

## **INVESTMENT IN CANADA’S ASIA-PACIFIC GATEWAY INFRASTRUCTURE FOR BULK vs. CONTAINER TRAFFIC<sup>©</sup>**

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### **Introduction**

Canadian deep water ports are governed by the *Canada Marine Act* (the “CMA”)<sup>1</sup>, which provides that such ports should be competitive, efficient and commercially oriented while maintaining positive impacts on the Canadian economy. Canada is said to enjoy a competitive advantage over the rest of North America due to the fact that ports in Vancouver and Prince Rupert, B.C. serve as Canada’s Asia-Pacific Gateway (the “Gateway”) while providing the shortest sea and overland routes between North America and the robust Asian markets. This advantage places Canada in an enviable position and there is little wonder that all levels of government want to capitalize on it.

However, the promotion of the Gateway has focused largely on expanding and accelerating the velocity of container traffic, in large measure with public funding. In contrast, improvements to the handling capabilities for bulk (such as coal, potash, grain, petrochemicals, energy products and forestry products) and break-bulk (e.g.: certain pulp and paper products, logs and special agricultural commodities) freight originating in Canada has received significantly less attention and funding. Bulk and break-bulk freight forms the base of an economy that provides well paying jobs,

significant tax revenues and export earnings. Although these commodities are in high demand from economies throughout the world, especially those in Asia, and might otherwise merit immediate and significant investment, there is more emphasis on investment (including public investment) in competitive container traffic than bulk commodity traffic.

The reasons for this disparity may be varied, but they are misdirected. Canadian bulk and break-bulk commodity freight traffic is often and largely captive, in the sense that with or without investment the freight traffic will originate and be handled in Canada. As a result, there is far less incentive to devote investment to these sectors of the economy than there is to containerized goods that compete against port, terminal, rail and road infrastructure in other jurisdictions. That is, to capture and maintain market share in the movement of containers through Canada, even if the movements are merely transitory, as in the case of imported container goods, it is required that both the public and private sectors devote significant financial resources. To the extent that public and private infrastructure capital is scarce, this devotion comes at the expense of the export of bulk commodities and the associated jobs and facilities. Ignoring capital investment in the important bulk and break-bulk sectors of the economy will likely have detrimental short and long term effects on the Canadian economy, in addition to failing to fulfill the purpose of the CMA. A better approach would be to maximize velocity and throughput for bulk commodities, which itself could benefit containerized traffic at a comparable pace.

We begin this paper by outlining the legislative regime of the CMA as it pertains to the growth of Canadian ports and then examine the benefits that the bulk and container sectors bring to the Canadian economy. We then move on to a discussion surrounding the policy and competitive considerations that underpin the public and private bias towards the container sector. Finally, we discuss the importance of the Asian economies as they look to Canada to help meet their ever-increasing natural resource demands.

## **Governance**

Much can be learned by reviewing national objectives as articulated in marine law and policy. Both the CMA and marine traffic handling policy underscore the benefits and need to sustain the Canadian economy through a focus on bulk movements.

The preamble to the CMA begins as follows:<sup>2</sup>

An Act for making the system of Canadian ports competitive, efficient and commercially oriented... [emphasis added].

Further, section 4 of the CMA outlines its purpose:

In recognition of the significance of marine transportation to Canada and its contribution to the Canadian economy, the purpose of this Act is to:

(a) implement marine policies that provide Canada with the marine infrastructure that it needs and that offer effective support for the achievement of national, regional and local social and economic objectives and will promote and safeguard Canada's competitiveness and trade objectives;

(a.1) promote the success of ports for the purpose of contributing to the competitiveness, growth and prosperity of the Canadian economy;

...

The foregoing language suggests that Parliament not only intended that the CMA be used as an instrument for making Canadian ports competitive and commercially viable, but importantly, that it be done in a manner that promotes the growth and prosperity of the Canadian economy as a whole, rather than just at the port level.

