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**Item No. 4**  
**Halifax Regional Council**  
**August 3, 2010**

**TO:** Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:** Original Signed  
\_\_\_\_\_  
Phillip Townsend, Director, Infrastructure and Asset Management

**DATE:** June 24, 2010

**SUBJECT:** Environmental Goals and Sustainable Prosperity Act Annual Report, 2010  
and Corporate Sustainable Transition Team  
\_\_\_\_\_

## **INFORMATION REPORT**

### **ORIGIN**

This report originates from Staff.

## **BACKGROUND**

### **Environmental Goals and Sustainable Prosperity Act (EGSPA)**

Excerpt from <http://secondnature.gov.ns.ca/> (the Province of Nova Scotia's branding and communications tool around Sustainability):

“In Nova Scotia, we believe the environment and the economy can thrive together. We believe a healthy environment is the foundation of a prosperous economy, and that a prosperous economy allows us to manage our environment wisely. Many examples of that dynamic already exist in our province and there is a vast potential for more.

That's why in April of 2007 the House of Assembly took the rare step of unanimously passing the Environmental Goals and Sustainable Prosperity Act. The Act sets out an ambitious vision for Nova Scotia and 21 specific goals, with deadlines, to mark the way toward that vision.

#### **The Vision**

The Environmental Goals and Sustainable Prosperity Act is unique because it explicitly links prosperous economy to a healthy environment.

By 2020, Nova Scotia will have one of the cleanest and most sustainable environments in the world and an economic performance that is equal to or above the Canadian average.

#### **The Environmental Goals**

The Act establishes 21 clear goals for our environment. They address ecosystem protection, air emissions, renewable energy, water quality, contaminated sites, solid waste, sustainable purchasing, and energy-efficient buildings.

#### **Sustainable Prosperity**

The Environmental Goals and Sustainable Prosperity Act (EGSPA) refers specifically to Nova Scotia's economic development strategy, Opportunities for Sustainable Prosperity. Our business climate and the health of our economy depend on our infrastructure, financial assets, environment, work force, and our social networks. These assets can be thought of as capital accounts. Nova Scotia's economic growth strategy sets out priorities and actions in each of them -- our financial, natural, built, human and social capitals.”

An overview of the commitments is in Attachment One.

## **DISCUSSION**

On Wednesday, June 23, 2010, the province released:

1. EGSPA Progress Report 2010 (Attachment Two); and
2. EGSPA Technical Report 2010 (Attachment Three).

With the Union of Nova Scotia Municipalities/Province of Nova Scotia Climate Change Memorandum of Understanding (Attachment Four), among other influences, EGSPA has a great impact on municipal economic development, sustainability, planning, project and operating service delivery efforts.

### **Corporate Sustainable Transition Team**

A very relevant example of the influence that the EGSPA has had on the Halifax Regional Municipality (HRM), can be demonstrated in the recent reformation and focusing of the Sustainable Transition Team. Originally established by former Sustainable Environment Management Office (SEMO) Manager, Stephen King, in June 2007, the fundamental mandate of the corporate “Sustainability Transition Team” included “greening the corporate culture through the promotion of sustainability practices, policies, education and awareness throughout HRM”.

The Sustainable Transition Team includes a cross section of key influential staff from across the various departments within the organization. While still verifying some representation, the team is well representative of the organization as per Attachment Five.

The focus of the recent Team Meeting was to agree on our focus areas, which were agreed to be:

1. Preparation of an Annual Sustainability Report to compliment the Corporate Reporting processes;
2. Internal capacity building around sustainability; and
3. External capacity building around sustainability.

### **Sustainability Filter**

In addition to the areas of focus, part of the Internal Capacity Building efforts will be the implementation of a corporate sustainability filter to support decision making. In 2008, staff started efforts to create and implement a sustainability filter (see Regional Council Report: <http://www.halifax.ca/council/agendasc/documents/080805ca081.pdf>). Following varied initiatives

to apply a sustainability filter in a broad range of activities, staff worked on developing a tool to offer staff for making decisions around sustainability, and the draft filter in Attachment Six was created and discussed.

Further implementation efforts have continued. It has been recognized that a single tool and application of a filter cannot be a one size fits all. A sustainability filter for an Engineer appears to need to work differently than a filter for a Planner, and differently for an Accountant, etc. In Sweden, staff learned that some filters are simply a happy face or a sad face, in the EGSPA report we see suns and clouds and numbers and graphs, some people want a score.

It is the contention of SEMO staff that there is a need for flexibility in the application of a filter, the key point being that the decision maker is contemplating things related to sustainability when making a recommendation or a decision. A specific area where we are working on implementing the filter in 2010/ 2011, is in the Project Planning process in reviewing Capability Projects. It is anticipated that a process will be articulated in fall/winter of 2010. Regardless of the final mechanics of application, it is evident that staff are increasing their adoption of sustainability considerations early on in their decision making processes.

### **BUDGET IMPLICATIONS**

There are no immediate budget implications resulting from this Information Report. It should be noted that Provincial Policy and Funding Programs are being created to support EGSPA. Programs such as EcoTrust, the developing Carbon Offset Fund, and the programming that will be delivered by Conserve Nova Scotia and the Office of Energy Efficiency, have a huge impact on our long term projects and operating budgets. Staff place high priority on monitoring, examining and consulting on these policies and programs to best serve the residents of HRM.

### **FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN**

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

## **COMMUNITY ENGAGEMENT**

HRM has not initiated any Community Engagement on EGSPA. The Province of Nova Scotia is increasing efforts to communicate the content and importance of EGSPA to the community and municipalities in advance of the 2012 review. Residents and Municipal Staff in HRM will have opportunities to provide input for additional goals.

## **ATTACHMENTS**

1. 2020 Fact Sheet - attached
2. EGSPA Progress Report 2010 - link:  
<http://www.gov.ns.ca/nse/egspa/docs/EGSPA.2010.Annual.Report.pdf>
3. EGSPA 2010 Technical Report - link:  
<http://www.gov.ns.ca/nse/egspa/docs/EGSPA.2010.Technical.Report.pdf>
4. Climate Change MOU - attached
5. Sustainable Transition Team - attached
6. Draft Sustainability Filter - attached

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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# N O V A S C O T I A ' S 2020 VISION

Attachment 1

**Nova Scotia aims to have one of the cleanest and most sustainable environments in the world by 2020.**

This commitment was adopted in the Environmental Goals and Sustainable Prosperity Act, proclaimed in June 2007. The act sets out 21 far-reaching goals for the province, ranging from reduced air emissions and waste, to new energy standards for buildings and increased protection of our land and water. These goals are outlined below.

