FTA with Korea has the potential to increase production by key Canadian industries, its impact relative to overall manufacturing output in Canada is expected to be small, as would be the case with any new FTA with a single country.

With respect to agricultural goods, the CKFTA would facilitate an increase in Canadian exports, thereby increasing crop and livestock production in areas where production is currently concentrated (i.e. the Prairies). Nevertheless, the analysis suggests that overall, should an increase in Canadian domestic production be required in order to supply the Korean market, it would likely have a minimal impact on the environment.

Investment from Korea represents only a very small proportion of total foreign investment in Canada. In view of the current trend, even a significant economic change in investment from Korea would be small in scale compared to the overall level of investment in Canada, and any related environmental impact is expected to be minimal. Furthermore, the CKFTA negotiations will not substantially change Canada's already open investment regime. Taking this into consideration, along with other factors influencing investment decisions, it is unlikely that there will be

a substantial increase in investment from Korea in the short term as a result of this FTA relative to the total stock of FDI in Canada.

With respect to services, Canada is already quite open in most sectors. While studies have shown that there are positive benefits to services liberalization, it remains difficult to assess with certainty the impact of trade negotiations on specific services sectors. Services barriers take the form of domestic regulations—e.g. requirements for local partners, foreign ownership restrictions, citizenship, residency and licensing requirements and opaque or non-transparent rules/regulations—and assessing the economic impacts of removing such barriers is difficult. Nevertheless, given the relatively small increase in the level of services trade expected within Canada as a result of an FTA with Korea relative to the size of the Canadian services sector, any increase is expected to have a limited impact on the environment.

To complement this EA, we also undertook an economic modelling simulation, as a means to estimate the potential economic impacts of the proposed FTA. Taking into consideration the limitations of such a simulation, in the scenario considered to be the most plausible, Canada's total exports to Korea would increase by 56% (or \$1.6 billion<sup>4</sup>, scaled to the value of exports in 2005) and imports from Korea would increase by 19% (or \$1 billion, scaled to the value of Canada's imports from Korea in 2005) compared to the pre-FTA level. In addition, Canada's gross domestic product (GDP) could see a gain of \$1.6 billion and Canadian households could derive an economic benefit of \$1.1 billion.

It is important to note that the FTA negotiations themselves will not completely liberalize trade between Canada and Korea. Some agricultural tariffs will be maintained (e.g. for Canada's supply-managed agricultural products), some tariffs will be phased out over time, and some other barriers to trade may remain. As a result, the environmental and economic impacts of a Canada-Korea FTA may turn out to be different than predicted by the economic modelling simulation conducted for this Initial EA.

Canada and Korea are established trade and investment partners. In 2005, two-way merchandise trade was approximately \$8.2 billion (Canada exported \$2.8 billion and imported \$5.4 billion), and two-way direct investment was \$1.1 billion (Canadian direct investment in Korea was \$779 million; Korean direct investment in Canada was \$364 million). In 2004, two-way trade in services between Canada and Korea totalled \$1.1 billion (services exports amounted to \$706 million and imports to \$350 million).

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<sup>4</sup> All monetary figures are in Canadian dollars unless otherwise noted.

## OVERALL ENVIRONMENTAL ASSESSMENT PROCESS

The Government of Canada is committed to conducting environmental assessments (EAs) for all trade and investment negotiations using a process that requires interdepartmental coordination and public consultations. This process, which is explained in detail in the 2001 Framework for Conducting Environmental Assessments of Trade Negotiations<sup>5</sup>, was developed in response to the 1999 *Cabinet Directive on Environmental Assessment of Policy, Plan and Program Proposals*,<sup>6</sup> which requires all initiatives considered by ministers or Cabinet to be environmentally assessed if their implementation is expected to result in important environmental effects, whether positive or negative. Detailed guidance for applying the Framework is contained in the *Handbook for the Environmental Assessment of Trade*.<sup>7</sup>

The Framework for Conducting Environmental Assessments of Trade Negotiations (EA Framework) provides a process and methodology for conducting an EA of trade negotiations. It is intentionally flexible so that it can be applied to different types of negotiations (i.e. multilateral, bilateral or regional) while ensuring a systematic and consistent approach to meet two key objectives:

- The first objective is to help Canadian negotiators integrate environmental considerations into the negotiating process by providing information on the environmental impacts of any proposed trade agreement. As such, trade negotiators and environmental experts are involved in each EA, and work proceeds in tandem with the negotiations being conducted.
- The second objective is to address public concerns by documenting how the environment is considered during negotiations. As such, the EA Framework contains a strong commitment to communications and consultations throughout each EA of trade negotiations.

Three increasingly detailed phases of assessment are undertaken: the Initial, Draft and Final EA. These phases correspond to progress within the negotiations. The Initial EA is a preliminary examination to identify key issues. The Draft EA builds on the findings of the Initial EA and requires detailed analysis. The Final EA takes place at the conclusion of the negotiations. At the conclusion of each phase, a public report is issued with a request for feedback.<sup>8</sup> A Draft EA is not required if the Initial EA finds little likelihood of significant environmental impacts as a result of the negotiation. However, in such circumstances, environmental considerations will continue to be integrated into ongoing discussions and a Final EA will be prepared.

### Assessment Methodology

Pursuant to the EA Framework, this Initial EA is being conducted in an *ex ante* fashion (i.e. before the negotiations are completed). A *Notice of Intent* to conduct a strategic environmental assessment of the CKFTA was announced on October 29, 2005, but to date, no comments have

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<sup>5</sup> For more information, see <http://www.international.gc.ca/tna-nac/documents/FinalFramework-e.pdf>

<sup>6</sup> For more information, see [http://www.ceaa-acee.gc.ca/016/index\\_e.htm](http://www.ceaa-acee.gc.ca/016/index_e.htm).

<sup>7</sup> For more information on the *Handbook for Conducting Environmental Assessments of Trade Negotiations* see <http://www.dfait-maeci.gc.ca/tna-nac/documents/handbook-e.pdf>.

<sup>8</sup> All reports are available on the DFAIT website at <http://www.international.gc.ca/tna-nac/env/env-ea-en.asp>.

been submitted to the government. It must be underscored that this is a *strategic* assessment and is intended to inform the decision-making process as the proposed FTA is being negotiated. Consequently, there is a fair degree of uncertainty associated with identifying any likely environmental impact. The Initial EA is, therefore, more of a “forecasting” or “anticipatory” exercise. Nevertheless, the analysis allows for the early clarification of national goals and priorities with respect to trade and environmental interests, as well as for any mitigation and enhancement options that can be taken into account while the trade negotiations are under way.

Consistent with the methodology prescribed in the EA Framework, this assessment explores the link between trade rules and regulatory policy and focuses on the potential environmental impacts of the prospective CKFTA on Canada—that is, the effects of new trade that may result directly from the proposed FTA. Transboundary, regional and global environmental impacts of the CKFTA are considered insofar as they have a direct impact on the Canadian environment.

The analytical steps of this study are as follows.

- **Identification of likely economic effects for Canada that will result from the proposed trade agreement.** The purpose of this stage is to identify the trade liberalization activity of the agreement under negotiation. This stage examines what the potential agreement would entail, the changes or new trade activity that could result, and the overall economic relevance to Canada. This helps to determine the scope of analysis required for the environmental assessment and to prioritize the issues to be assessed.
- **Identification of likely environmental effects (both positive and negative) within Canada.** Once the economic effects of the proposed trade agreement have been identified and characterized, the likely environmental impacts of such changes are addressed. There are two main factors that contribute to likelihood: exposure and probability. For the purpose of this EA, “environment” refers to the components of the Earth, which includes land, water and air (all layers of the atmosphere); all organic and inorganic matter; living organisms; and the interacting natural systems that include components of the foregoing. Please note that the EA is intended to highlight the *likely incremental* impacts on Canada only.
- **Assessment of the significance of the identified environmental effects.** The EA Framework outlines a number of criteria in determining significance, including frequency, duration, permanency, geographical scope and magnitude, level of risk, irreversibility of the impacts, and possible synergies among the impacts. This study uses the following scale in relation to the criteria outlined above to describe significance: none, minimal, moderate, high and extreme.
- **Identification of enhancement/mitigation options for any positive/negative environmental impacts to inform the negotiations.** In the Initial EA, this step is intended to identify, in a preliminary fashion, the possible policy options or actions to address negative impacts and/or to enhance positive impacts that may occur as a result of the proposed FTA.

In conducting EAs of trade negotiations, the Government of Canada is committed to a process that involves interdepartmental coordination. An interdepartmental committee is established to undertake the EA for each negotiation. The department leading the negotiations leads these EA committees, which are chaired by the Deputy Chief Negotiator and include officials responsible for each negotiating area. EA committees also include representation from Environment Canada and the Canadian Environmental Assessment Agency (CEAA). All other government departments and agencies are welcome to participate, and often do so based on the nature of the agreement being assessed.

Results from the EA analysis are enhanced through consultations with the provincial and territorial governments, and stakeholders representing business, academia, non-governmental organizations (NGOs) and the public. In preparation for the Initial EA, a Notice of Intent is issued inviting the public to provide their thoughts on the potential impact of the proposed agreement on the Canadian environment. At the conclusion of each phase, EA reports are shared with provinces and territories and environmental experts and then issued publicly with a request for feedback.

The Government of Canada welcomes comments on this Initial EA report. Feedback on the Initial assessment of the likelihood and significance of resultant environmental impacts is welcome. Comments on opportunities to mitigate any negative environmental impacts and to enhance any positive effects, as may already be identified at this stage are also welcome. Comments on this document can be sent to:

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## **BACKGROUND**

After extensive domestic consultations with business, citizen-based organizations and individual Canadians, as well as with the provincial and territorial governments, Canada and Korea formally announced the launch of bilateral free trade negotiations on July 15, 2005.

A high-growth and rapidly advancing market, Korea is widely recognized as a gateway to Northeast Asia, a region of strategic importance to global value chains. With an estimated 48 million inhabitants and a GDP approaching \$1 trillion, Korea is the largest of the four “Asian tigers” (Taiwan, Hong Kong and Singapore). Korea’s remarkable, and rapid, recovery from the 1997 Asian financial crisis has resulted in its emergence as the 12th-largest merchandise trading nation in the world, with total merchandise trade in 2005 reaching \$660.2 billion. Korea has demonstrated a strong commitment to promoting a favourable investment climate and positive domestic policy reform.

Canada and Korea are established trade and investment partners. In 2005, two-way merchandise trade was approximately \$8.2 billion (Canada exported \$2.8 billion and imported \$5.4 billion), and two-way direct investment was \$1.1 billion (Canadian direct investment in Korea was \$779 million, Korean foreign direct investment (FDI) in Canada was \$364 million). In 2004, two-way trade in services between Canada and Korea totalled \$1.1 billion (services exports amounted to \$706 million and imports to \$350 million).

Canada’s interest in Korea lies in three main areas: tapping into the value chains of globally competitive production and supply from Korean corporations; selling raw materials and key competitive technologies and products; and employing Korea as a strategic base from which to establish an export and manufacturing presence in Northeast Asia. Current and potential export growth exists in many sectors, including wood pulp, mineral fuels, metals, electrical machinery, shellfish and a wide variety of agricultural products. Korean exports to Canada cover a broad range of sectors, including vehicles, electrical machinery, computers, rubber and steel. With respect to services, an FTA with Korea could yield benefits for Canadian exporters, particularly small and medium-sized enterprises (SMEs), in sectors such as financial services, information and communications technology (ICT) services, environmental services and professional services. In addition, Canadian exporters would benefit from increased transparency of regulations, broader access through temporary entry for a range of service providers and investors, as well as frameworks for the negotiations of mutual recognition agreements and provisions respecting professional licensing and qualification requirements and procedures.

It is expected that a CKFTA would serve as an important building block to greater economic ties with other Northeast Asian economies such as China and Japan.

## **TRADE AND THE ENVIRONMENT**

Public support for trade liberalization in Canada is linked to the expectation that the environment will be protected. Canada is committed to achieving mutually supportive trade and environment goals with its key trading partners. Canada's broad environmental objectives when negotiating trade agreements are to preserve Canada's ability to protect the environment, to stimulate an improved environment through increased allocative efficiency of resources generated by the removal of trade and investment barriers that distort trade and lead to inefficient economic production, to ensure mutually supportive relationships between trade agreements and multilateral environmental agreements, to strengthen the environmental management capacities of Canada's trade partners, and to use this strengthened capacity to combat transboundary pollutants and invasive species that directly affect Canada's environment, economy and health.