To this end, the CMA Review Panel ("CMARP") report to the Federal Minister of Transportation<sup>3</sup> acknowledged the importance of bulk commodities to the Canadian economy:

Despite the growth and public profile of containerized traffic, the shipment and handling of bulk goods continues to dominate the marine transportation industry in Canada. The movement of bulk commodities such as petroleum products, grain, iron ore, sulphur, potash, coal, lumber and mineral concentrates has a substantial economic impact on most Canada Port Authorities and public ports and represents a significant proportion of Canada's national economy.<sup>4</sup>

In further support of the delicate and precarious state of the bulk sector, the CMARP report acknowledged the futility of relying on factors such as a weak Canadian dollar when competing for port traffic:

Devaluation of the Canadian dollar relative to the U.S. dollar has improved the international competitiveness of Canadian products and marine transport infrastructure providers over the past decade. No industry can succeed in the long term if it relies for success on factors outside its control. Canada's marine transportation industry must not rely on a weak dollar to support its competitiveness. For example, the Vancouver Port Authority states that a rise in the Canadian dollar to the equivalent of US\$0.70 - 0.72 would shift the competitive balance in favour of U.S. ports.<sup>5</sup>

Now that the Canadian dollar has achieved parity with the U.S. dollar over a sustained period of time, the need to focus on the bulk sector is that much more pronounced.<sup>6</sup>

#### **Economic Benefits of the Bulk vs. Container Sectors**

Bulk commodities contribute to the economic well-being of Canada in many ways, including providing well-paying jobs (at each of the extraction/harvesting, processing/manufacturing and transportation/handling stages), significant tax benefits and diversified export earnings. Figure 1 and Table 1 show the significant contribution made to the national, regional and local economies by the minerals (including mining), forestry (including pulp and paper) and energy industries (which are all part of the bulk sector), which are responsible for 12% of Canada's total GDP. With the addition of grain, the various contributions to these economies are that much more pronounced.

The data for containerized goods are not easily obtainable, nor are they capable of comparable analysis. The reasons are obvious: the products in the containers are varied, the monetary value of each product is not captured in a consolidated fashion, imported containers exceed exported containers, and weight and volume are not so meaningful. Consolidated public and private port and terminal statistics also are not available to draw the kinds of conclusions and

comparisons that might lend themselves to good policy and investment decision-making.

Further, while exported containerized goods also provide some of the economic benefits listed above, imported containerized goods only provide transitory benefits as they enter the country and again when they are redistributed, before hitting store shelves or becoming inputs for finished goods. Comparable GDP statistics are not readily available for container movements, so it is impossible to put any figures on the disparity in value-added for the bulk versus container traffic; however, it is likely that container handling provides a greater number of jobs than bulk commodities do at the port handling level.<sup>7</sup> While it is true that container movements provide employment in handling functions, the extent to which such employment comes at the expense of jobs related to the bulk sector, is a further complication in the calculus of measuring value, but underscores the apparent zero sum nature of the equation. This complication would be exacerbated by a decision to invest public funds into the movement of containers, particularly imported containers, at the expense of the lucrative movement of bulk commodities. Perhaps more obviously, container jobs are dwarfed by the employment figures in the bulk sector across Canada.

Despite the lack of readily available financial data, some volumetric data lend themselves to comparable analysis. For this purpose, we have confined ourselves to data from the Port of Metro Vancouver (the “PMV”). Tables 2 through 6 provide a useful breakdown of bulk and container tonnage through the PMV for the period from 2008 to 2010, which highlights several key points and trends.<sup>8</sup>

The clearest statistical trend from the data is that bulk commodities represent the overwhelming majority of tonnage shipped through the PMV. In 2010, bulk alone represented 68% of all tonnage through the PMV and when break-bulk is factored in, this figure rises to 82%. Further, imported containerized goods account for approximately 42% of all container tonnage, or 52% of all TEUs handled by the PMV. In other words, imported containers comprise 7% of all PMV

tonnage. On its own, these observations tell us nothing about value or economic contribution. More telling are growth trends.

The bulk sector alone grew 19% between 2009 and 2010, and 10% between 2008 and 2010. In 2010, containerized goods represented only 18% of the total tonnage through the PMV (a 9% increase in tonnes over 2009), between 2008 and 2010 container traffic growth was relatively flat at only 2%. This flat-lining of container traffic is underscored when the container tonnages are converted to TEUs. While there was a 17% increase in TEUs through the PMV from 2009 to 2010 (following 2009's economic downturn), the growth between 2008 and 2010 was only 1%.