## **Ecosystem Protection**

**Protecting our most valuable assets-our natural environment**

- Legally protect 12% of the total land mass of the province by 2015
- Adopt strategies to ensure the sustainability of forestry, mining, parks, and biodiversity by 2010
- Establish a policy to prevent net loss of wetlands by 2009

## **Air Emissions**

**Doing our part to fight climate change and improve the air we breathe**

- Reduce GHG emissions to at least 10% below 1990 levels by 2020
- Adopt emissions standards for new vehicles by 2010
- Reduce nitrogen oxide emissions by 20% (from 2000 levels) by 2009
- Reduce sulphur dioxide emissions by 50% (from sources existing in 2001) by 2010
- Reduce mercury emissions by 70% (from 2001 levels) by 2010
- Meet the Canada-wide standard for airborne fine particulate matter by 2010
- Meet the Canada-wide standard for ground-level ozone (which contributes to smog) by 2010

## **Renewable Energy**

**Tapping into nature's source of energy**

- Obtain 18.5% of Nova Scotia's total electricity needs from renewable sources by 2013

## **Water Quality**

**Restoring, preserving, and managing our precious water resources**

- Develop a comprehensive water-resource management strategy by 2010
- Provide at least primary treatment to all wastewater treatment facility discharges by 2017
- Meet operating guidelines for all septage treatment facilities by 2011
- All municipal public drinking water supplies will meet the province's treatment standards by 2008

## **Contaminated Sites**

**Building our economy by renewing our land**

- Develop regulatory tools to stimulate redevelopment of contaminated land by 2010

## **Solid Waste**

**Continuing to be an international leader in solid waste management**

- Reduce Nova Scotia's solid waste disposal rate to no more than 300 kg/person per year (38% reduction from 2006 levels) by 2015

## **Sustainable Purchasing**

**Leading the way in the purchase of environmentally and socially responsible goods and services**

- Develop and adopt a sustainable procurement policy for government departments by January 1, 2009

## **Energy-Efficient Buildings**

**Saving money and energy in our buildings at work, home, and play**

- Require all new residential dwellings in the province to display an EnerGuide rating by 2008 (EnerGuide is a national energy efficiency rating, from 1 to 100. The higher the number, the higher the efficiency.)
- Require an EnerGuide rating of 80 on all new residential dwellings by 2011
- Construct a green-certified government building as a demonstration facility by 2015

## **Achieving the 2020 Vision**

The province will be developing new strategies and policies to advance its 2020 Vision in co-operation with other levels of government, private industry, and the public. The Minister of Environment and Labour will report annually to the House of Assembly on progress made toward the goals.

**Achieving the province's vision will require effort and commitment from all Nova Scotians. We are confident that we can live up to the challenge. The future prosperity of our economy and ecosystems depends on it.**

*This is an overview of the Environmental Goals and Sustainable Prosperity Act. It is not intended to be a complete description and is not binding on the Crown. Please refer to the official version of the legislation, which is available online through the Nova Scotia Legislature website.*



ENVIRONMENTAL GOALS AND SUSTAINABLE PROSPERITY ACT

# PROGRESS Report 2·0·1·0

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## Environmental Goals and Sustainable Prosperity Act

# Progress Report 2010

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## MESSAGE FROM THE MINISTER

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The *Environmental Goals and Sustainable Prosperity Act* is a unique and important piece of legislation. It sets out a path for Nova Scotia to be a world leader by having one of the cleanest and most sustainable environments in the world with a strong and prosperous economy.

I am pleased to present this progress report, outlining our accomplishments as we work towards achieving the goals established in the Act. We've made progress toward improved air and water quality, protecting land for future generations, and reducing government's own impact on the environment. In the next year I look forward to the continued progress as we advance new government strategies in key areas such as water resource management, wetland conservation, and natural resources management.

June 2010 will mark the third anniversary of the proclamation of this act. As we mark this anniversary I am pleased with the progress that has been made. We continue to face challenges as we work toward achieving the goals and targets but, by working together with businesses, community organizations and individual Nova Scotians, we will succeed. All Nova Scotians have a role in reaching these goals and ensuring that Nova Scotia has a healthy environment, thriving communities, and a competitive economy.

Sterling Belliveau  
*Minister of Environment*



## INTRODUCTION

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The Environmental Goals and Sustainable Prosperity Act (EGSPA) became a law in Nova Scotia in the spring of 2007. This act recognizes the critical link between the environment and the economy. At the time, it was considered bold and progressive. This is still true today. This report presents a frank assessment of the progress made on each of the 21 goals and two overarching objectives in the act leading up to the year 2020.

Looking back on the 2009-10 fiscal year, many EGSPA targets have been met or are well underway. Others present challenges that government and others are working hard to overcome. In some cases the bar has been raised, with successes that go beyond the targets in the act. A few highlights are profiled here and a summary of each target is found in the pages that follow. A snapshot version of this progress report is available at [www.gov.ns.ca/nse](http://www.gov.ns.ca/nse).

### Progress Highlights

Government recognizes the benefits of reducing the environmental footprint of buildings while saving money. A partnership with the Nova Scotia Community College has led to the construction of the Centre for the Built Environment at the Waterfront Campus in Dartmouth. This state of the art teaching facility incorporates such things as solar panels, a solar hot water system, wind turbines, geothermal heating and cooling, and a green roof to reduce heating and cooling demands. It will open in the summer of 2010, well in advance of the act's 2015 target date to construct a demonstration facility to showcase energy efficiency and sustainable design.

All government buildings are now built to LEED<sup>\*</sup> Silver standards. Building projects that receive financial support from government must also meet energy efficiency and water conservation standards. Significant changes to the Building Code Act in 2009 will also have lasting positive impacts on the energy efficiency of buildings. New residential buildings, renovations or additions, as well as commercial buildings less than 600 m<sup>2</sup> must now meet EnerGuide 80 standards, equivalent to R-2000. Plans are in place to extend this requirement to all buildings in 2012. This is another example of a goal that was achieved early. It also goes far beyond the target set in EGSPA.

In August 2009, government adopted a sustainable procurement policy. Environmental, social and economic factors are now considered when making purchasing decisions. Over time, this will have a significant positive effect, as government spends about \$800 million a year on supplies and services.

Progress has also been made increasing the amount of protected land in Nova Scotia, which now represents approximately 8.6 per cent of the province. In 2009, government designated three new wilderness areas (Shelburne River, Blue Mountain-Birch Cove Lakes, and Ship Harbour Long Lake Wilderness Areas) totalling 18,300 hectares.

\* LEED stands for Leadership in Energy and Environmental Design, an international standard for the design and construction of high-performance, sustainable buildings.



In 2009-10, Nova Scotia Environment received a dedicated \$1.5 million Tangible Capital Asset (TCA) allocation to acquire critical conservation lands. In September 2009, government increased the provincial TCA allocation for land purchase and improvements. As a result, more than 57,000 hectares of land was purchased for about \$75 million to help meet a number of environmental, economic, and social objectives, including the goal of protecting 12 per cent of the province's land mass by 2015.