There is a strong correlation between open markets, economic development and environmental protection. Liberalized rules-based trade and efficiently regulated markets are key building blocks for economic growth and development. In turn, public support for measures to protect the environment generally increases as incomes rise, and wealthier countries are better able to implement effective environmental policies than are poorer countries. Open markets also help to foster the development of new, more environmentally friendly technologies, and liberalized trade and investment help to create the conditions for technology transfer.

The government undertakes EAs to inform future policy development and decision making. Improved understanding of the relationship between trade, FDI, economic growth and the environment can assist in the formulation of government policy to reduce potential conflicts between commercial and environmental objectives.

In order to ensure that Canada's environmental quality is strengthened through liberalized trade, Canada includes trade-related environmental provisions in appropriate sections of FTAs (i.e. preamble, objectives, investment, general exceptions), and typically negotiates parallel environmental cooperation agreements (ECAs).

Through ECAs, Canada and its trade partners commit to high levels of environmental protection and compliance; good governance and effective enforcement of environmental laws and regulations; fair, open and equitable proceedings; and accountability and public participation in the environmental policy-making process. An ECA also promotes a positive, ongoing environmental partnership through cooperative activities.

### **Incorporating Environmental Provisions into a Canada-Korea FTA**

In the context of the CKFTA, Canada is currently negotiating a parallel ECA, which includes specific obligations to ensure that:

- each party maintains high levels of environmental protection, and that environmental laws are effectively enforced;
- appropriate procedures for completing environmental assessments are used;

- laws, regulations, judicial decisions and administrative rulings are made available to the public;
- each party complies with the due process of law, as set out in explicit procedural guarantees; and
- greater accountability and the open exchange of information between parties are promoted.

An ECA also promotes bilateral cooperation on environmental issues, setting out a list of areas of possible cooperation from which the parties can draw to develop specific work plans as appropriate. Examples range from economic instruments to sustainable urbanization to pollution prevention. Issues identified by the EA may also guide future cooperative work. For example, potential areas of cooperation that have synergies with this EA include fisheries, environmental services, toxics management, and air pollution, to name a few.

### **Canada-South Korea Bilateral Environmental Relations**

In addition to the ECA, other mechanisms exist through which Canada has pursued environmental cooperation with Korea over the years.

More recently, Canada and Korea have signed a memorandum of understanding (MOU) on climate change, which allows the two countries to promote the deployment of cleaner Canadian technologies in Korea. In addition, Korea is one of the six founding members of the Asia Pacific Partnership on Clean Development and Climate (APP), a voluntary partnership focusing on the development and deployment of cleaner and energy-efficient technologies.

Canada wants to constructively engage Korea to play a leadership role in negotiating an effective and inclusive post-2012 agreement on long-term cooperative action to address climate change. As a major energy importer, Korea is conscious of a carbon-restrained future, with impacts on energy security, economic competitiveness and climate change.

In addition, Environment Canada has built mutually beneficial relationships with its Korean counterparts through its regional offices and nationwide services. Over the years, the department has welcomed numerous senior Korean officials to study for extended periods of stay, hosted study tours and delegations, and organized an environmental technology themed trade mission to Korea.

Environment Canada's Meteorological Service Canada (MSC) also has a history of working collaboratively with the Korean Meteorological Administration (KMA). MSC has participated in a number of exchanges with their Korean partners and have built strong and open channels for dialogue on areas of mutual interest, including ocean monitoring, atmospheric science and climate change, variability and impacts. This dialogue is expected to continue. The Asia Pacific Economic Cooperation (APEC) Climate Network (APCN) has been another forum for cooperation. MSC will continue to support APCN and its recently established APEC Climate Centre (APCC).

## **ECONOMIC MODELLING KEY FINDINGS**

In order to complement the qualitative assessments in this EA and confirm assumptions about the potential scale of the economic impact on Canada resulting from an FTA with Korea, simulations with an economic model were conducted in parallel to assess the potential economic impacts of the Canada-Korea FTA (CKFTA) in quantitative terms. Consistent with generally accepted practice, the economic impacts of the CKFTA were analyzed using a computable general equilibrium (CGE) model. The model deployed for this purpose was the widely recognized Global Trade Analysis Project (GTAP) model, version 6.0.

These simulations were undertaken to provide some general guidance to the experts who were reviewing the potential environmental impact of the CKFTA regarding the magnitude of the potential economic impacts. The simulation results described below are necessarily based on simplifying assumptions in order to make the analysis tractable. In that light, it is important to take into account several general observations concerning the interpretation of the reported impacts as found in the full economic modelling report.

For the purposes of this simulation, the model assumed full tariff elimination for all industrial and agricultural products, so as not to prejudge the outcome of negotiations. The economic modelling confirms that an FTA with Korea is expected to generate economic benefits across the Canadian economy, but its overall impact in relation to the size of the aggregated Canadian economy is expected to be modest. Accordingly, this would also suggest that the scale effect on the environment would similarly be modest.

The model will continue to be used to inform negotiators about the potential economic impacts, and shifts in production and consumption, and these results will be further considered in the context of environmental impacts for the purposes of the Final EA.

### **Economic Impacts**

The main findings are as follows:

- Assuming full elimination of tariffs for industrial and agricultural products, Canada's total merchandise exports to Korea in the central scenario would increase by 56%. Based on the level of Canadian exports to Korea in 2005 of \$2.8 billion, this would represent an export gain of about \$1.6 billion.
- Canada's merchandise imports from Korea would increase by 19%. Based on the level of merchandise imports from Korea in 2005 of \$5.4 billion, this would represent an import increase of about \$1 billion.
- The value of Canada's gross domestic product (GDP) would increase, although the extent varies considerably based on alternative assumptions about the response of the economy to expanded trade with Korea. In percentage terms, the alternative simulations place the gain at between 0.064% and 0.268%; in the central scenario, the gain is 0.114%. Compared to the size of Canada's GDP in 2005 (\$1,369 billion), the corresponding GDP gain ranges between \$0.88 billion and \$3.6 billion across the five scenarios, with the central scenario estimate at \$1.6 billion. The corresponding estimates for Korean GDP gains, compared to the size of Ko-

rea's economy in 2005, range between \$0.23 billion (0.024%) and \$6.6 billion (0.691%) across the five scenarios, with the central scenario estimate at \$0.66 billion (0.07%).

- The simulations suggest that Canadian households would derive an economic welfare benefit, scaled to the size of Canada's economy in 2005, between \$266 million under the most restrictive supply-side-response assumptions and \$3.5 billion under the least restrictive assumptions; the central scenario estimate is \$1.1 billion. The simulations suggest that Korean households would experience a small decrease in economic welfare under the most restrictive assumptions, but would gain benefits that would exceed Canada's in the least restrictive scenario.

## INITIAL ENVIRONMENTAL ASSESSMENT FINDINGS

The Initial EA consisted of two levels of analysis: a scoping exercise and detailed analysis based on the analytical methodology outlined in the EA Framework. Table 1 presents the findings of the scoping exercise for each issue area (and corresponding FTA chapter) that were identified as not requiring in-depth analysis for the purposes of this Initial EA. A more detailed analysis of trade in goods, services and investment is then provided.

**Table 1: Results of Initial EA Analysis**

<b>Issue area</b>	<b>Anticipated outcome</b>	<b>Potential environmental implications and provisions</b>
<b>Preamble</b>	<ul style="list-style-type: none"> <li>▪ The preamble will provide guidance on the general intentions of the two parties to the agreement, but is not binding.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The preamble is expected to reference the parties' ongoing commitment to sustainable development and cooperation on environmental matters.</li> </ul>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>▪ This chapter will establish the free trade area between Canada and Korea, lay out the overall objectives for the agreement, define the relation to other agreements, and the extent of obligations.</li> </ul>	<ul style="list-style-type: none"> <li>▪ A proposed provision will make reference to the relation to multilateral environmental and conservation agreements.</li> </ul>
<b>Transparency</b>	<ul style="list-style-type: none"> <li>▪ This chapter facilitates the administration and smooth operation of the agreement by reiterating the parties' commitment to transparency and due process regarding matters covered by the FTA.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This chapter will allow both parties to review and comment in a transparent manner any new laws or regulations that may have negative environmental implications.</li> </ul>
<b>Rules of origin</b>	<ul style="list-style-type: none"> <li>▪ This chapter will provide rules of origin that are clear, as simple as possible, and leave little room for administrative discretion.</li> <li>▪ The rules are intended to be sufficiently stringent to ensure that the benefits of the FTA flow only to goods qualifying as originating in the territory of either or both countries.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Production and consumption changes resulting from product-specific rules of origin will be captured in the Trade in Goods section below, along with their corresponding environmental impacts.</li> </ul>
<b>Customs procedures</b>	<ul style="list-style-type: none"> <li>▪ This chapter seeks to administer and enforce the rules of origin in a fair and transparent manner.</li> </ul>	<ul style="list-style-type: none"> <li>▪ There are no foreseen environmental impacts as a result of this chapter.</li> </ul>
<b>Trade facilitation</b>	<ul style="list-style-type: none"> <li>▪ This chapter will seek to streamline customs processes and facilitate the movement of goods more efficiently.</li> </ul>	<ul style="list-style-type: none"> <li>▪ It is expected that any measures agreed to between the two parties would have minimal impact on the environment.</li> <li>▪ Outcomes related to trade facilitation would not impact the Government of Canada's ability to implement measures or regulations to protect the environment.</li> </ul>

Issue area	Anticipated outcome	Potential environmental implications and provisions
<b>Sanitary and phytosanitary measures (SPS)</b>	<ul style="list-style-type: none"> <li>▪ This chapter will reaffirm commitments made under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and agree to continued use of the WTO dispute settlement procedures for any formal disputes regarding SPS measures. In addition, it will seek to establish a bilateral SPS mechanism to provide direction on identification, management, and resolution of SPS issues to avoid disputes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ As provided in the WTO SPS Agreement, both countries maintain the right to take measures necessary for the protection of human, animal or plant life or health. Both countries are required to ensure that any SPS measures are applied only to the extent necessary to protect human, animal or plant life or health, and are based on scientific principles.</li> </ul>
<b>Non-tariff measures and regulatory cooperation</b>	<ul style="list-style-type: none"> <li>▪ This chapter will affirm commitments made under the WTO Technical Barriers to Trade Agreement (TBT Agreement), promote greater cooperation in the field of standards-related measures, address horizontal transparency issues, including notifications and participation in consultation processes, and establish a mechanism to provide direction on identification, management, and resolution of standards-related measures issues to avoid disputes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The chapter will reaffirm WTO TBT rights and obligations, including the right of both countries to take measures necessary to ensure the protection of animal or plant life or the environment. Measures shall not be more trade-restrictive than necessary to fulfil such legitimate objectives.</li> </ul>
<b>Emergency action</b>	<ul style="list-style-type: none"> <li>▪ This chapter seeks to protect domestic producers from difficulties associated with bilateral trade liberalization (e.g. sudden surge in imports). The measures are intended to be applied only on a temporary basis.</li> <li>▪ No significant changes to production or consumption are expected as a result of this chapter.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This chapter is not expected to have any significant impact on the environment.</li> </ul>
<b>Financial services</b>	<ul style="list-style-type: none"> <li>▪ This chapter of the agreement is expected to promote high quality, forward looking market access commitments and improve regulatory transparency in the financial services sector.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Financial services activities could increase and/or become more efficient as a result of these negotiations. There would be minimal positive or negative environmental impacts from the office operations associated with this change.</li> </ul>
<b>Telecommunications</b>	<ul style="list-style-type: none"> <li>▪ This chapter seeks to ensure that the terms and conditions for access to and use of public telecommunications transport networks and services do not impede the parties' market access commitments under the FTA, and to an open and competitive market for telecommunications services.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In the context of the Canada-Korea FTA, Canada will maintain its limitations on foreign investment in Canadian telecommunications carriers, such that these companies must be owned and controlled by Canadians.</li> <li>▪ It is not anticipated that the FTA will have any adverse affect on the environment.</li> </ul>