So, why such a heavy push for investment into this sector, particularly when supported by statements such as “unprecedented growth in containerized traffic to and from China and other Asia-Pacific countries”?<sup>9</sup>

While it is true that container traffic rose relatively consistently before the 2008 economic recession, the data shows that the “unprecedented growth in container traffic” was the first to go in the downturn. Given Canada's natural resource base, it remains a curiosity why the strongest sectors of the economy would not benefit from the investment available for container traffic, particularly imported containers.

### **Competition Considerations**

The likely answers may be found in the competitive conditions of bulk producers. B.C.'s ports face stiff competition for container traffic from other North American west coast ports, including the Ports of Seattle and Tacoma in Washington and Oakland and Los Angeles-Long Beach in California.<sup>10,11</sup> In addition to these other North American ports, B.C. also faces competition from container traffic through the Panama Canal (possibly expanding to capture larger vessels to reach markets via all-ocean routes, rather than more expensive ocean-land routes) as a gateway for Asian goods to get to the lucrative markets of the eastern United States. Despite all of this

competition, B.C.'s ports enjoy a distinct geographical advantage in that they serve as the shortest routes between the Asian ports and North America, being up to 58 hours shorter from port-to-port than the largest North American ports at Los Angeles-Long Beach.<sup>12,13</sup> The exposure to competition suggests an investment risk factor that prudence might dictate avoidance. Is it really the shorter route that explains the willingness to overlook the risks?

Unlike bulk commodities which tend to be captive to railways and ports, containerized goods are generally not captive to a particular carrier or a particular port. For example, along the west coast from B.C., through Washington, Oregon, California, Mexico and down to Panama, there are approximately 40 container terminals.<sup>14</sup> Container shipping lines can choose any one of these terminal facilities before reaching the populated areas of North America, including California, richer and more populous than all of Canada.<sup>15</sup> In comparison, there are fewer than ten terminals dedicated to handling bulk commodities along this same stretch of coastline. Bulk commodities simply do not have the range of options that containerized goods do for transportation between Asia and North America. Both the competitive nature of container ports and the captive nature of bulk ports suggest capital should go to bulk, rather than containers, especially imported containers, if only because bulk commodities are not merely transitory.

A further consideration is the backhaul nature of export containers which, while still beneficial to the extent that the price of container traffic reflects the backhaul price, unlike bulk, which is not backhauled. That is, backhaul export containers don't reflect the total cost of the inbound containers. Increasing backhaul traffic has tremendous value and has been endorsed by Transport Canada:

Seizing the opportunity and optimizing container flows would have significant growth potential for both Canada and China. An increase in the volume of backhaul container traffic would mean greater efficiency and productivity in the use of containers, as well as provide Canadian industries with improved access to the Chinese markets.<sup>16</sup>

Remember that the CMA's stated purpose is to promote competition for the purpose of contributing to the "growth and prosperity of the Canadian economy". Canada's bulk commodities face competition from other producers overseas. Despite the fact that B.C.'s ports provide the shortest routes to Asian markets, other resource-rich countries such as Australia are at a significant advantage over the whole of North America. This competition for buyer's market share is yet another reason why investment would be better suited for bulk rather than container traffic: Canadian commodities cannot choose a different path to market in a fickle manner. Investing in container facilities does not promote competition in a way that supports continued growth in the bulk sector and thus fails to fulfill the purpose of the CMA.

#### **Public Policy and Bias in Favour of Containers**

Despite the guidance provided by the CMA, the investment risk associated with container traffic, especially imported containers, and the glaring need for active investment in bulk transportation and terminal infrastructure, there appears to be a bias in favour of expending resources on infrastructure that will benefit the container industry.