Efforts are underway to address the challenging greenhouse gas (GHG) and air pollution targets in EGSPA. In August 2009, Nova Scotia became the first province in Canada to impose regulated hard caps on GHG emissions from the electricity sector. The electricity sector is currently responsible for approximately fifty percent of Nova Scotia's GHG emissions. The caps ensure that by 2020, GHG emissions from the sector will be reduced by about one quarter. New, more stringent caps were also placed on emissions of air pollutants. These caps exceed the current EGSPA targets and take effect in 2015 and 2020.

In January 2010, Efficiency Nova Scotia was established. This independent administrator will help Nova Scotians use less energy, and reduce greenhouse gas emissions. Government is also working to ensure that more of the electricity generated in Nova Scotia comes from cleaner sources. In July 2009, government announced its goal of meeting 25 per cent of the province's electricity needs through renewable sources by 2015. This goes beyond the 18.5 per cent target for renewable energy in EGSPA. A plan to reach this new and aggressive target will be released in April 2010.

## Investing in Our Future

The work to achieve the environmental goals in EGSPA is taking place in the broader context of economic prosperity. A clean and healthy environment supports a strong economy and vice versa. To achieve this goal, efforts from all levels of government, businesses, industry associations, not-for-profit organizations and citizens is needed.

Government is investing in infrastructure, promoting skills development and training, encouraging productivity and innovation, and positioning the province to engage more effectively in the international economy. This is being done while protecting the environment and helping communities affected by the economic downturn. For example, the village of Weymouth, with support from all three levels of government, is constructing a state-of-the-art library facility with a community training and resource centre.

High-speed access to the Internet across the province is creating new opportunities for communities and individuals. This initiative also supports businesses as they embrace new ways of doing things to become more productive and globally competitive.

Government investment is helping to improve environmental quality while supporting sustainable economic development. The ecoNova Scotia Fund for Clean Air and Climate Change, a \$42.5 million fund, currently



supports 89 projects. Together with partners, millions of dollars are being invested in equipment and materials to implement these projects. Year after year, as of November 2009, ecoNova Scotia funded projects will result in:

- GHG reductions of 172,000 tonnes
- air pollutant reductions of 525,000 kg, by cutting emissions of sulphur oxides by 294,000 kg and nitrogen oxides by 231,000 kg
- the equivalent of 38,000 cars off the road

Many of these projects will result in spin-off emission reductions as they transform technology and encourage innovation in the province. As an added bonus, hundreds of people are employed during project development, and new jobs will be created once the projects are in place. The program will create over 55 full time jobs under the Environmental Technology Program alone.

Another government investment program, the Community Development Trust Fund, is making strategic investments to help transition key sectors and rural communities throughout Nova Scotia facing economic hardship. To date, \$30.6 million has been committed to 16 community initiatives such as the Forestry Task Force Action Plan, Seafood Processing Sector Revitalization, Local Food Networks and Farmers Markets, and Tourism Niche Market Development.

## Looking Forward

With all of this progress, there are still specific areas that present challenges for the government. Some goals, such as the ambitious air emissions standards set for new vehicles, rely on a national and/or regional approach. Other goals, such as meeting the standards for wastewater treatment or public municipal drinking water facilities, rely on municipal and federal partnerships and significant infrastructure investments at a time when budgets are shrinking. These are not excuses but realities that must be addressed. Government will continue to work with the Round Table on Environment and Sustainable Prosperity (see Round Table letter, page 33) and others to find creative ways to accomplish these goals.

Government is also looking to the future as the act is reviewed in 2012 and amended to reflect new environmental standards and economic objectives. This will keep our province on track to have one of the cleanest and most sustainable environments by 2020 and beyond.



## EGSPA GOALS AND OBJECTIVES

The Environmental Goals and Sustainable Prosperity Act includes 21 goals related to natural capital, with strong links to social, human, built and financial capitals (see Appendix 2). Some goals commit to strategies that support stewardship of natural capital (land, water, wetlands, forests, minerals, parks and biodiversity). Other goals support clean air and water, factors critical for human health and social well-being. Infrastructure related goals, such as the requirement for primary wastewater treatment, or the drinking water facility standards, link to built capital. And all goals have a financial impact, such as the cost to the health care system of poor air quality or benefits that come from stewardship of our natural resources.

An update on progress achieving these goals and overarching objectives is found in the following sections. A high-level summary can be found at [www.gov.ns.ca/nse](http://www.gov.ns.ca/nse).

### The Objectives

The act presents two high-level and ambitious objectives to strive for by 2020 (see text box). Nova Scotia is demonstrating leadership through the development and implementation of progressive sustainability legislation, policies and practices. Priorities are rooted in the legislated goals contained within EGSPA. Early successes, such as the Sustainable Procurement Policy and significant changes to the Building Code Act, are already making a difference. As this report shows, progress continues with other goals, a number of which are due by the end of 2010.

**4(1) The long-term environmental and economic objective of the Province is to fully integrate environmental sustainability and economic prosperity and to this end to:**

- 4(1)(a) demonstrate international leadership by having one of the cleanest and most sustainable environments in the world by the year 2020**
- 4(1)(b) provide certainty to all sectors of the economy through the Government's economic development strategy entitled Opportunities for Sustainable Prosperity and establish clear environmental goals while improving the Province's economic performance to a level that is equal to or above the Canadian average by the year 2020**

The act tasks the external Round Table on Environment and Sustainable Prosperity to conduct a review of the legislation and its goals every five years. The first review is due in 2012. The commitment to review the act on a regular basis provides an opportunity to re-assess priorities, consider emerging trends and continue to show leadership in achieving sustainable prosperity.

The act emphasizes the importance of integrating environmental sustainability and economic prosperity. This calls for a broad approach to tracking how we are doing as a province. The following section, "Measuring Up – Tracking Economic Progress", outlines this approach. The high-level indicator set presented here will track trends over time within Nova Scotia and across the country. This indicator set is not perfect, and work will continue to refine it and strengthen the environmental component as meaningful measures for Nova Scotia are selected.