Issue area	Anticipated outcome	Potential environmental implications and provisions
<b>Temporary entry</b>	<ul style="list-style-type: none"> <li>▪ This chapter seeks to facilitate the temporary movement of business persons in support of bilateral trade in goods, services and investment by negotiating more liberal access by waiving regulatory requirements for labour market tests, etc.</li> <li>▪ Any outcome in these negotiations is not expected to significantly change production and consumption patterns in Canada.</li> </ul>	<ul style="list-style-type: none"> <li>▪ There will be minimal environmental effects resulting from the normal operation of an office or service facility and travel and temporary stay of professionals from Korea to Canada to carry out their work. These would include consumption of energy for heating, lighting, and use of vehicles or equipment, and production of waste, including paper, refuse and others.</li> <li>▪ To the extent that temporary entry and stay of individuals from Korea is facilitated, this will not affect how Canadian environmental regulations are developed or implemented or how environmental objectives are set.</li> </ul>
<b>Electronic commerce</b>	<ul style="list-style-type: none"> <li>▪ This chapter will seek to include rules guaranteeing a predictable environment for the conduct of electronic commerce, while preserving the government's flexibility to pursue cultural and other social policy objectives, including the environment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The amount of e-commerce conducted between the parties is not expected to increase substantially as a direct result of the FTA.</li> <li>▪ The only environmental impacts from these discussions would be indirect. If the expected cooperation activities increase the amount of e-services there could be positive and/or negative environmental impacts. Positive environmental impacts could include reduced demand for transportation. Negative environmental impacts could result from increased waste and energy usage. These impacts could be partially mitigated via effective environmental management practices.</li> </ul>
<b>Competition policy</b>	<ul style="list-style-type: none"> <li>▪ This chapter will have provisions against anti-competitive business practices, as well as enhanced cooperation between Canadian and Korean competition agencies.</li> </ul>	<ul style="list-style-type: none"> <li>▪ It is expected that any measures agreed to between the two parties would have minimal impact on the environment.</li> <li>▪ Outcomes related to this chapter would not impact the Government of Canada's ability to implement measures or regulations to protect the environment.</li> </ul>



Issue area	Anticipated outcome	Potential environmental implications and provisions
<b>Monopolies and state enterprises</b>	<ul style="list-style-type: none"> <li>▪ This chapter will have provisions that permit the designation of monopolies and state enterprises but place disciplines on a party with respect to such entities. These include disciplines to ensure that a party does not circumvent obligations under the agreement, monopolies or state enterprises provide non-discriminatory treatment to investors of the other party, and act in accordance with commercial considerations and do not act anti-competitively outside of their monopoly designation.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No environmental impacts are expected as a result of these provisions.</li> <li>▪ Canada will safeguard its ability to delegate governmental authority to monopolies and state enterprises.</li> </ul>
<b>Government procurement</b>	<ul style="list-style-type: none"> <li>▪ This chapter of the agreement is expected to contain government procurement market access and transparency commitments.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Canada-Korea government procurement chapter will not have a negative effect on Canada's ability to develop and implement environmental policies and regulations, including with respect to green procurement.</li> <li>▪ Canada will safeguard its ability to maintain and expand the current framework of policies, regulations, and legislation for the protection of the environment in a manner consistent with its domestic and international obligations.</li> </ul>
<b>Intellectual property</b>	<ul style="list-style-type: none"> <li>▪ This chapter will reaffirm commitments made under the WTO Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement as well as other international agreements in respect to intellectual property.</li> <li>▪ This chapter of the agreement is expected to contain provisions on how Canada and Korea can enhance their cooperation on IP issues.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The provisions in this chapter are not expected to have a significant impact on production or consumption in any specific sector.</li> <li>▪ The ability to regulate for environmental purposes will not change as a result of this chapter.</li> <li>▪ The chapter is not expected to go beyond Canada's current international intellectual property obligations, which can be implemented in a manner that is mutually supportive with the Convention on Biological Diversity (CBD).</li> <li>▪ IP protection could encourage investment and innovation in environmental technology, which may lead to the development of new products, technologies or processes that could have a positive environmental impact.</li> </ul>

<b>Issue area</b>	<b>Anticipated outcome</b>	<b>Potential environmental implications and provisions</b>
<b>Exceptions</b>	<ul style="list-style-type: none"> <li>▪ This chapter will include exceptions for measures such as those necessary to protect, <i>inter alia</i>, human, animal or plant life or health, as well as the environment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ A GATT (Article XX) type exception will allow for adoption or enforcement of measures to protect animal or plant life or health, and measures relating to the conservation of exhaustible natural resources.</li> </ul>
<b>Dispute settlement</b>	<ul style="list-style-type: none"> <li>▪ This chapter includes state-to-state dispute resolution procedures with Korea based on the dispute settlement provisions of the NAFTA, but simplified and improved where possible.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No environmental impacts are expected as a result of this chapter.</li> </ul>

## **A. TRADE IN GOODS**

### **Overview**

This section is divided into two parts, which deal with the environmental impacts of goods exported to Korea as well as those Korean goods imported to Canada. In addition, an economic modelling simulation was undertaken to assess the possible economic and environmental impacts of the FTA. The key findings are highlighted in this section and the full economic modelling simulation is available as a separate document. General trade flows and applied tariffs are also described below.

In 2005, Canada exported to Korea \$2.8 billion in goods, consisting primarily of wood and wood products, coal and non-ferrous metals, ethylene glycol, measuring instruments and controllers, and agricultural and fish products. Korea was Canada's seventh-largest trading partner, and represented less than one percent of Canada's total goods exports, or 4% of non-U.S. exports.

Korea's applied tariffs for most non-agricultural goods are between 1% and 13%. Canada's major exports to Korea incur duties between 1% and 8%. Agricultural tariffs applied by Korea average around 52%, with tariffs ranging from 10%-887% on over half of these products. Fish and seafood products are subject to duties between 10% and 20%. Korea's applied tariffs are generally below the higher WTO bound tariffs, but are somewhat unpredictable as they are subject to annual unilateral review by Korea. Exporters also face a variety of technical and non-tariff barriers, as well as sanitary and phytosanitary (SPS) measures.

In 2005, Canada imported \$5.4 billion in goods from Korea, a third of which were motor vehicles. Other major imports include consumer electronics such as cell phones, computers, televisions and appliances. Imports from Korea represent 1.6% of Canada's total imports of goods.

Korea is a beneficiary of Canada's general preferential tariff (GPT) for all goods with the exception of motor vehicles, which are assessed the 6.1 % most favoured nation (MFN) duty rate rather than the 6% GPT rate.

### **Exports**

The proposed CKFTA will seek to improve market access between Canada and Korea principally through tariff elimination. Canadian negotiators will also work at increasing cooperation with Korea to make trading procedures more efficient, through trade facilitating measures and customs procedures designed to provide certainty, transparency and effective verification. Rules of origin that are transparent, predictable and consistent in application will be developed to ensure that the benefits negotiated under the trade agreement accrue only to its parties.

As tariffs are lowered and market access increases, it is expected that there would be an increase in the flow in some products currently being exported and opportunities for new products to be exported. The sectors chosen for study in this Initial EA, therefore, are based on the government's analysis of which exports are expected to benefit the most from the FTA and input from industries that see opportunities for increased or new exports. It should, however, be noted that

increases in some sectors made possible by tariff elimination in Korea, may reduce exports to other less profitable destinations, thus reducing the overall environmental impact associated with increased production.

The findings of this Initial EA will be shared with the interdepartmental EA Committee, which includes representation by the federal departments in the sectors in which increases in production are anticipated. This approach facilitates informed policy development and decision making throughout the federal government.

### *Agriculture*

Two-way agriculture trade between Canada and Korea totalled \$512 million in 2005. Canada's top agriculture exports to Korea in 2005 were wheat and meslin (43% of total agriculture exports) and pork (20% of total agriculture exports). Prior to the discovery of a domestic cow with bovine spongiform encephalopathy (BSE), Canada exported \$74 million worth of beef to Korea in 2000 and \$21 million in 2001.

The following product categories have significantly high tariff rates in Korea that, if lowered, might lead to an increase in exports and a subsequent change in economic activity in Canada.

- Meat and meat products (beef and pork): generally 8% to 40%, but as high as 72%;
- Grains (wheat, malting barley, flax): generally 2% to 256%, but as high as 800%;
- Oilseeds (canola, soybean): generally 0% to 30%, but as high as 487%;
- Fruits and vegetables (apples, potatoes): generally 8% to 45%.

In addition, there are also non-tariff barriers, such as import licensing, quantitative restrictions or other duties and charges that may impede increased exports to Korea. Unfortunately, such limitations are not easily assessed for the purposes of an EA, since the effects of a particular barrier may differ from product to product, making an assessment of them, and their prospective elimination, difficult to analyze.

From an environmental perspective, the most significant changes in agricultural production are changes that affect land use (e.g. crop-land under summerfallow, use of marginal lands) and changes in livestock numbers. In addition, there may be some impact on groundwater aquifers and surface waters, depending on the location and the scope of change in agricultural activity. Overall, crop and livestock production are expected to increase only marginally if tariffs are significantly reduced. It is also likely that such increases would occur primarily in regions where production is currently focused (i.e. in the Prairie region). Canada's agricultural production is of relatively low intensity and thus, a slight increase in the domestic production in order to supply the Korean market would cause minimal environmental impact.

The environment is one of the five key priorities of Agriculture and Agri-food Canada's (AAFC) Agricultural Policy Framework (APF) announced by the federal government in June 2002. Through the APF, federal, provincial and territorial governments aim to assist producers in accelerating the adoption of improved environmental practices. For example, AAFC funds various initiatives intended to improve the environmental performance of the agri-food sector, such as:

- *Environmental Farm Planning (EFP)*: Farmers with EFPs are eligible to apply for financial and technical assistance to implement beneficial management practices through the National Farm Stewardship Program and Greencover Canada.
- *Greencover Canada*: Landowners can access a package of funding and technical assistance to help improve grassland-management practices, protect water quality, reduce greenhouse-gas emissions, and enhance biodiversity and wildlife habitat.
- *National Agri-Environmental Standards Initiative*: Producers will benefit from performance standards establishing the degree of desired environmental quality of air and water and soil in agricultural areas.
- *National Agri-Environmental Analysis and Reporting Program* provides objective, science-based indicators to inform decision-makers in agriculture and help improve policies and programs aimed at addressing environmental issues faced by producers.
- *National Farm Stewardship Program*: Landowners can receive financial and technical assistance to implement on-farm beneficial management practices to address environmental risk identified in their Environmental Farm Plans.
- *National Land and Water Information Service* is developing an Internet portal to provide land managers with information, data, tools and expertise to help them make sustainable land-use decisions.
- *National Water Supply Expansion Program*: Producers and agricultural communities can receive technical and financial assistance to help meet their everyday growing water needs.
- The *Pesticide Risk Reduction Program* develops and implements strategies, conducts research and develops alternative approaches to pest management.
- The *Minor Use Program* assists producers in accessing more environmentally friendly and efficient pest management technologies.
- Various ongoing programs built upon the work of the activities of the Prairie Farm Rehabilitation Administration (PFRA), delivered to ensure the sustainable use and conservation of agricultural soil and water resources, such as grassland management, irrigation, crop diversification and shelterbelt planning.

Provincial environmental legislation and initiatives usually have a direct impact on farming operations. They include a range of mechanisms designed to encourage or require environmentally sound farming practices:

- extension services or funding to carry out specific practices, develop infrastructure, or diversify operations to reduce the environmental impact of agricultural production;
- information documents on best environmental management practices;
- regulations on reducing agricultural pollution;
- policies encouraging the development of on-farm environment plans;
- regulations on the development and operation of new or expanded livestock operations;
- legislation to regulate the discharge of pollutants.

Efforts related to the above and other programs will help offset any negative environmental impact that may result from liberalized agricultural trade with Korea. In the event the environ-

mental impacts as a result of the FTA turn out to be greater than expected, consideration will be given to expanding existing programs or creating new ones to deal with any negative effects.

### ***Fish and seafood products***

Fish and seafood products are one of Canada's largest exports. In 2005, Canada exported \$4.3 billion of fish and fish products, of which, \$33 million was exported directly to Korea. These exports represent both "wild capture" and aquaculture fisheries.