The "Pacific Gateway Strategy Action Plan" (the "Action Plan")<sup>17</sup> was prepared as a response to the "significant opportunities arising from rapid expansion of Asia-Pacific trade".<sup>18</sup> The Action Plan outlines a list of 34 "Supply Chain Infrastructure and Process Initiatives" (the "Initiatives") identified as a means of "assessing, planning and implementing critical transportation infrastructure and policy initiatives [that will be] required to meet Pacific Gateway Strategy objectives".<sup>19</sup> Of these Initiatives, 25 were of benefit to the container sector, while only four were for the dual benefit of the bulk and container sectors with a further single Initiative for the sole benefit of a commodity in the bulk sector (that Initiative, however, was to be funded by the bulk producer that owns part of the terminal from which it ships). Such initiatives appear to directly contradict the purpose of the CMA.



Aside from the long-term growth plans expressed in the Action Plan, various governmental bodies at both the provincial and federal levels have demonstrated an unwarranted bias toward containers and away from bulk in a variety of ways, including:

1. The B.C. Ministry of Transportation focusing solely on container traffic when discussing matters of competition and growth as follows:

The competitive global business environment means container line port customers have an unprecedented degree of choice. Transportation and infrastructure are part of a decision to buy and that decision is based on value over the entire supply chain. Fierce competition exists among global supply chains to attract customers.<sup>20</sup>

No mention was made of the need to invest in bulk freight infrastructure to allow producers to compete more effectively with other international producers.

2. Transport Canada has funded studies, such as the Pacific Coast Container Terminal Competitiveness Study,<sup>21</sup> the Directory of Pacific Coast Container Ports, Terminals, and Services,<sup>22</sup> and the Container Expansion Plans at Pacific Coast Ports Study,<sup>23</sup> where the ultimate goal is to improve the competitiveness of container terminals, but it has not financed any similar studies for the bulk and break-bulk commodities sector.
3. \$1.5 billion has been earmarked for the expansion of B.C. container terminals through 2020,<sup>24</sup> while there is no similar investment earmarked for the bulk and break-bulk sectors.

### **Asian Economies Looking to Canada to Fuel Resource Demands**

Canada's bulk commodities are highly sought after by many Asian economies, including China, Japan and South Korea. Canada, while distant, provides a secure and stable source of necessary commodities including coal, potash, copper, zinc, pulp, petrochemicals and energy products. Apart from price, which usually prevails in the commodity world, security of and access to a reliable source of supply and quality of product and distribution are important criteria in determining whether to purchase from one source versus another.

Further, Asia looks to Canada to fulfill its resource needs when supply from other countries is halted.

These facts have been acknowledged by the B.C. Ministry of Transport in the same report that earmarked \$1.5 billion for container terminal development:

Significant opportunities in several commodities, for example, coal (China demand), minerals, petrochemicals, value-added agriculture and forest products and oil and gas, are due in part to improved prices and increased production.<sup>25</sup>

These beneficial circumstances tend to occur when production of commodities in other countries is halted, resulting in the supply to Asia drying up, while demand remains high. A prime example of this occurred when Queensland, the world's leading producer of steel-making coal, experienced severe weather events such as in early 2008 and again, in late 2010/early 2011 when it was first hit by severe flooding and a severe cyclone thereafter. As a result of these two back-to-back weather events, it is predicted that Australia could lose as much as 30 million tonnes of steel-making coal production in 2011.<sup>26</sup> Such events send the coal price skyrocketing<sup>27</sup> and present Canadian producers with an opportunity to realize additional coal sales at the higher price, in addition to creating goodwill with their customers.

Similarly, on occasion, Canadian bulk exporters experience events of *force majeure* themselves, such as when avalanches cut off rail access through the Rocky Mountains to the west coast ports. In situations such as these, it is imperative that there be significant stockpiles at the ports so that producers are able to meet their customers' needs even when they are unable to get their commodity to port.

Both of these types of environmental supply choke points demonstrate the need for adequately capitalized infrastructure.

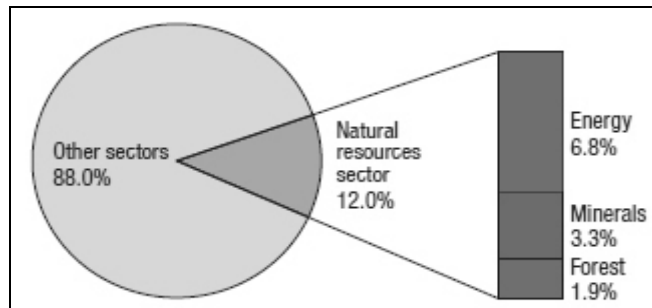
### **Conclusion**

Without adequate rail and port infrastructure, Canadian bulk exports likely will not grow as fast as otherwise possible, nor will Canada be

able to exploit high demand when opportunities arise in the global marketplace to meet its customers' needs at the most crucial times.