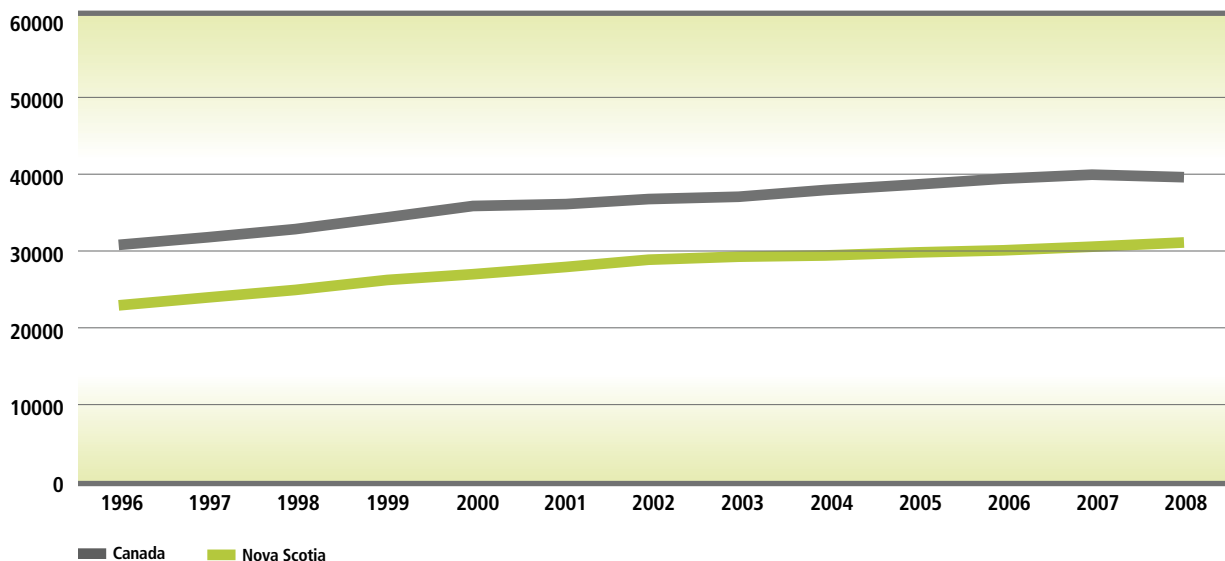


## MEASURING UP – TRACKING ECONOMIC PROGRESS

The strength of the economy and the health of the environment depend on one another. This is a basic principle in EGSPA. The act challenges Nova Scotia to achieve specific environmental goals while growing the economy. It sets the objective for the economy to perform at or above the Canadian average by 2020 (subsection 4(1)(b)). This is no small feat, as the province falls below the national average on a number of traditional economic indicators.

In terms of GDP per capita alone, Nova Scotia's economic performance remains well below the Canadian average (Figure 1). Between 2001 and 2006, this gap widened as provincial GDP growth slowed, and rapid economic growth in resource-rich Newfoundland and Labrador, Saskatchewan and Alberta boosted the Canadian average.

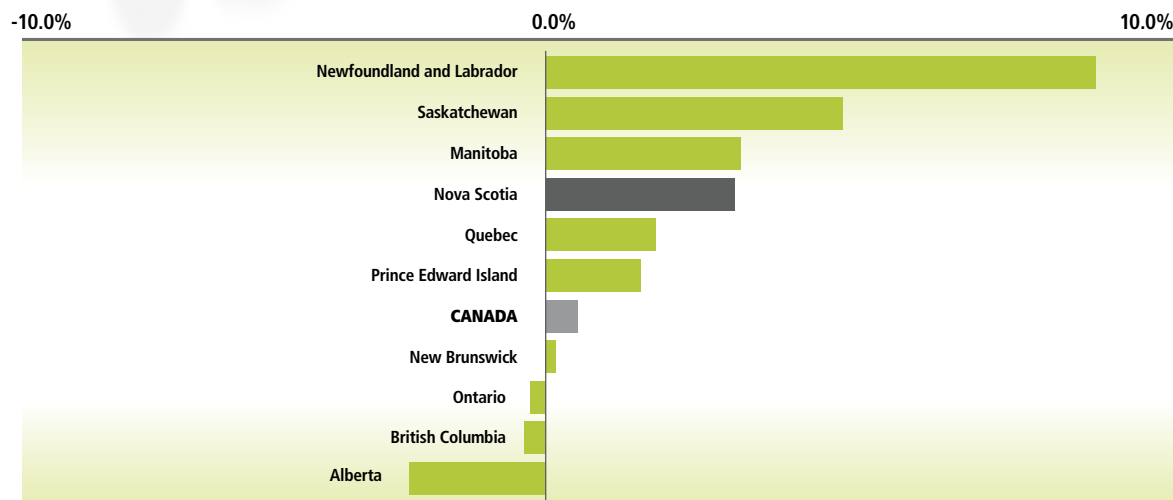
**FIGURE 1. GDP PER CAPITA – 1996 TO 2008**



In recent years, talk of the economy tends to dwell on the impact of the world-wide recession. So far Nova Scotia has fared relatively well compared to other provinces (see Figure 2). Between 2006 and 2008, Nova Scotia performed better than the Canadian average in terms of growth of Gross Domestic Product (GDP), ranking fourth among Canadian provinces, with a growth rate that was only slightly less than Manitoba's. In 2010, however, as the national economy rebounds, the GDP for Canada is expected to once again grow at a faster rate when compared to Nova Scotia.



**FIGURE 2. REAL GDP PER CAPITA GROWTH – 2006 TO 2008**



Economic indicators such as GDP are very important to track. When GDP is increasing, employment, profits, incomes and government revenues usually improve as well. This only tells part of the story. A prosperous economy must provide citizens with economic security, a healthy environment, and social well-being. The challenge is to achieve these objectives without risking quality of life in the future.

To get the whole picture, the things that build economic prosperity must be counted – human, social, built, financial, and natural capitals (See Appendix 2 for definitions). This concept was introduced in the 2009 EGSPA Progress Report. The health of each of these capitals is essential. One cannot be compromised for the benefit of another. This is the essence of sustainability.

A preliminary set of indicators is presented here to provide a broader view of the economy, including environmental and social measures (Table 1). They represent a slice of the economy from the perspective of all five capitals referenced above. Monitoring indicators over time in Nova Scotia, and across Canada, will identify where further analysis is required to understand emerging challenges and opportunities. The selection of indicators that capture a big picture of the economy was no easy task. For more details on the process and the indicators, a copy of the technical report is available on-line at [www.gov.ns.ca/nse](http://www.gov.ns.ca/nse).

Most of the indicators selected can be compared across the country. Some indicators affect more than one capital and cannot be slotted into a single category. A continuum is presented in Table 1 representing social, economic and environmental measures of economic prosperity. It might be useful to think of how various factors (lifestyle, environment, relationships) interact to support a person over their life-time. In a similar way, economic, environmental and social elements work together to support a healthy economy. In the table, weather symbols are used to represent the status of each indicator - sunshine means things are going well, while the thunder storm represents cause for concern.