Korea currently applies high tariffs on imported fish and seafood products (between 10% and 20%) and Canada could expect an increase in exports of fish and seafood products to Korea as a result of an FTA. For example, opportunities exist for increased exports of salmon, trout, char, shrimps, crabs, lobster and other species.

While tariff elimination could encourage more exports, such growth will be subject to supply restraints that ensure that fish and seafood products are harvested at a sustainable level. The Government of Canada, along with provincial and territorial governments, aboriginal organizations, coastal communities and other stakeholders and interested Canadians are committed to the conservation and sustainable development of Canada's oceans through a variety of programs under the umbrella of the national *Sustainable Development Strategy*.

Canada's fish management systems and federal, provincial and territorial governments measures have been put into place to ensure the sustainability of Canada's fisheries and the environmental integrity of its aquaculture operations so that any increased trade resulting from an FTA will have minimal environmental impact. Therefore, because there are effective environmental management systems and government measures in place, an increase in exports to Korea due to the FTA and tariff liberalization in fish products is not expected to result in a significant negative or positive impact on the sustainability of fish stocks, nor on Canada's marine or freshwater environment.

### ***Wild capture fisheries***

Canada has a fisheries management system in place that aims to ensure sustainable use of Canada's fisheries, irrespective of market demand and tariff levels in export markets, and hence independent of the impact of this trade agreement. Fish stocks are managed according to controls on the amount of fishing, with a total allowable catch as the predominant control mechanism, often complemented by restrictions on effort (e.g. limited entry, vessel and gear restrictions), and/or catch composition (e.g. size and age of fish). Fisheries and Oceans Canada develops and implements Integrated Fisheries Management Plans for each fishery, which integrate conservation, management and scientific objectives and spell out the required measures to conserve and manage a fishery. Controls are subject to regulation and enforcement.

### ***Aquaculture***

The Canadian aquaculture industry is not subject to the same production constraints that apply to the wild capture fishery, e.g. catch quota allocations. Consequently, aquaculture production could be more responsive to certain market conditions than capture fishery production. To the extent that an FTA would lead to improved access for Canada's fish and seafood products into the Korean market, there is the potential for augmented production incentives for fish species farmed in Canada. Depending on the outcome of negotiations, opportunities could exist for particular species, such as salmon, trout and char.

The federal, provincial and territorial governments share jurisdiction over Canadian aquaculture. Measures are taken to ensure the environmental integrity of aquaculture operations. Site expansion and the development of new aquaculture sites are subject to the Canadian Environmental Assessment Act.

### *Minerals*

Currently, minerals represent Canada's largest exports to Korea. Canada exported \$938 million worth of bituminous coal, copper ores, aluminium, nickel, iron and other minerals to Korea in 2005. Coal is Canada's largest mineral export and represents roughly 33% of Canada's global minerals exports. In 2005 it was the largest single export to Korea. Korea purchased 17% (by value) of all the bituminous coal that Canada exported worldwide in 2005.

Mining is an intensive type of land use with potential for environmental impact over a limited area. However, with proper environmental protection and planning mechanisms, adverse impacts on the environment can be minimized. Possible negative impacts on the environment include the potential to disturb sensitive ecosystems, pollute the local water and contaminate soils. In Canada, environmental protection is an important element in modern mining oriented toward the safe and sustainable development of mineral resources, while at the same time ensuring that adverse environmental impacts are minimized.

Before mining activities commence, a company must submit a mine plan and an environmental impact assessment identifying all activities that may impact upon the mine site environment and the actions that will mitigate these environmental impacts. No mine facility will be granted operating permits until territorial/provincial and federal governments are satisfied with the actions proposed under the assessment plan. The company must also include a plan for decommissioning the facility and reclaiming the lands. The Canadian mining industry is committed to the continual development of innovative technologies and processes to ensure that mining activities are conducted in a manner that is as environmentally responsible and sustainable as possible.

Currently, non-tariff barriers are not impeding market access for Canadian mineral exports, and Korean import duties are already very low (1% to 5%). At these low rates, it is unlikely that the elimination of tariffs under an FTA would result in substantially increased demand that would result in increased mining activity.

If increased export activity did occur, federal, provincial and territorial laws and regulations on both mineral development and environmental assessment would assist in ensuring that any in-

creased production occurring in Canada consequent to increased export demand would be carried out in an environmentally acceptable and responsible manner.

### ***Wood and wood products***

This product group represents Canada's second-largest export to Korea. Exports of wood pulp, sawn and rough wood and kraft paper, building products and plywood amounted to \$565 million in 2005 or 15% of total exports to Korea. With the elimination of restrictive tariff barriers currently facing forestry products—such as on softwood lumber, particle board, and prefabricated buildings—Canadian exporters will benefit from improved market access opportunities in a rapidly growing economy.

Korea, along with Canada, is signatory to a zero-for-zero agreement for pulp and paper and, therefore, these Canadian products enter Korea duty-free. Since tariffs have already been eliminated on these products, an FTA is not expected to increase exports.

Forest products are a renewable resource. Forests regenerate, both naturally and through silviculture. Canadian governments at the federal, provincial and territorial levels have taken steps to ensure that our forests are managed in accordance with sustainable development principles. Canada's commercial forest resources are largely managed by the provinces through forest management tenure agreements that strictly regulate harvesting, silviculture and forestry practices. These policies provide for regulatory and audit mechanisms based on sustainable development principles to ensure that timber is not harvested at rates exceeding a forest's capacity to regenerate. Any marginal increase in production in those products on which a tariff would be lowered could be easily accommodated within current forest management programs.

### ***Ethylene glycol***

Canadian exports of ethylene glycol (EG) to Korea have been increasing steadily since 1999 from \$63 million to \$174 million in 2005 and represented Canada's fourth-largest product export in 2005. Korea's import duty is currently 5.5% and the removal of this tariff is likely to lead to increased exports.

Environment Canada did a preliminary assessment report on EG in 2000. It found that there can be releases of EG into the air during its production. However EG does not bio-accumulate or persist in the environment, primarily due to biodegradation. The half-life in air is typically from 0.35 to 3.5 days, depending on the environmental conditions.

The report found that EG is not expected to contribute to a depletion of the ozone layer and has a low potential to contribute to ground-level ozone formation. Its potential contribution to climate change is negligible. The International Programme on Chemical Safety's Concise International Chemical Assessment, Document 22, which looks at the environmental aspects of EG, concluded that with the exception of runoff water from airports when EG was used as a de-icer, the detected levels in surface waters are generally low. The risk to aquatic organisms from the production of EG was also considered to be very low and probably negligible. If the increase in exports re-



sulted in increased production, it is expected that there would be no measurable environmental impact.

### ***Measuring equipment and controllers***

Canadian exports of electrical equipment, measuring and controlling devices to Korea in 2005 were worth \$123 million. These goods incur an average tariff rate of 6.4%, which is among the highest duties of Canada's current non-agricultural goods exports to Korea. The elimination of these duties is expected to facilitate greater exports of these products to Korea.

The manufacturing of these products has an impact on the environment through the use of hazardous materials, water waste, energy use and airborne pollutants. The electronics industry, for example, uses large amounts of cleaning solvents. These not only pose risk to human health in the workplace, but often evaporate into the air where they may combine with other chemicals. Chlorinated and chloro-fluorinated hydrocarbons—CHCs and CFCs—have been used by industry for decades as solvents to clean electronics and mechanical assemblies. However, as it becomes known that these toxic materials are harmful to the environment, their use is being curtailed, and in many cases eliminated.

Environmentally conscious manufacturing (ECM) is a new concept guiding manufacturing. It focuses on the most efficient and productive use of raw materials and natural resources, and minimizes the adverse impacts on workers and the natural environment. Concepts like life-cycle analysis, pollution prevention, energy efficiency, material substitution and maximization of recycled content are parts of this process.

In its most advanced form, a product's entire life cycle is considered, from design, raw material and natural resource use to end use and disposal. For example, the product design phase considers such things as quantity of raw materials, type and recyclability of materials, energy consumption required for manufacturing and use, and the ease of recycling. New products to treat the contact surfaces are being developed, which will limit the amount of cleaning solvents needed and reduce air and waste water pollution. ECM seeks to limit the use of heavy metals and ozone-depleting substances used in the products and manufacturing processes.

As manufacturing begins to conform to these new norms, the further production of these goods should have a less harmful impact on the environment.

### ***Hides, skins and fur skins***

Canadian exports of hides and skins in 2005 totalled \$32.5 million and fur skins totalled \$21.8 million. Canada exports primarily bovine hides, on which Korea assesses a 2% duty. Bovine hides are a byproduct of Canada's large beef production.

There is no expectation from the industry or government that lowering the tariff will result in significantly increased exports to Korea given the already low tariff rate. Lowering the tariff on hides greater than 16 kg should not result in increased beef cattle production for the purpose of

producing more hides. Therefore, the environmental impact of the CKFTA is expected to be minimal for this sector.

Korea assesses a 3% tariff on imported fur skins and almost all mink fur skins. Exports of mink pelts come from ranched mink and have been steady for the past few years. Given the already low tariff rate, any reduction is not expected to lead to greater Canadian production. Although the Canadian fur industry has expressed interest in the export of fur apparel to Korea, the special excise tax of 20% on luxury items is restricting any increase in exports, and this would not be affected by the CKFTA.

There are provincial best management practices for the purpose of minimizing the environmental impacts of raising ranched fur animals, including mink, and no negative environmental repercussions are expected to result from the CKFTA.

## **Imports**

### ***Motor vehicles***

In 2005, a third of Canada's imports from Korea were motor vehicles, which are assessed a duty of 6.1%. Korea currently exports approximately 128,000 cars a year to Canada, and its market share has increased from 2% in 1995 to 8.1% in 2005. Parts for the after-market and accessories for motor vehicles and tires are dutiable at 6% and 7% respectively. Original equipment parts to be used in the manufacture of new vehicles enter Canada duty-free.

The current 6.1% tariff is not a significant barrier for Korean automakers. Looking at the trend of Korean auto sales in Canada, it is highly probable that Korean auto imports will continue to increase with or without an FTA. An elimination of the tariff would cause a modest downward pressure on price, thus the net impact on overall auto sales is expected to be small. Since the impact on net sales is expected to be small, and new vehicles represent only a small portion of the vehicle stock, the impact on overall emissions would be negligible. In addition, since the majority of the increase in Korean imports is expected to displace other imports in the same class, emissions will not be affected by a change in the composition of vehicle sales.

Korean motor vehicles that are imported into Canada would have to meet Canada's vehicle emission standards. Korean vehicles tend to be smaller than North American cars and, therefore, would likely have better fuel consumption efficiency. However, when compared to vehicles in the same class such as the Canadian-produced Toyota Corolla or Honda Civic, Korean vehicles have slightly worse fuel consumption efficiency. Therefore, the overall impact on air emissions that is anticipated from changed consumption in Korean automobiles is expected to be minimal.

### ***Consumer electronics and consumer durables***

Consumer electronics and durables make up a large part of imports from Korea. Major imports include items such as cell phones, radios and televisions and their components, computers and their peripheral devices, integrated circuits and boards, and consumer durables such as refrigera-

tors, washing machines and air conditioners. Many consumer electronics are already MFN free, and as such, trade in these products would likely not be affected by the CKFTA. Canada maintains tariffs between 3% and 8% on some consumer electronics and durables, such as televisions, refrigerators and washing machines. However, removing tariffs on these items is not expected to significantly increase their imports from Korea, relative to total Canadian consumption. Canadian production in these areas is not substantial, and any increase in imports from Korea would likely be the result of displacing imports from other countries. Therefore, the net effect on the environment is expected to be minimal.

The environmental impacts in Canada would primarily be related to the disposal of these consumer items after their useful life is done. According to Environment Canada, electronic waste (e-waste) in Canada was predicted to reach 71,000 tonnes in 2005, almost double what was produced in 1999. Between 1997 and 2004, some 315 million computers became obsolete. Not only do they take up space in landfill, but e-waste contains such toxic substances as cholinates, bromides, toxic gases, toxic metals, biologically active materials, acids, plastics and plastic additives. As much as 40% of the heavy metals in landfills (such as lead, mercury and cadmium) comes from electronic equipment discards.