Whether the use of public funds for port infrastructure is desirable at all is one question, but the case for preferring container port infrastructure over bulk and break-bulk infrastructure is not, in our view, warranted. What bears examination is the possibility of building up multi-purpose port and terminal infrastructure, focused on bulk and break-bulk, where container traffic may also benefit. Such investment might better be manifested in land use decisions, private or P3 infrastructure projects or increases in fluidity and elimination of bottlenecks to prevent clogs on output found in the various distribution chains that lead to exports, to say nothing of the taxation of Canadian commodities that acts as a wedge to prevent growth. There are more questions than answers, but public investment in container infrastructure stands in stark contrast to its poorer bulk cousin.

**Figure 1: Natural Resources Sectors and Canada's GDP (2008)<sup>28</sup>**



**Table 1: Natural Resources Sectors and Canada's GDP (2008)<sup>29</sup>**

2008 Statistics	Forest	Minerals	Energy	Total Natural Resources	Canada
<b>GDP</b>	\$23.8 B (1.9%)	\$40.1 B (3.3%)	\$84.2 B (6.8%)	\$148.1 B (12.0%)	\$1,233.7 B (100.0%)
<b>Direct employment (*000 people)</b>	231 (1.6%)	351 (2.4%)	276 (1.9%)	859 (5.8%)	14,818 (100.0%)
<b>Total exports</b>	\$30.2 B	\$95.1 B	\$128.4 B	\$253.8 B	\$483.6%

2008 Statistics	Forest	Minerals	Energy	Total Natural Resources	Canada
	(6.2%)	(19.7%)	(26.6%)	(52.5%)	(100.0%)
<b>Imports</b>	\$10.2 B (2.4%)	\$69.3 B (16.0%)	\$52.9 B (12.2%)	\$132.4 B (30.5%)	\$433.5 B (100.0%)
<b>Balance of Trade</b>	+20.1 B	+25.8 B	+75.5 B	+\$121.4 B	+\$50.1 B

**Table 2: Bulk Sector Total Tonnage by Year**

Metric Tonnes	2008	2009	2010	% Change (2009 – 2010)	% Change (2008 – 2010)
<b>Coal</b>	<b>26,034,284</b>	<b>24,297,384</b>	<b>30,328,772</b>	<b>25%</b>	<b>17%</b>
Steel-making coal	21,670,364	18,473,001	22,304,915	21%	3%
<b>Grain, Specialty Crops &amp; Feed</b>	<b>11,064,261</b>	<b>15,115,136</b>	<b>16,277,850</b>	<b>8%</b>	<b>47%</b>
Wheat	4,091,956	5,704,249	6,178,242	8%	51%
Canola	4,632,665	6,470,435	6,044,312	-7%	31%
Specialty Crops	1,454,497	1,831,689	2,219,144	21%	53%
<b>Fertilizers</b>	<b>11,169,236</b>	<b>6,508,247</b>	<b>9,268,106</b>	<b>42%</b>	<b>-17%</b>
Potash & potassium based fertilizers	6,448,363	2,272,044	5,530,499	143%	-14%
<b>Petroleum Products</b>	<b>7,166,678</b>	<b>8,335,014</b>	<b>8,834,162</b>	<b>6%</b>	<b>23%</b>
Crude Petroleum	2,208,348	3,916,333	4,247,886	8%	92%
<b>Chemicals, Basic Metals &amp; Minerals</b>	<b>11,658,803</b>	<b>8,117,749</b>	<b>8,815,632</b>	<b>9%</b>	<b>-24%</b>
Minerals	8,563,274	5,305,395	6,250,677	18%	-27%
Ores & Concentrates	870,581	949,968	1,089,507	15%	25%
<b>Forest Products</b>	<b>4,657,825</b>	<b>3,873,504</b>	<b>4,825,105</b>	<b>25%</b>	<b>4%</b>
Woodchips	4,017,087	3,334,567	4,171,384	25%	4%
<b>Processed Food Products</b>	<b>757,546</b>	<b>841,120</b>	<b>1,384,757</b>	<b>65%</b>	<b>82%</b>
<b>Construction &amp; Materials</b>	<b>824,774</b>	<b>584,187</b>	<b>533,968</b>	<b>-9%</b>	<b>-35%</b>
<b>Grand Total</b>	<b>73,333,407</b>	<b>67,672,340</b>	<b>80,268,352</b>	<b>19%</b>	<b>10%</b>