**TABLE 1. INDICATOR SET**

	<b>PEOPLE</b>	sense of belonging to community	income equality	persistence in low income
		post secondary education	life expectancy	employment ratio-visible minority groups
	<b>ECONOMY</b>	labour productivity	net investment in capital stock	personal savings
		Gross Domestic Product (GDP)	government debt	
	<b>ENVIRONMENT</b>	value of natural resources (unharvested stock)	electricity generated from fossil fuels	
		water quality (planned - 2011)	forest sustainability (planned - 2011)	air quality (planned - 2011)

**Key:** Note: Data sources are found in Appendix 1.

- Favorable level, high to middle Canadian ranking, overall positive trend
- Favorable to neutral level, middle to low Canadian ranking, flat or positive trend
- Neutral to unfavorable level, middle to low Canadian ranking, flat or negative trend
- Unfavorable level, low Canadian ranking, flat or negative trend



## Our People

### HUMAN AND SOCIAL CAPITALS

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Viewed as a whole, our human and social capital is steadily improving and is in good health compared to other provinces. Social networks make possible a wide range of activities that support people, the economy and the environment. Nova Scotians are seen as supportive and community-focused. Reflecting this, in 2007, 71.7 per cent of Nova Scotians reported a strong sense of belonging to local community.

Inadequate social supports can lead to poor health, and limited employment and life skills. These factors create barriers to participation even when the economy is doing well. Over the last decade, the percentage of Nova Scotians experiencing three or more years of low income declined from 11.3 per cent to 7.0 per cent by 2007. Higher levels of income equality have been correlated with better quality of life for everyone, regardless of their income. Income equality declined slightly in Nova Scotia in the early years of this decade, but still remains higher than the Canadian average.

Poor health affects quality of life and the ability to work. Employees in Nova Scotia miss more work due to illness or disability than the Canadian average.<sup>1</sup> Diagnosis of chronic diseases, such as asthma<sup>2</sup> and cancer<sup>3</sup> is higher than any other Canadian province. This is reflected in a lower life expectancy for Nova Scotians compared to the Canadian average.

Completion of post-secondary education is related to better health and employment outcomes. One of Nova Scotia's major assets is a well educated workforce. Historically, Nova Scotia has also had a low rate of grade nine completion compared to other provinces. This difference has vanished in recent years. Between 1997 and 2009, the percentage of 25 to 44 year-olds with less than grade nine education fell by over 60 per cent.<sup>4</sup>

Almost two-thirds (65.2 per cent) of 25 to 44 year-olds living in the province have completed either a university, college, or trades apprenticeship program. Despite this achievement, in recent years the province has fallen below the Canadian average. Other provinces are also moving ahead of Nova Scotia in terms of developing and attracting a highly skilled younger working age population. Lower than average employment rates remain an issue for 25 to 44 year-olds who are members of a visible minority group. Although significant progress has been made, in 2006, this group was 87.6 per cent as likely to be employed as 25 to 44 year-old Nova Scotians as a whole.



## Our Economy

### ECONOMIC OUTPUT, FINANCIAL AND BUILT CAPITALS

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A highly skilled workforce and the adoption of innovative practices improve labour productivity. Our employment rates<sup>5</sup> have continued to increase in recent years, meaning more Nova Scotians are joining the labour market and finding work. As our population ages and more people retire, the size of the workforce is expected to decline. To meet this challenge, employers will need to learn to achieve more with fewer workers. Employees often benefit from increases in labour productivity, with higher average wages, and the stability of competitive, profitable employers. In recent years, Nova Scotia's labour productivity growth has fluctuated, with little overall improvement.

Nova Scotia faces significant challenges in the coming years in terms of building and maintaining healthy financial and built capital. Both government and private investors are a source of financial capital or investment funds. High levels of debt, both public and private, reduce the funds available for future investments. Although there has been a small decline in government debt over the past few years, government debt to GDP was 37.1 per cent in 2008. This is more than twice the Canadian average. Personal savings rates have been negative since 2002, meaning that, as a whole, Nova Scotians are now spending more than they earn. An increasing proportion of retirees, who are now spending their savings, combined with higher levels of household debt, have significantly changed the rate of personal saving over the past decade.

In recent years, the offshore gas industry has generated healthy levels of private investment. Expected declines in natural gas production in the future may reduce levels of investment to below the Canadian average<sup>6</sup>. Net investment in non-residential capital stock (investment less depreciation) has steadily declined since 1997, and fell below zero in 2008. A recent increase in investment brought the ratio above zero in 2009.



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## Our Environment

### NATURAL CAPITAL

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The indicators near the bottom of Table 1 represent the environment slice of the economy. They are intended to track the big picture view of natural capital. In comparison, the goals and targets in EGSPA are more specific, and supplement this view.

The value of certain key natural resource stocks (timber, oil, gas and minerals) has increased slightly in recent years to \$11,079 per person in 2008. Although important, Nova Scotia's natural resources are modest compared to the Canadian average (\$41,712 per person). Sustainable management of our resources is essential to maintain our natural resource industries and the health of the environment. Development of a forest sustainability indicator is planned for inclusion in the 2011 report.

Nova Scotia's production of greenhouse gases, as measured per capita, is about equal to the Canadian average<sup>7</sup>, and electricity is a major contributor. In 2008, electricity generated from fossil fuel per capita was still very high in Nova Scotia, although investment in renewable sources of energy and energy efficiency was beginning to have an effect. Decreasing fossil fuel usage will improve the quality of the air, lower greenhouse gas production and reduce economic risk due to increasing fossil fuel prices.

Clean water and air is essential for the health of individuals, communities, and the economy. It has been estimated by the Canadian Medical Association that the economic cost of air pollution in the province is approximately \$205 million dollars each year and this cost continues to rise.<sup>8</sup> Adequate indicators for the overall air and water quality have yet to be identified. Once available, they will be included in future reports.





## THE GOALS

4(2) To achieve the long-term objectives set forth in subsection (1), the Province's environmental and economic goals are to ensure:

### ecosystem protection

#### PROTECTING OUR MOST VALUABLE ASSETS - OUR NATURAL RESOURCES

**4(2)(u)** the Province will adopt strategies to ensure the sustainability of the Province's natural capital in the areas of forestry, mining, parks and biodiversity by the year 2010

**Measure:** status of natural resource strategy development for forestry, minerals, parks and biodiversity

**Target:** a provincial natural resource strategy in place by 2010

#### Where are we now?

The Natural Resources Strategy is being developed in three phases. Phase 2 is now complete.

In Phase 1, Voluntary Planning's Natural Resources Project Committee engaged citizens in discussions focusing on what is most valued about the four components of the province's natural resources (forests, minerals, parks and biodiversity). Two thousand people across the province participated in workshops and 600 written submissions were received. Voluntary Planning submitted its final report to the Minister of Natural Resources in April 2009, completing Phase 1.

In Phase 2, a Steering Panel led the strategy development process. This Panel was chaired by retired Chief Justice Constance Glube, and members included Mr Allan Shaw and Mr Joe B. Marshall. The Steering Panel oversaw the work of four technical Panels of Expertise (PoEs), one for each of the four strategy areas. Each panel included three members appointed in the summer of 2009, after an extensive recruitment and screening process. The PoEs conducted technical stakeholder consultations and prepared a report for the review of the Steering Panel.