Over the next five years, a number of key trends are expected to contribute to the increased consumption of electronic products. Computer technology is expected to continue to evolve at similar historical rates of doubling of processing speed every two years or less. Monitor technology has shifted from CRT to LCD technology, resulting in the replacement of most old monitors. Peripheral devices are being integrated, resulting in new products and the discarding of old printers, scanners, etc. Cell phone technology continues to evolve toward lighter and smaller units, with new features constantly being integrated. Finally, phone technology is moving toward cordless phones, resulting in an increase use of batteries.

Responsibility of waste management is being shifted to the producer or brand-holder through government-driven regulation or through voluntary initiatives. Industries are responding by changing technologies to use more environmentally friendly components. For example, in 2004 Intel announced it was eliminating up to 95% of the lead used in its processors and chipsets. Sony announced that as of July 1, 2006, its products worldwide would not contain lead, mercury, cadmium, hexavalent chromium, or polybrominated biphenyl and diphenyl ethers. As well, industries are designing products that are easier to dismantle, sort and recycle.

In Canada, all levels of government share in the responsibility for e-waste. The Canadian Environmental Protection Act (CEPA) gives the federal government the authority to regulate the use and disposal of toxic material in electronic products. The federal government, through the Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations under the CEPA, in order to improve the management of hazardous waste has put in place an effective system to control the export and import of such wastes at border points. The Export and Import of Hazardous Wastes Regulations (EIHWR) ensure that transboundary movements of hazardous wastes destined for disposal, and hazardous wastes destined for recovery/recycling facilities, are handled in an environmentally sound manner. By requiring that transboundary movements be directed to environmentally acceptable disposal or recovery/recycling operations, the regulations

reduce risks to human health and to the environment. They establish proper mechanisms for exports and imports of hazardous wastes, and at the same time ensure environmental protection and the economic viability of such shipments. The enforcement and compliance policy under CEPA applies to these regulations. Strict penalties for non-compliance include fines of up to \$1 million and jail terms of up to three years.

In 2004, the Canadian Council of Ministers of the Environment (CCME), a council composed of environment ministers from the federal, provincial and territorial governments adopted 12 principles for the proper management of e-waste. The principles focus on life cycle management, which places the responsibility for e-waste primarily with the producers, with the costs to be borne by producers and users. The list of products to be included in any regulatory regime encompasses not only what is considered to be IT-related equipment, but also a full range of household devices.

Management of e-waste is generally regulated by the provinces and territories. E-waste that is hazardous waste must be managed according to applicable provincial and territorial hazardous waste regulations. Municipalities may also be involved in the management or disposal of e-waste generated by households. Several provinces are implementing e-waste management programs. These programs focus on collection, disposal, recycling, take-back, recovery, reprocessing and treatment.

## **B. TRADE IN SERVICES**

### **Overview**

Korea has undertaken substantial opening of its services sector to foreign investment in recent years (notably financial, telecommunications, broadcasting, and maritime and air transportation).<sup>9</sup> Since 2000, liberalization of its trade and investment policies to promote structural reform has improved the economy's efficiency.<sup>10</sup> This acceleration of services liberalization and deregulation increased Korea's trade in services from US\$49 billion in 1998 to US\$73 billion in 2002, and the share of FDI inflow into the services sector rose from 33.2% in 1998 to 56.3% in 2000 and to 63.9% in 2003.

In 2004, Canada's total services exports to Korea totalled \$706 million (total services exports consist of several components: travel, transportation, commercial services and government services) and imported \$350 million in services. More current disaggregated data are not yet available. Korea is the destination of 1.02% of Canada's services exports and 0.31% of Canada's services imports.

Both Canada and Korea participate actively in the negotiations on the WTO General Agreement on Trade in Services (GATS). Our involvement is in part on a bilateral and plurilateral market access basis, as well as multilaterally in the context of the development of rules. Although Can-

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<sup>9</sup> 2000 WTO Trade Policy Review, Korea

<sup>10</sup> 2004 WTO Trade Policy Review, Korea

Canada made many sectoral and horizontal market access requests of Korea, our main interests are in environmental services, telecommunications services, financial services, computer and related services and architectural services. While Korea did not signal any specific sensitivity with regard to Canada's market access requests, its Initial and revised GATS offers do not provide any significant improvements in these areas, particularly with respect to cross-border supply.

Notwithstanding potential difficulties, there is sufficient scope to advance Canadian interests bilaterally under a CKFTA with respect to market access and to rules development on a number of fronts. A NAFTA-plus type approach would likely yield benefits beyond GATS to both parties. Canada is seeking to negotiate with Korea a comprehensive NAFTA plus chapter on services, which will include expanded provisions on domestic regulation, transparency, and professional services/mutual recognition. In addition, there will be separate chapters on telecommunications, financial services, e-commerce and temporary entry. A negative list approach to the listing of non-conforming measures will provide both parties with improved market access and regulatory transparency beyond our respective existing commitments under the GATS. In general, Canada and Korea share the same approach regarding the scope of cross-border trade in services.

On market access, Canada will not negotiate commitments on any services related to health, public education, social services or culture. In addition, Canada will ensure that its position at all stages of these negotiations is fully consistent with our right to regulate and to introduce new regulations on the supply of services in order to meet national policy objectives, including environmental protection.

### **Domestic Regulation**

Services sectors tend to be heavily regulated. Governments at different levels have implemented and maintained regulations governing the provision of services for a variety of reasons. Generally, such regulations establish and maintain a legal framework to serve various public-policy purposes, including the protection of the environment. Canada's proposed Article on Domestic Regulation in the context of the CKFTA seeks to build on the NAFTA and the GATS, as well as ongoing discussions in the WTO on potential disciplines on domestic regulation in accordance with GATS Article VI:4.

The proposed article has two elements: regulatory transparency (in non-binding language) that sets out "best practice benchmarks," and an annex on licensing and qualifications requirements and procedures, rules of conduct, and standards of competence (in "best efforts" language) that seeks to ensure that these requirements and procedures do not constitute unnecessary barriers to trade in services. The proposed article also recognizes that it could potentially be supplemented, further to the review of any GATS Article VI:4 disciplines that may be developed and adopted by members.

The provision on transparency is expected to result in improved transparency and predictability in the business environment of individuals or companies providing a service in Korea. Such transparency is not expected to significantly change production or consumption patterns in Canada. Therefore, no significant impact on the Canadian environment is expected.

As for the proposed provisions on licensing and qualification requirements and procedures, these relate to application and not to the content or objective of regulations. They are not expected to materially change production and consumption patterns, and thus, will not significantly affect the Canadian environment. These proposed disciplines seek only to ensure that such measures do not unnecessarily restrict trade. In so doing, however, they will not infringe upon a government's ability to regulate within its own territory, nor will they constrain the establishment of a wide range of regulatory objectives, including environmental protection, or the choices for implementing such objectives. This will be explicitly recognized in the CKFTA.

A further review of environmental impacts will be required as the FTA negotiations advance and a clearer picture of potential WTO disciplines on domestic regulation emerges. Consultations will continue to be undertaken to help ensure that our ability to regulate for the protection of the environment is not undermined or weakened.

### **Likely Economic Impact of the CKFTA**

While studies have shown that there are substantial positive benefits to services liberalization, it remains difficult to assess with certainty the impacts of specific trade negotiations in specific services sectors. Services barriers take the form of domestic regulations—i.e. requirements for local partners, foreign ownership restrictions, citizenship, residency and licensing requirements and opaque or non-transparent rules/regulations—and assessing the economic impacts of removing such barriers to services trade is difficult. In addition, the definition of services trade reaches beyond cross-border flows to include three additional modes of supply: consumption abroad (e.g. international tourism), commercial presence (e.g. a branch office operating in a country outside of country of ownership), and the movement of natural persons (e.g. engineers, architects or other professionals working abroad).

Despite these difficulties, work is ongoing in this area. For example, several studies using CGE modelling suggest that there would be welfare gains to be made from services liberalization. For Canada, recent studies estimate that even a partial global reduction of services barriers in the WTO context could lead to gains in the range of 2.8% of GDP or US\$20 billion<sup>11</sup> while deeper liberalization that includes investment liberalization would lead to gains in the range of 14.9% of GDP or US\$84 billion.<sup>12</sup>

The gains identified above are based on a multilateral approach. The gains to be made from the CKFTA would therefore be smaller. For the purposes of the Initial EA of the CKFTA, we have based our analysis on expected results of an agreement with Korea that includes a NAFTA-plus services chapter and separate chapters on telecommunications, financial services, e-commerce and temporary entry. Korean services sectors of particular interest to Canada include environmental services, telecommunications services, financial services, computer and related services

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<sup>11</sup> Chadha, Rajesh, Drusila K. Brown, Alan v. Deardorff and Robert M. Stern (2000), "Computational analysis of the impact of India of the Uruguay Round and the Forthcoming WTO trade negotiations," Discussion Paper No. 459, School of Public Policy, University of Michigan.

<sup>12</sup> Brown, Drusilla K. and Robert M. Stern (2000) "Measurement and modelling of the economic effects of trade and investment barriers in services," Discussion Paper No. 453, School of Public Policy, University of Michigan.

and architectural services. Canada will seek the removal of existing regulatory barriers in these and other sectors from Korea.

### **Likely Environmental Impacts of the Economic Changes**

Generally, the kinds of environmental impacts that could result from the economic activities of increased trade in service sectors include effects on air and water pollution, land and biodiversity conservation, and effects on the atmosphere and climate. Environmental effects common to all services sectors include the consumption of energy for heating, lighting and vehicle and equipment use, which may result in air pollution and release of greenhouse gas (GHG) emissions, and the production of waste, including paper, refuse, sanitary waste, and chemical byproducts from office equipment. In sectors such as environmental services and telecommunications services, positive environmental impacts are anticipated. Given the nature of services trade, the analysis of the environmental effects must also consider the impacts of services trade liberalization in areas where the potential for negative impact may seem negligible but where the impact will prove more significant over time. Analysis of elements such as smokestack effects, direct and indirect effects, and upstream and downstream effects is necessary to capture the potential cumulative effects. An example of these indirect effects would be the increases in transportation and distribution services when service providers or imported goods come into Canada.

### **Significance of the Environmental Impacts**

While an FTA with Korea is expected to provide increased market access into Canada, no substantial increase in trade in services is expected. Canada is already quite open in most services sectors and no domestic regulatory changes are expected as a result of a FTA with Korea. There may be some increased services exports from Korea, but it is difficult to segregate the effects of the Canada-Korea trade negotiations from those resulting from Canada's other trade negotiations or implementation of existing regional or bilateral trade agreements or from unilateral liberalization. Generally speaking, while any environmental impacts, positive or negative, are not expected to be significant, we will need to consider indirect or cumulative impacts and the synergies between environmental goods and services, which may increase the impact.

### **Enhancement and Mitigation Options**

As noted above, while an FTA with Korea will improve market access and to an extent, increase trade in services, we can expect little or moderate environmental impact. Further, any potential impacts can be partially balanced by mitigation options and opportunities for environmentally sustainable growth, including technology innovation and industry best practices.

Depending on the sector, mitigation options include the use of fuel-efficient vehicles, alternative fuels, paper conservation within the office, recycling of various materials, and corporate policies on "green procurement," limiting access to ecologically sensitive tourist areas, consumer education, and promotion of sound environmental practices. In addition, increasingly, changes and improvements to environmental legislation and industry awareness of environmental issues are helping to offset potential negative impacts of services trade liberalization. A further review of

environmental impacts will be required as the FTA negotiations advance and a clearer picture of potential WTO disciplines on domestic regulation is obtained. Consultations will continue to be undertaken to help ensure that our ability to regulate for the protection of the environment is not undermined or weakened.



## **C. INVESTMENT**

### **Overview**

Although the potential is significant, Korea is currently a modest destination for both Canadian direct investment abroad (CDIA) and source of FDI. In 2005, CDIA in Korea was \$779 million (stock), which makes Korea the 30th-largest destination for CDIA in the world. Also in 2005, there was \$364 million (stock) of FDI from Korea in Canada. This made Korea the 23rd-largest source of FDI in Canada in the world. A CKFTA with investment provisions will provide more certainty and predictability for businesses.