\* Table 2 shows the total tonnage for each industry in the bulk sector and some of the main commodities within that industry, but does not list every commodity in each industry.

**Table 3: Container Sector (Metric Tonnes)**

<b>Metric Tonnes</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>% Change (2009 – 2010)</b>	<b>% Change (2008 – 2010)</b>
<b>Inbound</b>	<b>8,717,880</b>	<b>7,111,796</b>	<b>8,696,475</b>	<b>22%</b>	<b>-0.2%</b>
Household Goods	3,203,413	2,571,730	3,140,107	22%	-2%
<b>Outbound</b>	<b>11,470,624</b>	<b>12,166,641</b>	<b>12,232,309</b>	<b>1%</b>	<b>7%</b>
Lumber	2,187,299	2,510,163	3,318,578	32%	51%
Woodpulp	2,622,666	2,555,474	2,092,380	-18%	-20%
Specialty Crops	1,676,429	2,119,418	1,985,683	-6%	18%
Animal Feed/Other Cereals	542,699	588,833	554,695	2%	2%
<b>Overall</b>	<b>20,458,504</b>	<b>19,278,437</b>	<b>20,928,784</b>	<b>9%</b>	<b>2%</b>

**Table 4: Container Units and TEUs**

<b>TEUs</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>% Change (2009 – 2010)</b>	<b>% Change (2008 – 2010)</b>
<b>Inbound</b>	<b>1,294,308</b>	<b>1,122,849</b>	<b>1,296,946</b>	<b>16%</b>	<b>0%</b>
Laden	1,238,350	1,007,304	1,233,051	22%	-0.4%
Empty	55,958	115,546	63,894	-45%	14%
<b>Outbound</b>	<b>1,197,799</b>	<b>1,029,613</b>	<b>1,217,364</b>	<b>18%</b>	<b>2%</b>
Laden	915,465	925,411	940,921	2%	3%
Empty	282,334	104,201	276,443	165%	-2%
<b>Total Laden</b>	<b>2,153,816</b>	<b>1,932,715</b>	<b>2,173,972</b>	<b>12%</b>	<b>1%</b>
<b>Total Empty</b>	<b>338,291</b>	<b>219,747</b>	<b>340,337</b>	<b>55%</b>	<b>0%</b>
<b>Grand Total</b>	<b>2,492,107</b>	<b>2,152,462</b>	<b>2,514,309</b>	<b>17%</b>	<b>1%</b>

**Table 5: Total Tonnage through PMV by Sector**

Metric Tonnes	2008	2009	2010	% Change (2009 – 2010)	% Change (2008 – 2010)
Auto*	456,442	387,230	381,609	-1%	-16%
Break-bulk	20,313,638	14,549,817	16,800,139	15%	-17%
Bulk	73,333,407	67,672,340	80,268,352	19%	10%
Containerized	20,458,504	19,278,437	20,928,784	9%	2%
<b>Total</b>	<b>114,561,990</b>	<b>101,887,824</b>	<b>118,378,885</b>	<b>16%</b>	<b>3%</b>

\* 1 Vehicle Unit = 1 Metric Tonne.

**Table 6: Percentage of PMV Total Tonnage by Sector**

Commodity	2008	2009	2010
Auto	0.4%	0.4%	0.3%
Break-bulk	18%	14%	14%
Bulk	64%	66%	68%
Containerized	18%	19%	18%
<b>Total*</b>	<b>100.4%</b>	<b>99.4%</b>	<b>100.3%</b>

\* Numbers do not add to 100 due to rounding.