The Steering Panel prepared an overarching report with recommendations for the Minister of Natural Resources in Phase 2. Phase 3, strategy development, will begin once the report and recommendations have been reviewed by Executive Council. The strategy is expected to be completed by the end of 2010.

#### How will we reach our target?

- ▶ implement the project management framework (Phases 1, 2, 3)
- ▶ promote the development of the Natural Resource Strategy and opportunities for citizen and stakeholder engagement
- ▶ use the Phase 1 report prepared by Voluntary Planning to inform Phase 2. This report synthesizes public values identified in the citizen engagement process.
- ▶ establish independent panels: an overarching Steering Panel, supported by four Panels of Expertise, one for each subject area: forests, minerals, parks and biodiversity
- ▶ require the Steering Panel to prepare a report and recommendations based on the individual reports from the Panels of Expertise and the Phase 1 findings.
- ▶ prepare the Natural Resources Strategy using information gathered in Phases 1 and 2 (Phase 3)



## ecosystem protection

continued...

**4(2)(a)** twelve per cent of the total land mass of the Province will be legally protected by the year 2015

**Measure:** per cent of the total land mass of the province that is legally protected

**Target:** 12 per cent land legally protected or 663,360 hectares by 2015

### Where are we now?

At the end of 2009, approximately 8.6 per cent of the province had been legally protected. In 2009, the province designated three new wilderness areas (Shelburne River, Blue Mountain-Birch Cove Lakes, and Ship Harbour Long Lake Wilderness Areas) totalling 18,300 hectares. In addition, designation is pending for over 6,600 hectares of land purchased in 2007 from Bowater Mersey.

Over the last three years considerable progress has been made to conserve privately owned land. As of January 2010, 7,040 hectares of privately owned land has been protected and is being exempted from taxation under the 2008 Conservation Property Tax Exemption Act. In addition, \$3.8 million from the Nova Scotia Crown Share Land Legacy Trust was used to secure over 2,100 hectares of ecologically significant private land, valued at nearly \$7.1 million.

In 2009-10, NS Environment received a \$1.5 million Tangible Capital Asset (TCA) allocation to acquire critical conservation lands. In September 2009, government increased the provincial TCA allocation for land purchase and improvements. As a result, more than 57,000 hectares of land was purchased for about \$75 million to help meet a number of environmental, economic, and social objectives, including the goal of protecting 12 per cent of the province's land mass by 2015.

In November 2009 the Colin Stewart Forest Forum submitted its report and recommendations to government on ways to protect lands while recognizing the need for an economically sustainable forestry sector. This will help to inform a conceptual protected areas plan that will be used for stakeholder consultation in 2010-11. Broad public consultation will follow.

### How will we reach our target?

- ▶ research candidate areas
- ▶ conduct socio-economic evaluations
- ▶ develop outreach and educational materials
- ▶ conduct internal reviews and stakeholder and public consultations
- ▶ develop and implement protected areas plan
- ▶ partner with land trusts and landowners
- ▶ acquire and designate land

*table continues on next page...*



## ecosystem protection

continued...

### Where are we now? (continued...)

While there is much work to be done, progress towards the 12 per cent goal is on track. Recent land acquisitions and private land conservation initiatives are expected to add about 1 per cent to the current protection. High conservation value Crown lands have been identified through a multi-year science-based approach. The process for evaluating, consulting on, and moving some of these lands towards legal protection is underway, with a goal of completing a protected areas plan by 2013 that will lead to the achievement of the 12 per cent goal.

#### Total hectares of land protected:

2007	451,016 hectares	~8.2 %
2008	456,160 hectares	~8.3 %
2009	474,800 hectares	~8.6 %



## water quality

### PROTECTING, RESTORING AND MANAGING OUR VALUABLE WATER RESOURCES

**4(2)(k)** a comprehensive water-resource management strategy will be developed by the year 2010

**Measure:** status of water-resource management strategy development

**Target:** water-resource management strategy developed by 2010

#### Where are we now?

The development of a water-resource management strategy for the province follows the successful implementation of the Drinking Water Strategy (2002). An interdepartmental steering committee lead by Nova Scotia Environment is overseeing the development of this strategy.

A public discussion paper, *Towards a water resource management strategy for Nova Scotia* was released in January 2008. It outlined a number of water issues in Nova Scotia and posed key questions about how we can best manage water resources.

Public input collected from workshops and written comments were summarized in a document entitled *What we heard: A public feedback report* (September 2008). Sessions were also conducted with staff from 14 government departments and agencies involved in or affected by water resource issues.

A draft set of policy options was prepared in 2010 for consultation with key stakeholders. This document will form the basis of the water resource management strategy planned for release later in the year.

#### How will we reach our target?

- ▶ conduct formal public consultation on water issues and water resource management
- ▶ review water resource programs and policies across government
- ▶ work with all levels of government on a path forward
- ▶ develop a draft strategy based on research and public input
- ▶ consult with key stakeholders on the draft policy options and prepare the final strategy



## water quality

continued...

**4(2)(j)** municipal public drinking-water supplies will meet the Province's treatment standards by the year 2008

**Measure:** per cent of municipalities that are in compliance with the Province's water treatment standards, as outlined in their operational approvals

**Target:** at least 95 per cent of municipal public drinking water supplies meet the provincial treatment standards by 2008

### Where are we now?

There are 84 municipal drinking water facilities that are required to meet the drinking water treatment standards. In addition to water quality, these standards include such things as operator training, monitoring and reporting requirements.

At the end of March 2010, approximately 65 per cent of facilities are in compliance with the provincial standard. These facilities serve approximately 90 per cent of the population in Nova Scotia. The municipalities with facilities not in compliance with the standard have submitted detailed plans and timelines to Nova Scotia Environment describing how they will meet the standard. As the numbers show, some municipalities are struggling to meet the standard. They are faced with challenges such as land acquisition delays, groundwater study requirements, construction delays and cost over-runs. Nova Scotia Environment together with Service Nova Scotia and Municipal Relations are working to help them overcome these challenges and achieve compliance.

<b>2007-08:</b>	<b>50 %</b>
<b>2008-09:</b>	<b>59 %</b>
<b>2009-10:</b>	<b>65 %</b>

### How will we reach our target?

- ▶ assist municipalities to obtain the necessary funding for infrastructure upgrades
- ▶ work with municipalities to develop drinking water treatment compliance strategies
- ▶ conduct regular inspections of municipal public drinking water supplies to assess compliance with standards
- ▶ take enforcement action when necessary



## water quality

continued...

**4(2)(n)** a policy of preventing net loss of wetlands will be established by the year 2009

**Measure:** status of policy preventing net loss of wetlands

**Target:** policy preventing the net loss of wetlands in place by 2009

### Where are we now?

The Department of Environment increased capacity to manage wetlands by hiring a wetlands specialist and conducting staff training. Wetland information sessions were also delivered to key stakeholders across the province.