### **Likely Economic Impact of the CKFTA**

As seen in the statistics describing the Canada-Korea investment relationship, there is currently a limited amount of Korean investment in Canada. Sectors where there are currently appreciable Korean investments include mining, oil and gas, auto parts and equipment, retail, transport and warehousing. Korean investors may also be interested in the information and communications technology (ICT) sector. These sectors would be expected to be the most susceptible to be influenced by the FTA in the short term. Improvements as a result of the negotiation of other chapters, such as improvements to the regulatory regime, may result in increased investment as well.

While the existence of investment provisions as part of the FTA should be a positive and important factor in investor's decisions on whether to invest in the territory of the other party, it will be but one of many factors considered in any investment decision. In addition, Canada already has a relatively open investment regime. As such, large changes in investment patterns are not expected to result from these negotiations. For example, it is unlikely that the current FTA negotiation was a significant factor prompting Korea to invest in the oil sands.

Therefore, the results of the Initial EA indicate that significant changes to investment flows into Canada are not expected as a result of these negotiations, as compared to the total flow of investment to and from Canada from all sources. As such, the economic effects in the form of increased incoming investment from Korea in Canada as a result of the FTA are expected to be minimal.

### **Likely Environmental Impacts of the Economic Changes**

The likelihood and significance of the environmental impact of expected economic changes would depend on the degree of increase in investment, the sectors of the investment, and the measures in place to protect the environment in relation to those activities.

As noted above, Korea's stock of investments in Canada is modest. While over the long term the investment provisions are expected to contribute to a favourable business climate conducive to growth of two-way investments, increases will depend on investors' individual assessments of the opportunities and risks. Notwithstanding the new investment in Alberta, compared with global investment flows, Korea is not anticipated to become a significant source of new invest-

ment into Canada as a direct result of the investment provisions in the FTA. Therefore, it is expected that the environmental effects of the investment chapter of the CKFTA will be minimal.

The following is a general discussion, based on existing information, regarding the known environmental impacts associated with the mining, manufacturing, and trade, retail, transport and warehousing sectors, all sectors in which Korea has a demonstrated interest in Canada. Additionally, the known environmental impacts of the information and communication technology sector are discussed, as this is a sector in which Korean investors may have increased interest in the future.

### **Mineral Resources (Mining)**

The main Korean investors in Canada have been raw material processing companies, such as Posco Canada Ltd. (POSCO), whose primary activities are associated with coal mining. These companies have accounted for nearly 70% of Korean investment in Canada over the last five years.

For many years, material processing companies were content to purchase supplies on the open market. The relationship has since developed and now Korean mineral processors have begun to invest in Canadian mines to secure supplies. For instance POSCO has invested in the Elkview mine in British Columbia to secure supplies of coal.

Each stage of the mineral production process (exploration, extraction, processing, closure, and abandonment) has the potential to have negative environmental impacts (e.g., air emissions, water contamination and sedimentation, soil contamination, and habitat destruction). The geographic scale of these impacts will vary from local to global, and will depend on the mitigation and prevention measures that are used by the company. All mining operations in Canada are subject to rigorous requirements, and must conduct an environmental assessment.

### **Manufacturing (Oil and Gas)**

Manufacturing accounted for nearly 20% of Korean FDI to Canada between 2000 and 2005. The vast majority of FDI in manufacturing was in material processing. Korean resource processing companies, such as Korea National Oil Corporation (KNOC), have recently invested in Canada to secure resources<sup>13</sup>. This is highlighted in KNOC's investment in the oil sands and interest in construction of an oil refinery. However, Korea is a relatively minor player in the industry and this is unlikely to change as a result of the FTA.

### **Trade, Retail, Transport and Warehousing**

Trade, retail, transport and warehousing accounted for approximately 9% of Korean investment in Canada between 2000 and 2005. Several Korean companies such as Samsung, LG, Hyundai Motors, and Kumho Tires, have established sales offices and warehousing operations in Canada.

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<sup>13</sup>KNOC signed a deal with Newmont to acquire a 100% stake in BlackGold oil sands leases in Alberta for an estimated \$310 million.

Increased trade as a result of the FTA may lead to more Korean firms investing in offices or warehouses in Canada. The environmental impact of this sector will be limited to waste generated from daily operations and emissions associated with transportation. However, given that there is no manufacturing taking place, the environmental impact is considered to be minimal.

### **Information and Communications Technology (ICT)**

Although there is not a significant amount of Korean investment in the ICT sector, it could be a sector of interest to Korean investors in the future. Growth in the ICT sector would likely result in more environmental benefits than risks due to reduced travel, shipping, and use of paper. However, any environmental challenges facing the industry as a whole can be broken down into e-waste, toxic and hazardous materials use, water and energy use.

- *E-waste*: According to Environment Canada, e-waste in Canada was expected to reach 71,000 tonnes in 2005, almost double what was produced in 1999. As much as 40% of the heavy metals in landfills (such as lead, mercury and cadmium) come from electronic equipment discards. Disposal of old computers and the hazardous wastes associated with them is one of the key issues facing the industry in terms of environmental impact. While the industry is responding to the issue, the sheer size and rapid technological change associated with the industry requires that industry move quickly to create solutions.
- *Toxic and hazardous materials use*: Semiconductor manufacturers use a number of extremely toxic chemicals in the chip-making process. These chemicals are a serious issue for both the workers who have to deal with them and the communities where the chemical waste ends up.
- *Water and energy use*: While the industry as a whole is relatively frugal with water and energy, the manufacture of silicon chips and semiconductors requires large amounts of clean water and reliable energy, while the operation of fixed line networks (telecoms) is also energy intensive.

In Canada, major firms in the telecommunications sector are considered leaders in environmental stewardship. All of the major companies in the telecom sector have environmental policies and a significant majority of them have third-party auditing of their environmental policies. As well, the sector does an excellent job of providing employees with environmental education to promote knowledge and skills development around environmental issues. Companies in the telecoms sector have also begun to embrace product take-back initiatives, a leading edge issue for companies worldwide.

It is not anticipated that the CKFTA will result in any significant change in the way this sector operates.

## **Significance of Environmental Impacts**

Investment from Korea represents only a very small proportion of total foreign investment in Canada. In 2005, Korean FDI in Canada amounted to less than 0.2% of total incoming FDI in Canada. In view of the current trend, even a significant economic change in investment from Korea would be small in scale compared to the overall level of investment in Canada, and any environmental impact is expected to be minor, if not negligible. Furthermore, the CKFTA negotiations are not expected to substantially change the already open Canadian investment regime.

## **Potential Regulatory Impacts**

Additional environmental concerns have been expressed regarding the inclusion of rules on investment in Canada's FTAs. Principally, concerns have been raised regarding the language in recent international investment agreements governing the relationship between investors and the states that are parties to the agreements. Criticism has been focused on investment dispute-settlement provisions, which, it is argued, incorporate the principle that entities other than the signatories to the agreement can be granted rights but are not bound by any obligations, including obligations to protect the environment.

Foreign investors in Canada are bound by the same environmental regulations that govern the activities of domestic investors. Canada, as it has done in all previous investment agreements, fully intends to maintain its right to regulate in the public interest in sectors such as health, public education, social services and culture, and its right to protect the Canadian environment. Therefore, the inclusion of investor-state provisions is not expected to have an environmental impact.

## **Enhancement and Mitigation Options**

In the event that the CKFTA results in increased FDI in Canada, potential environmental impacts will be mitigated by laws that bind foreign investors to the same environmental regulations that govern domestic investors.

### CONCLUSION

Given the government's view that trade and environment policies should be mutually supportive, it is Canada's practice to pursue trade agreements in a manner consistent with, among other things, environmental protection and conservation. Undertaking environmental assessments is an effective way to address potential environmental impacts that may result from the negotiations of a trade agreement. The EA process is a mechanism through which the Canadian environment may be better protected in trade negotiations. It does this by assisting decision makers in understanding environmental implications of trade policy and by improving overall policy coherence at the national level.

In tandem with the FTA negotiations with Korea, a separate but parallel environmental cooperation agreement is being pursued. This agreement will be consistent with the focus on strengthening the domestic environmental management systems found in existing side agreements to which Canada is a party (including NAFTA, Chile and Costa Rica). It is envisaged that this agreement will contain commitments to high levels of environmental protection and effective enforcement of domestic environmental laws, including through cooperative activities.

The conclusion of the CKFTA will strengthen the already robust commercial relationship enjoyed between our two countries. In addition, the anticipated new economic activity resulting from the trade agreement is expected to yield meaningful economic benefits to Canada through improved market access into Korea for Canadian goods, services and investment, as well as provisions that will ground the trading relationship between Canada and Korea in a coherent rules-based system, thereby making it more predictable and secure. These economic effects, while important, will be modest relative to Canada's overall economic activity, and as a consequence, the environmental impact is not expected to be significant. Therefore, the Initial environmental assessment of the CKFTA does not anticipate significant environmental impacts on Canada.

In these circumstances, according to the EA Framework, the Draft EA phase is not required and we will proceed directly to the Final EA. Further analysis will be carried out if information becomes available that would warrant further consideration. Indeed, should the negotiations with Korea take a path that may lead to environmental effects not yet explored in this study, steps will be taken to ensure that they are assessed. In addition, the findings of the Initial EA, published herein, as well as any new public comments received, will continue to inform Canadian negotiators.

In accordance with the Framework for the Environmental Assessment of Trade Negotiations, the Final EA will be conducted based on the outcome of the negotiations, and the findings will be reported publicly. As such, it will include a discussion of any new analysis and comments received in response to the Initial EA regarding the anticipated environmental impacts of the agreement on Canada.



# ENVIRONMENTAL ASSESSMENT REPORT

## APPENDIX 1: TOP 25 CANADIAN EXPORTS TO KOREA (000S)

Product (HS4 Codes)	2004	2005
2701 - Coal and Solid Fuels Manufactured from Coal	230,191	555,126
4703 - Chemical Woodpulp - Soda or Sulphate	310,178	274,468
1001 - Wheat	75,695	218,286
2905 - Acyclic Alcohols and their Halogenated, Sulphonated, Nitrated or Nitrosated Derivatives	183,902	173,842
2603 - Copper Ores and Concentrates	111,806	152,586
7601 - Unwrought Aluminium	141,069	95,026
8517 - Electrical Apparatus for Telephonic Line Use (Including Telephones and Modems)	74,077	91,450
0203 - Meat of Swine - Fresh, Chilled or Frozen	34,691	80,558
7502 - Unwrought Nickel	59,214	67,193
4705 - Semi-Chemical Wood Pulp	110,157	59,162
4101 - Raw Hides and Skins of Bovine or Equine Animals	9,090	32,426
4403 - Wood in the Rough	27,334	31,737
4407 - Lumber (Thickness > 6mm)	37,460	30,043
2601 - Iron Ores and Concentrates	9,303	29,771
8542 - Electronic Integrated Circuits and Microassemblies	31,743	25,656
2844 - Uranium and Other Radioactive Elements, Isotopes, Residues and Compounds	17,338	24,784
7108 - Gold	--	22,366
2608 - Zinc Ores and Concentrates	13,082	21,796
4301 - Raw Fur Skins	14,912	21,668
8543 - Other Electrical Machines and Apparatus NESOI <sup>14</sup>	11,644	21,006
0306 - Crustaceans - Live, Fresh, Chilled, Frozen, Dried, Salted or in Brine	23,707	20,483
9030 - Instruments/Apparatus for Measuring/Detecting Radiation and Electrical Phenomena	7,028	19,848
1502 - Rendered Fats of Bovine Animals, Sheep or Goats	20,903	18,454
0206 - Edible Offal - Bovine, Swine, Sheep, Goat, Horse, Ass, Mule, Henny – Fresh, Chilled or Frozen	7,749	17,981
4804 - Uncoated Kraftliner Paper or Paperboard	22,271	17,740
<b>Subtotal</b>	<b>1,584,543</b>	<b>2,123,455</b>
<b>Others</b>	<b>684,055</b>	<b>682,442</b>
<b>TOTAL (All products)</b>	<b>2,268,598</b>	<b>2,805,898</b>