## Endnotes

<sup>1</sup> 1998, c. 10.

<sup>2</sup> Ibid, preamble.

<sup>3</sup> “The Canada Marine Act – Beyond Tomorrow” – Report of the Review Panel to the Minister of Transport (June, 2003).

<sup>4</sup> Ibid, at chapter 3.

<sup>5</sup> Ibid.

<sup>6</sup> Bank of Canada – Monthly and Annual Noon Exchange Rate Averages [http://www.bankofcanada.ca/en/rates/exchange\\_avg\\_pdf.html](http://www.bankofcanada.ca/en/rates/exchange_avg_pdf.html) (retrieved February 15, 2011).

<sup>7</sup> For further discussion on this point, please see “2008 Port Metro Vancouver Economic Impact Study” – Inter Vistas Consulting (January 12, 2009).

<sup>8</sup> “Statistics Overview 2010” – Port Metro Vancouver (January, 2011).

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<sup>9</sup> “British Columbia Ports Strategy” – Ministry of Small Business and Economic Development (March, 2005).

<sup>10</sup> *Ibid*, at p. 7.

<sup>11</sup> The port of Los Angeles-Long Beach has the distinction of being the largest container port in North America.

<sup>12</sup> “Connecting Asia to North America” – Pacific Gateway Branch <http://www.pacificgateway.gov.bc.ca/index.htm> (retrieved February 9, 2011).

<sup>13</sup> “West Canadian ports vie for China trade” – Cargonews Asia <http://www.cargonewsasia.com/secured/article.aspx?article=23874> (retrieved Feb 15, 2011).

<sup>14</sup> “Directory of Pacific Coast Container Ports, Terminals, and Services”, Hanam Canada Corporation (January, 2007).

<sup>15</sup> As of 2009 – California Department of Finance [http://www.dof.ca.gov/HTML/FS\\_DATA/LatestEconData/documents/BBRANK.XLS](http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/documents/BBRANK.XLS) (retrieved February 15, 2011).

<sup>16</sup> “Seizing Trade Opportunities” – Transport Canada (Asia Pacific Gateway and Corridor Initiative) <http://www.tc.gc.ca/canadagateways/apgci/trade-logistics.html> (retrieved February 15, 2011).

<sup>17</sup> “Pacific Gateway Strategy + Plan 2006 – 2020” (April 2006).

<sup>18</sup> *Ibid*, at p. 1.

<sup>19</sup> *Ibid*, at p. 5.

<sup>20</sup> *Supra* note 9, at p. 10.

<sup>21</sup> “Pacific Coast Container Terminal Competitiveness Study”, Hanam Canada Corporation (March, 2008) at Chapter 7.

<sup>22</sup> *Supra* note 14.

<sup>23</sup> “Container Capacity Expansion Plans at Pacific Coast Ports” Hanam Canada Corporation (January, 2007).

<sup>24</sup> *Supra* note 9 at p. 9.

<sup>25</sup> *Ibid*.

<sup>26</sup> “Australian woes spoke coal prices” – Kunal Bose, *Business Standard Live Markets*, <http://www.business-standard.com/commodities/news/australian-woes-spike-coal-prices/424580/>.

<sup>27</sup> There are estimates that the steel-making coal price could surpass US\$400/tonne as a result of the flooding of 2010/2011 in Queensland – “Coking coal prices to skyrocket as stockpiles dry up” – Matt Chambers, *Business with the Wall Street Journal*, (January 24, 2011) <http://www.theaustralian.com.au/business/coking-coal-prices-to-skyrocket-as-stockpiles-dry-up/story-e6frg8zx-1225993253543> (retrieved February 9, 2011).

<sup>28</sup> “Important Facts on Canada’s Natural Resources” – Natural Resources Canada <http://www.nrcan-rncan.gc.ca/stat/index-eng.php> (retrieved February 11, 2011).

<sup>29</sup> *Ibid*. All dollar amounts shown are in current Canadian dollars, except GDP, which is shown in 2002 constant dollars. The data reported for each of the natural resources sectors reflect the value of primary industries and related downstream manufacturing industries as of October 2009. Balance of trade is the difference between the total exports and the total imports of goods. Services and capital flows are not included.