Because of the broad nature of wetland issues, an inter-departmental Wetland Policy Working Group lead by Environment, guided the development of the *Wetland Conservation Policy* for Nova Scotia.

Public input on wetlands was gathered during the consultations on natural resources and water resource strategies (2007 to 2009). In addition, thirty-eight meetings were held with key stakeholders on the draft wetlands policy (more than 650 participants). Meetings with wetland experts from the government of New Brunswick were also held.

Public consultation on a draft *Wetland Conservation Policy* and a draft *Proponent's Guide to Wetland Conservation* took place from October to December of 2009. More than 150 stakeholders and interested Nova Scotians provided input that helped to shape the policy documents.

The approval and release of the wetlands policy and accompanying guide are planned for the spring/summer of 2010.

### How will we reach our target?

- ▶ research other jurisdictions respecting "no-net loss" of wetlands
- ▶ consult with the public and key stakeholders on wetlands
- ▶ work across departments to identify and manage wetland issues
- ▶ develop a draft wetlands policy and proponents guide
- ▶ consult with public on draft policy and guide and make appropriate amendments
- ▶ release policy and begin implementation





## water quality

continued...

**4(2)(p)** septage treatment facilities will be operated in accordance with the Guidelines for the Handling, Treatment and Disposal of Septage by the year 2011

**Measure:** per cent of septage treatment facilities that are operating in compliance with the guidelines

**Target:** at least 95 per cent of septage treatment facilities are operating in compliance with the guidelines by 2011

### Where are we now?

Under the *Guidelines for the Handling, Treatment and Disposal of Septage* (2005), each septage treatment facility in the province is required to prepare and implement a plan to meet the new requirements outlined in the guidelines.

All operating septage treatment facilities in the province currently have updated approvals that include targets and timelines to meet the guidelines referenced above. On December 31, 2010, these approvals will expire. New 10-year approvals will only be issued to sites that are in compliance with these guidelines.

At the end of 2009, 15 septage treatment facilities (56 per cent) have either completed the majority of the required upgrades and/or closed out in accordance with the guidelines. Six sites (22 per cent) are actively working toward upgrades and are expected to meet the December 31, 2010 deadline. Another six (22 per cent) have made limited progress and may not be in a position to obtain a new approval to operate.

### How will we reach our target?

- ▶ research and encourage alternative technologies
- ▶ require implementation of facility action plans for achieving compliance with the guidelines
- ▶ monitor sites on an on-going basis to ensure upgrades are being completed in accordance with engineering site assessments
- ▶ commence investigations and compliance activities for sites that are behind schedule



## water quality

continued...

**4(2)(I)** wastewater treatment facility discharges will be provided at least primary treatment by the year 2017

**Measure:** per cent of wastewater treatment facilities that provide at least primary treatment

**Target:** 100 per cent of wastewater treatment facilities provide at least primary treatment by 2017

### Where are we now?

Currently 90 per cent of municipal wastewater facilities meet the EGSPA target of at least primary treatment.

Nova Scotia has begun implementing the national *Municipal Wastewater Effluent strategy* (MWWE) which goes beyond the goal in EGSPA. This strategy, developed through the Canadian Council of Ministers of the Environment (CCME), sets out a framework to manage discharges from more than 3,500 wastewater facilities in Canada. The long term target (30 years) is to achieve secondary level treatment standards for municipal wastewater facility discharges.

The CCME has established a national coordinating committee to oversee the implementation of the strategy. Nova Scotia has also established a committee to help facilitate strategy implementation.

All municipal wastewater facilities in Nova Scotia will be issued new approvals requiring them to meet the secondary treatment levels within 10, 20 and 30 years, based on the level of risk that the facility poses.

This stricter national standard will require a significant investment of funding, resources and education. This will be difficult for those municipalities currently facing declining tax revenues. Close coordination with the federal government and Service Nova Scotia and Municipal Relations is essential for the achievement of this challenging goal.

### How will we reach our target?

- ▶ consult with municipalities on policy issues
- ▶ develop and implement the Canada-wide MWWE Strategy
- ▶ assist municipalities to obtain the necessary infrastructure upgrades



## air quality

### DOING OUR PART TO FIGHT CLIMATE CHANGE AND IMPROVE THE AIR WE BREATHE

**4(2)(e)** greenhouse gas emissions will be at least ten per cent below the levels that were emitted in the year 1990 by the year 2020, as outlined in the New England Governors and Eastern Canadian Premiers Climate Change Action Plan of 2001

**Measure:** annual provincial greenhouse gas emissions (GHG), as measured by the National GHG Inventory (revised annually by Environment Canada), compared with 1990 emission levels

**Target:** 17.1 M tonnes or less greenhouse gas emissions by 2020

#### Where are we now?

In 2004, Nova Scotia's greenhouse gas emissions peaked at approximately 19.5 per cent above 1990 levels. Change is required by all sectors of society to reach GHG emission target of 10 per cent below 1990. This includes such things as energy conservation, fuel switching and diversification of non-GHG emitting sources of power.

To help meet this target, in August 2009, Nova Scotia became the first jurisdiction in North America to impose hard caps on GHG emissions from the electricity sector. In 2010, government anticipates emissions from the electricity sector to be approximately 9.7 M tonnes. This is expected to decrease to approximately 8.8 M tonnes by 2015 and to approximately 7.5 M tonnes by 2020.

More stringent limits on air pollutants were also put in place through amendments to the Air Quality Regulations.

#### Nova Scotia greenhouse gas emissions:

<b>1990:</b>	<b>19.0 M tonnes</b>	<b>base year</b>
<b>2004:</b>	<b>22.7 M tonnes</b>	<b>19.5 % above base</b>
<b>2005:</b>	<b>21.6 M tonnes</b>	<b>13.6 % above</b>
<b>2006:*</b>	<b>20.0 M tonnes</b>	<b>5.3 % above</b>
<b>2007:</b>	<b>20.6 M tonnes</b>	<b>8.4 % above</b>
<b>2008:</b>	<b>20.8 M tonnes</b>	<b>9.5 % above</b>
<b>2009:</b>	<b>available in 2011</b>	

\* In 2006 the province's largest electricity consumer was closed for most of the year. Therefore, emissions for this year were lower than average.

#### How will we reach our target?

- ▶ implement the energy strategy and the climate change action plan
- ▶ regulate emissions (e.g., NSPI emissions cap)
- ▶ invest in energy conservation (new demand side management entity, Building Code amendments)
- ▶ require or encourage investment in renewable and cleaner energy sources (Renewable Energy Standard for electricity; conversions to natural gas)
- ▶ develop and implement a sustainable transportation strategy
- ▶ encourage projects with industry and municipalities that will reduce emissions with incentives through the ecoNova Scotia Program



## air quality

continued...