Source: Statistics Canada

<sup>14</sup> Not elsewhere specified or included



## ENVIRONMENTAL ASSESSMENT REPORT

### APPENDIX 2: TOP 25 CANADIAN IMPORTS FROM KOREA (000S)

Product (HS4 Codes)	2004	2005
8703 - Motor Vehicles for Passenger Transport (other than Buses/Public Transport)	1,680,878	1,573,716
8525 - Transmission Apparatus for TV/Radio Broadcasting	708,872	677,106
8542 - Electronic Integrated Circuits and Microassemblies	329,730	305,313
8471 - Computers and Computer Peripherals	200,935	129,072
8708 - Motor Vehicle Parts (Excluding Body, Chassis and Engines)	109,883	117,673
4011 - New Pneumatic Tires of Rubber	108,665	110,327
8429 - Self-Propelled Bulldozers, Scrapers, Graders, Levellers, Shovel Loaders, Taping Machines and the Like	58,313	93,570
8481 - Taps, Cocks, Valves and Similar Appliances for Pipes, Boiler Shells, Tanks, Vats and the Like	66,268	84,260
8473 - Parts and Accessories for Computers and Other Office Machinery	104,098	82,265
8528 - Television Receivers; Video Monitors and Projectors	63,125	74,904
3903 - Polymers of Styrene in Primary Forms	32,344	57,388
7210 - Flat-Rolled Products of Iron/Non-Alloy Steel (Width > 600mm) - Clad, Plated or Coated	59,050	56,942
7306 - Other Tubes, Pipes and Hollow Profiles NESOI Of Iron or Steel	31,789	53,706
8501 - Electric Motors and Generators (Excluding Electric Generating Sets)	60,767	47,441
7216 - Angles, Shapes and Sections of Iron or Non-Alloy Steel	44,661	45,910
8418 - Refrigerators and Freezers; Heat Pumps other than for Air Conditioning	32,876	44,926
8413 - Pumps for Liquids; Liquid Elevators	31,500	44,342
8450 - Washing Machines - Household or Laundry-Type	28,431	41,351
9013 - Other Optical Devices, Appliances and Instruments (Including Telescopes and Lasers)	22,376	40,870
8415 - Air Conditioning Machines (Air Conditioners)	90,403	39,322
4002 - Synthetic Rubber and Factice Derived from Oils	35,504	36,656
8516 - Electric Domestic Heating Apparatus	22,099	36,361
8901 - Ferry Boats, Cruise Ships and Excursion Boats; Tankers and Other Cargo Vessels	--	33,872
8527 - Radio Receivers (Including Combined with Cassette Recorders); Pagers	37,615	30,420
7312 - Stranded Wire, Ropes and Cables (Not Electrically Insulated) of Iron or Steel	41,097	30,077
<b>Subtotal</b>	<b>4,001,279</b>	<b>3,887,789</b>
<b>Others</b>	<b>1,824,420</b>	<b>1,486,871</b>
<b>Total (All products)</b>	<b>5,825,699</b>	<b>5,374,661</b>

Source: Statistics Canada



APPENDIX 3: ENVIRONMENTAL LEGISLATION AND REGULATIONS

Below is a non-exhaustive list of federal, provincial and territorial legislation<sup>15</sup> and regulations that may enhance positive environmental impacts or mitigate against negative environmental impacts of the WTO Doha Round of trade negotiations.

**Laws of General Application**

**Federal**

Antarctic Environmental Protection Act  
[Auditor General Act](#)  
Canada Shipping Act  
Canada Transportation Act  
Canadian Environmental Assessment Act (CEAA)  
Canadian Environmental Protection Act, 1999 (CEPA)  
Canadian Food and Drugs Act  
Canadian Nuclear Safety and Control Act<sup>16</sup>  
[Department of the Environment Act](#)  
Emergencies Preparedness Act  
Energy Efficiency Act  
Hazardous Materials Information Review Act  
Hazardous Products Act  
[National Round Table on the Environment and the Economy Act](#)  
Pilotage Act  
Railway Safety Act  
[Resources and Technical Surveys Act](#)  
Transportation of Dangerous Goods Act

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<sup>15</sup> Electronic copies of the actual legislation can be obtained online at <http://laws.justice.gc.ca/en/index.html> (federal) and [http://www.canlii.org/index\\_en.html](http://www.canlii.org/index_en.html) (provincial/territorial).

<sup>16</sup> This has replaced the Atomic Energy Control Act





## ENVIRONMENTAL ASSESSMENT REPORT

### Provincial/Territorial

<b>Ontario</b>	Environmental Protection Act, Environmental Assessment Act, Dangerous Goods Transportation Act, Environmental Bill of Rights
<b>Quebec</b>	Environment Quality Act, Ministry of the Environment Act, Transport Act
<b>Nova Scotia</b>	Environment Act, Environmental Assessment Regulations
<b>New Brunswick</b>	Clean Environment Act, Environmental Impact Assessment Regulation, Transportation of Dangerous Goods Act
<b>Manitoba</b>	Sustainable Development Act, Environment Act, Dangerous Goods Transportation and Handling Act
<b>British Columbia</b>	Environmental Management Act, Environmental Assessment Act, Transportation of Dangerous Goods Act
<b>Prince Edward Island</b>	Environmental Protection Act
<b>Alberta</b>	Environmental Protection and Enhancement Act, Environmental Assessment Regulation, Dangerous Goods Transportation and Handling Act
<b>Saskatchewan</b>	Environmental Assessment Act, Environmental Management and Protection Act, Dangerous Goods Transportation Act,
<b>Newfoundland and Labrador</b>	Environmental Protection Act, Environmental Assessment Regulations, Dangerous Goods Transportation Act
<b>Northwest Territories</b>	Environmental Protection Act, Environmental Rights Act, Transportation of Dangerous Goods Act
<b>Yukon</b>	Environment Act, Environmental Assessment Act and Regulations, Dangerous Goods Transportation Act, Yukon Environmental and Socio-Economic Assessment Act, Yukon Act
<b>Nunavut</b>	Transportation of Dangerous Goods Act



## Laws impacting air

### Federal

Aeronautics Act

[Alternative Fuels Act](#)

[Weather Modification Information Act](#)

Canadian Aviation Regulations

Motor Vehicle Fuel Consumption Standards

### Provincial/Territorial

#### **Ontario**

Environmental Protection Act

- Regulation 419/05 – Air Pollution – Local Air Quality
- Regulation 194/05 – Industry Emissions – Nitrogen Oxides and Sulfur Dioxide
- Regulation 127/01 – Air Contaminant Discharge Monitoring and Reporting
- Regulation 397/01 – Emissions Trading
- Ozone-depleting Substance Regulations

#### **Nova Scotia**

Air Quality Regulations, Ozone Layer Protection Regulations

#### **New Brunswick**

Clean Air Act, Air Quality Regulation, Ozone-depleting Substances Regulation

#### **Manitoba**

Ozone-depleting Substances Act

#### **British Columbia**

Ozone-depleting Substances and Other Halocarbons Regulation, BC Cleaner Gasoline Regulation, Sulphur Content of Fuel Regulation

#### **Prince Edward Island**

Transboundary Pollution (Reciprocal Access) Act

#### **Alberta**

Clean Air Act, Ozone-depleting Substances Regulation

#### **Saskatchewan**

Clean Air Act and Regulations, Ozone-depleting Substances Control Regulations

#### **Newfoundland and Labrador**

Air Pollution Control Regulations, Halocarbon Regulations



**Laws impacting flora and fauna**

**Federal**

Arctic Wildlife Act

Canada Wildlife Act

Fertilizer Act

Fisheries Act

Health of Animals Act

[Migratory Birds Convention Act](#)

Migratory Birds Regulations

[National Wildlife Week Act](#)

Pest Control Products Act

Pesticide Residue Compensation Act

Plant Protection Act

[Species at Risk Act \(2002\)](#)

[Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act](#)



## ENVIRONMENTAL ASSESSMENT REPORT

### Provincial/Territorial

<b>Ontario</b>	Fish and Wildlife Conservation Act, Forestry Act Crown Forest Sustainability Act, 1994 Pesticides Act Endangered Species Act Wilderness Areas Act
<b>Quebec</b>	Wildlife Conservation and Development Act, Natural Heritage Conservation Act, Act Respecting Threatened or Vulnerable Species, Pesticides Act, Tree Protection Act
<b>Nova Scotia</b>	Wildlife Habitat and Watercourses Protection Regulations, En- dangered Species Act, Fisheries and Coastal Resources Act, Forests Act, Forest Sustainability Regulations
<b>New Brunswick</b>	Endangered Species Act, Fish and Wildlife Act,
<b>Manitoba</b>	Forest Act, Wildlife Act, Fisheries Act, Fishermen's Assistance and Polluters' Liability Act, Endangered Species Act
<b>British Columbia</b>	Wildlife Act, Fisheries Act, Freshwater Fish Regulation, Farming and Fishing Industries Development Act, Fish Protec- tion Act
<b>Prince Edward Island</b>	Wildlife Conservation Act, Fisheries Act
<b>Saskatchewan</b>	Forest Resources Management Act, Wildlife Act, Wildlife Habitat Protection Act , Fisheries Act
<b>Northwest Territories</b>	Wildlife Act
<b>Yukon</b>	Wildlife Act, Migratory Birds Convention Act, Fisheries Act, Forest Protection Act



**Laws impacting water and fisheries**

**Federal**

Arctic Waters Pollution Prevention Act  
Canada Marine Act  
[Canada Water Act](#)  
Coastal Fisheries Protection Act  
Coasting Trade Act  
Fisheries Act  
[International Boundary Waters Treaty Act](#)  
[International Rivers Improvements Act](#)  
[Lac Seul Conservation Act](#)  
[Lake of the Woods Control Board Act](#)  
Navigable Waters Protection Act  
Northwest Territories Water Act  
[Oceans Act](#)  
Yukon Waters Act

**Provincial/Territorial**

**Ontario**

Ontario Water Resources Act  
▪ Regulation 387/04 - Water Taking and Transfer  
▪ Water Well Regulation (Regulation 903)  
Nutrient Management Act, 2002  
Safe Drinking Water Act, 2002  
Clean Water Act, 2006  
Lakes and Rivers Improvement Act  
Sustainable Water and Sewage Systems Act  
Pesticides Act

**Quebec**

Watercourses Act, Water Resources Preservation Act

**Nova Scotia**

Water Resources Protection Act, Wildlife Habitat and Watercourses Protection Regulations,

**New Brunswick**

Clean Water Act, Water Quality Regulations, Watercourse Alteration Regulations

**Manitoba**

Conservation Agreements Act, Ground Water and Water Well Act, Water Protection Act, Water Resources Conservation and Protection Act

**British Columbia**

Water Act, Water Protection Act, Groundwater Protection Regulation



## ENVIRONMENTAL ASSESSMENT REPORT

<b>Prince Edward Island</b>	Water and Sewage Act
<b>Alberta</b>	Water Act, Surface Water Quality Guidelines
<b>Saskatchewan</b>	Water Regulations, Groundwater Conservation Act
<b>Newfoundland and Labrador</b>	Water Resources Act
<b>Northwest Territories</b>	Northwest Territories Waters Act, Water Resources Agreements Act
<b>Yukon</b>	Water Act
<b>Nunavut</b>	Nunavut Waters and Nunavut Surface Rights Tribunal Act

### Laws impacting land and non-renewable resources

#### **Federal**

[Agricultural and Rural Development Act](#)

[Canada Agricultural Products Act](#)

Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act

Canada-Newfoundland-Atlantic Accord Implementation Act

[Canada Oil and Gas Operations Act](#)

[Canada Petroleum Resources Act](#)

[Energy Supplies Emergency Act](#)

Fertilizer Act

First Nations Land Management Act

Indian Oil and Gas Act

[James Bay and Northern Québec Native Claims Settlement Act](#)

[Mackenzie Valley Resource Management Act](#)

Manganese-Based Fuel Additives Act

Motor Vehicle Fuel Consumptions Standards (Not in Force)

National Energy Board Act

[Northern Pipeline Act](#)

Territorial Lands Act

#### **Provincial/Territorial**

##### **Ontario**

Environmental Protection Act

- Regulations 101-104
- Regulation 153 – Record of Site Condition (Brownfields)
- Deep Well Disposal Regulation (Regulation 341)



## ENVIRONMENTAL ASSESSMENT REPORT

- Regulation 347 – Waste Management – General
  - Waste Management – PCBs Regulation (Regulation 362)
- Waste Diversion Act, 2002  
Waste Management Act  
Planning Act  
Greenbelt Act, 2005  
Nutrient Management Act  
Oak Ridges Moraine Conservation Act, 2001  
Places to Grow Act, 2005  
Aggregate Resources Act  
Mining Act  
Oil, Gas and Salt Resources Act

### Quebec

Mining Act

### Nova Scotia

Asbestos Waste Management Regulations, PCB Management Regulations, Wilderness Areas Protection Act, Petroleum Management Regulations, Energy Resources Conservation Act

### New Brunswick

Topsoil Preservation Act, Petroleum Product Storage and Handling Regulation, Regional Solid Waste Commissions Regulation, Energy Conservation Act, Mining Act, Oil and Natural Gas Act

### Manitoba

Natural Resources Act, Waste Reduction and Prevention Act, Habitat Heritage Act, Natural Resources Transfer Act

### British Columbia

Environment and Land Use Act, Contaminated Sites Regulation, Special Waste Regulation, Waste Discharge Regulation, Hazardous Waste Regulation, Forest Act, Forest and Range Practices Act

### Prince Edward Island

Oil and Natural Gas Act

### Alberta

Release Reporting Regulation, Release Regulation, Waste Control Regulation, Conservation and Reclamation Regulation, Coal Conservation Act, Energy Resources Conservation Act, Oil and Gas Conservation Act, Oil Sands Conservation Act, Pipeline Act

### Saskatchewan

Environmental Spill Control Regulations, Hazardous Substances & Waste Dangerous Goods Regulations, Mineral Industry Environmental Protection Regulations, Conservation and Development Act, Oil and Gas Conservation Act

### Newfoundland



## ENVIRONMENTAL ASSESSMENT REPORT

<b>and Labrador</b>	Well Drilling Regulations, Waste Management Regulations, Waste Reduction and Recovery Act
<b>Northwest Territories</b>	Forest Protection Act, Waste Reduction and Recovery Act
<b>Yukon</b>	Oil and Gas Act, Yukon Surface Rights Board Act

### Laws impacting trade

[Canada-Chile Free Trade Agreement Implementation Act](#)

[North American Free Trade Agreement Implementation Act](#)

[Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act](#)





### APPENDIX 4: GLOSSARY

**Agriculture and Agri-food Canada’s Agricultural Policy Framework (APF):** A strategy that aims to position Canada as the world leader in food safety, innovation and environmentally responsible agricultural production.

**Allocative efficiency:** Allocative efficiency is improved if production is shifted to lower-cost producers and/or if consumers gain access to lower-cost goods. If the cost to the environment of this production is adequately reflected in the price (e.g., through appropriate environmental regulation), and if allocative efficiency improves globally, one would expect the overall quality of the global environment to improve due to the more efficient allocation of resources.

**Asia Pacific Economic Cooperation forum (APEC):** An intergovernmental forum dedicated to promoting free trade and investment, economic growth and development, and cooperation in the Asia-Pacific region. It operates on the basis of non-binding commitments and open dialogue.

**APEC Climate Centre (APCC):** Research centre whose goal is to facilitate the sharing of high-cost climate data and information, to build capacity in prediction and in sustainable social and economic applications of climate information, and accelerate and extend socio-economic innovation.

**APEC Climate Network (APCN):** Aims to establish a climate network for the exchange of real-time climate information among APEC member economies and to reduce natural disasters related to unusual climate in the Asian-Pacific region by enhancing emergency preparedness and capacity building in climate monitoring.

**Asia Pacific Partnership on Clean Development and Climate (APP):** Founding partners Australia, China, India, Japan, Republic of Korea, and the United States have agreed to work together and with private-sector partners to meet goals for energy security, national air pollution reduction, and climate change in ways that promote sustainable economic growth and poverty reduction. The Partnership will focus on expanding investment and trade in cleaner energy technologies, goods and services in key market sectors.

**Bovine spongiform encephalopathy (BSE):** or “Mad Cow Disease”: A degenerative disease of the central nervous system found in cattle.

**Canadian direct investment abroad (CDIA):** Canadian capital that is invested in foreign resources.

**Convention on Biological Diversity (CBD):** One of the key agreements adopted at the Earth Summit in Rio in 1992. This pact among the vast majority of the world’s governments sets out commitments for maintaining the world’s ecological underpinnings as we go about the business of economic development. The Convention establishes three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources.

**Computable general equilibrium (CGE):** A class of economic model that seeks to explain the economic-wide changes in production, consumption, and price. It uses actual economic data to estimate how an economy might react to changes in policy or other external factors. It is widely used to analyze the aggregate welfare and distributional impacts of policies whose effects may be transmitted through multiple markets, or different policy instruments. A CGE model usually consists of equations describing economic behaviour of economic agents and a database that is consistent with the model equations.

**Economic modelling simulation:** To simulate the impact of policy changes on the economy using economic models.

**Environmental impact assessment:** Refers to the environmental assessment of projects pursuant to the Canadian Environmental Assessment Act (CEAA), and describes the process undertaken to predict the environmental effects of proposed initiatives before they are carried out. Project-level environmental assessment identifies possible environmental effects, proposes measures to mitigate adverse effects, and predicts whether there will be significant adverse environmental effects, even after the mitigation is implemented.

**Ethylene glycol (EG):** A clear, colourless, odourless liquid with a syrup-like consistency. Globally, approximately two thirds of ethylene glycol is used as a chemical intermediate in the manufacture of polyesters for fibres, films, bottles, etc., with a further one quarter used as an antifreeze in engine coolants. Ethylene glycol is also used for runway de-icing (the main source of high local concentrations in the environment), as plasticizer for adhesives, as softener for cellulose film, as glycolborates in electrolytic condensers, as glycol dinitrate in explosives, for various heat transfer applications, as humectant in inks, as antifreeze and plasticizer in paints.

**Export and Import of Hazardous Wastes Regulations (EIHWR):** Regulations whose main goal is to implement a control system for transboundary movements of hazardous waste and hazardous recyclable materials. The Regulations include requirements for prior notification and consent of the importing and transit jurisdictions; the existence of contracts between importers and exporters; insurance for Canadian importers and exporters and their carriers; and tracking of the movement from its point of origin to its final destination through the use of manifests and certificates of recycling/disposal.

**Foreign direct investment:** Investing directly in production in another country, either by establishing an enterprise, expanding operation of its existing business, or acquiring ownership or control of an existing enterprise.

**Free trade area:** A designated group of countries that have agreed to eliminate tariffs, quotas and preferences on most (if not all) goods between them.

**General Agreement on Trade in Services (GATS):** The creation of the GATS was one of the landmark achievements of the Uruguay Round, whose results entered into force in January 1995. The GATS was inspired by essentially the same objectives as its counterpart in



## ENVIRONMENTAL ASSESSMENT REPORT

merchandise trade, the General Agreement on Tariffs and Trade (GATT): creating a credible and reliable system of international trade rules; ensuring fair and equitable treatment of all participants (principle of non-discrimination); stimulating economic activity through guaranteed policy bindings; and promoting trade and development through progressive liberalization.

**General Preferential Tariff (GPT):** During the 1970s, most industrialized countries instituted tariff preferences (referred to as the Generalized System of Tariff Preferences (or GSP) for developing countries to encourage their economic growth through increased trade. On July 1, 1974, Canada introduced its version of the GSP called the General Preferential Tariff (GPT).

**Global Trade Analysis Project (GTAP):** A global network of researchers and policy makers conducting quantitative analysis of international policy issues using a CGE model developed by Purdue University.

**Greenhouse gas (GHG):** Components of the atmosphere that contribute to the greenhouse effect. Some greenhouse gases occur naturally in the atmosphere, while others result from human activities such as burning of fossil fuels such as coal. Greenhouse gases include water vapour, carbon dioxide, methane, nitrous oxide and ozone.

**Gross domestic product (GDP):** The market value of all final goods and services produced within a country in a given period of time. It is also considered the sum of value added at every stage of production of all final goods and services produced within a country in a given period of time.

**Information and communications technology (ICT):** Deals with the use of electronic computers and computer software to convert, store, protect, process, transmit and retrieve information, securely. Recently it has become popular to broaden the term to explicitly include the field of electronic communication.

**Korean Meteorological Administration (KMA):** Korean government body responsible for improving public welfare through the prevention and mitigation of meteorological disasters, as well as the provision of meteorological support in industrial activities.

**Memorandum of understanding (MOU):** A legal document describing a bilateral or multi-lateral agreement between parties. It expresses a convergence of will between the parties, indicating an intended common line of action and may not imply a legal commitment. It is a more formal alternative to a gentlemen's agreement, but in some cases, depending on the exact wording, lacks the binding power of a contract.

**Meteorological Service Canada (MSC):** Part of Environment Canada, the MSC is Canada's source for meteorological information. The MSC monitors water quantities, provides information and conducts research on climate, atmospheric science, air quality, ice and other environmental issues.



## ENVIRONMENTAL ASSESSMENT REPORT

**MFN duty rate:** The rate of duty applied to goods originating from all countries, except North Korea and Libya, unless it can be proved that the imported good originates from a country that benefits from a preferential tariff.

**Mine plan:** Description of the development plans for a mine.

**Sanitary and phytosanitary (SPS) measures:** Measures put in place by governments to protect human, animal (sanitary) and plant (phytosanitary) life or health.

**Shelterbelt planning:** Shelterbelts are linear plantings of trees and shrubs designed to block winds that can enhance crop production, protect buildings, people and livestock, trap snow and/or prevent soil and water erosion. Shelterbelts may also be a source of valuable timber and non-timber products as well providing habitat for wildlife. Shelterbelt planning is the process of clearly identifying, defining and determining the design and placement of a shelterbelt. This includes the systematic consideration of the physical environment, climate, tree and shrub species, time, maintenance and management necessary to achieve predetermined goals and objectives of the proposed shelterbelt.

**Silviculture:** The art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

**Strategic Environmental Assessment (SEA):** Used synonymously with Environmental Assessment (EA) in the 2001 Framework for Conducting Environmental Assessments of Trade Negotiations, an SEA is a systematic process of identifying and evaluating likely environmental impacts from an initiative to ensure they are integrated and addressed at the earliest stage of decision making. The term “strategic” is added to distinguish the activity from project-level environmental assessment.

**Summerfallow:** Cropland left idle in order to restore productivity, mainly through accumulation of water, nutrients, or both. The soil is tilled for a growing season to control weeds, to aid in decomposition of plant residues, and to encourage the storage of moisture for the succeeding crop. Summerfallow exposes soil to a high risk of erosion from extreme weather events (high winds and heavy rains).

**Supply-managed (agricultural products):** Refers to those agricultural products subject to supply management, which aims to balance production with the needs of the domestic market for each of the five commodities with supply-managed schemes (dairy, chicken, eggs, turkey, and broiler hatching eggs).

## APPENDIX 5: ACRONYMS

AAFC            Agriculture and Agri-food Canada



## ENVIRONMENTAL ASSESSMENT REPORT

APCC	APEC Climate Centre
APCN	APEC Climate Network
APEC	Asia Pacific Economic Cooperation forum
APF	Agricultural Policy Framework
APP	Asia Pacific Partnership on Clean Development and Climate
CBD	Convention on Biological Diversity
CCME	Canadian Council of Ministers of the Environment
CDIA	Canadian direct investment abroad
CEAA	Canadian Environmental Assessment Agency
CEPA	Canadian Environmental Protection Act
CGE	Computable general equilibrium
CKFTA	Canada-Korea Free Trade Agreement
DFAIT	Foreign Affairs and International Trade Canada
EA	Environmental assessment
ECA	Environmental cooperation agreement
ECM	Environmentally conscious manufacturing
EG	Ethylene glycol
EIHWL	Export and Import of Hazardous Wastes Regulations
FDI	Foreign direct investment
FTA	Free trade agreement
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GHG	Greenhouse gas
GNI	Gross national income
GTAP	Global trade analysis project
ICT	Information and communications technology
KMA	Korean Meteorological Administration
KNOC	Korea National Oil Corporation
MFN	Most favoured nation
MOU	Memorandum of understanding
MSC	Meteorological Service Canada
NGO	Non-governmental organization
PFRA	Prairie Farm Rehabilitation Administration
SME	Small and medium-sized enterprise
SPS	Sanitary and phytosanitary measures
WTO	World Trade Organization