**4(2)(b)** the Province will adopt emissions standards for greenhouse gases and air pollutants from new motor vehicles, such as the standards adopted by the State of California by the year 2010

**Measure:** status of new motor vehicle emission standards for greenhouse gases (GHGs)

**Target:** GHG emission standards for new motor vehicles adopted by 2010

**Measure:** status of new motor vehicle emission standards for air pollutants

**Target:** air pollutant emission standards for new motor vehicles adopted by 2010

### Where are we now?

Because of its limited automotive market share, Nova Scotia is working closely with other jurisdictions on new vehicle emissions standards. This includes federal, provincial, and territorial counterparts and the northeastern United States.

By 2012, the United States will have its GHG emission standards aligned with those of California. Implementation is planned for vehicle model years 2012 to 2016.

In Canada, the federal government released a consultation draft on December 7, 2009 for comments regarding GHG emission standards from passenger automobiles and light trucks. The proposed standards and test procedures align with those of the United States. These standards would fall under the Canadian Environmental Protection Act (CEPA). They plan to have the regulations finalized by the summer of 2010, to become effective for the 2011 model year.

The federal government's *Sustainable Development Strategy* released in March 2010 says it will continue the development and implementation of air pollutant emission regulations for various classes of on-road vehicles and large and small engines used in off-road applications and fuels. The Province will continue to encourage the federal government to upgrade the national standards.

### How will we reach our target?

- ▶ consult with stakeholders
- ▶ work with federal/provincial/territorial counterparts on a national standard or standards
- ▶ encourage projects with industry and municipalities that will reduce emissions with incentives through the ecoNova Scotia Program



## air quality

continued...

**4(2)(c)** emissions of nitrogen oxides will be reduced by twenty per cent by the year 2009 relative to emissions in the year 2000

**Measure:** annual total nitrogen oxide (NO<sub>x</sub>) air emissions (tonnes) emitted by Nova Scotia Power Inc. in the province

**Target Achieved and Exceeded:**

in 2009 NO<sub>x</sub> emissions from NSPI decreased by about 36 per cent, compared with emissions in 2000

### Where are we now?

The NO<sub>x</sub> emission cap of 21,365 tonnes per year for Nova Scotia Power Inc. took effect January 2009, achieving the target. This cap is legislated by the Air Quality Regulations under the Environment Act.

Further NO<sub>x</sub> reductions beyond this EGSPA target have been added to the Air Quality Regulations for 2015 and 2020.

**NSPI NO<sub>x</sub> air emissions per year:**

<b>2000:</b>	<b>26,706 tonnes</b>	<b>base year</b>
<b>2001:</b>	<b>26,513 tonnes</b>	<b>0.7 % reduction</b>
<b>2002:</b>	<b>30,168 tonnes</b>	<b>13.0 % increase</b>
<b>2003:</b>	<b>31,882 tonnes</b>	<b>19.4 % increase</b>
<b>2004:</b>	<b>33,442 tonnes</b>	<b>25.2 % increase</b>
<b>2005:</b>	<b>32,300 tonnes</b>	<b>20.9 % increase</b>
<b>2006:</b>	<b>28,037 tonnes</b>	<b>5.0 % increase</b>
<b>2007:</b>	<b>25,862 tonnes</b>	<b>3.2 % reduction</b>
<b>2008:</b>	<b>21,398 tonnes</b>	<b>19.8 % reduction</b>
<b>2009:</b>	<b>17,075 tonnes</b>	<b>36.1 % reduction</b>

### How will we reach our target?

- ▶ target has been exceeded
- ▶ further NO<sub>x</sub> reductions beyond this EGSPA target have been added to the Air Quality Regulations for 2015 and 2020



## air quality

continued...

**4(2)(d)** sulphur dioxide emissions will be reduced by fifty per cent by the year 2010 from sources existing in 2001

**Measure:** annual total sulphur dioxide (SO<sub>2</sub>) air emissions\* (tonnes) in the province

**Target:** a 50 per cent reduction in SO<sub>2</sub> air emissions (total) by 2010

\* by emitters with greater than 90 tonnes SO<sub>2</sub> per year, including NSPI

### Where are we now?

Total sulphur dioxide emissions have been dropping over the last eight years. In 2005, the Air Quality Regulations under the Environment Act were amended to establish specific SO<sub>2</sub> emission caps for Nova Scotia Power Inc., including 108,750 tonnes in 2005 and 72,500 tonnes in 2010. The SO<sub>2</sub> target will be achieved with the 2010 emissions cap.

Further SO<sub>2</sub> reductions beyond this EGSPA target have been added to the Air Quality Regulations for 2015 and 2020.

Through these regulations, other facilities that emit more than 90 tonnes of SO<sub>2</sub> are also required to submit plans for how they will reduce their emissions by at least 25 per cent by 2010.

#### Nova Scotia SO<sub>2</sub> air emissions (total) per year:

<b>2001:</b>	<b>164,000 tonnes</b>	<b>base year</b>
<b>2002:</b>	<b>154,000 tonnes</b>	<b>6 % reduction</b>
<b>2003:</b>	<b>161,000 tonnes</b>	<b>2 % reduction</b>
<b>2004:</b>	<b>161,000 tonnes</b>	<b>2 % reduction</b>
<b>2005:</b>	<b>126,431 tonnes</b>	<b>23 % reduction</b>
<b>2006:</b>	<b>126,281 tonnes</b>	<b>23 % reduction</b>
<b>2007:</b>	<b>123,645 tonnes</b>	<b>25 % reduction</b>
<b>2008:</b>	<b>124,300 tonnes</b>	<b>24 % reduction</b>

### How will we reach our target?

- ▶ established SO<sub>2</sub> air emission caps for Nova Scotia Power Inc.
- ▶ require all facilities that emit more than 90 tonnes of SO<sub>2</sub> to develop and implement a SO<sub>2</sub> air emission reduction plan
- ▶ work with industry to reduce SO<sub>2</sub> air emissions





## air quality

continued...

**4(2)(f)** mercury emissions will be reduced by seventy per cent by the year 2010 relative to pre-2001 levels

**Measure:** annual total mercury (Hg) air emissions (kg) from electrical power generation (NSPI) in the province

**Target:** 65 kg mercury air emissions from electrical power generation (NSPI) by 2010

### Where are we now?

The Air Quality Regulations under the Environment Act were amended in 2007 to lower the Nova Scotia Power Inc. mercury emissions cap to 65 kg by 2010. The mercury target will be achieved with the 2010 emissions cap.

This mercury emissions cap is consistent with the Canada-Wide Standard established by the Canadian Council of Ministers of the Environment.

Nova Scotia Power Inc. has installed mercury abatement equipment on three of their four coal-fired facilities. This equipment will significantly reduce mercury emissions and the 2010 target is on track.

#### Hg air emissions from electrical power generation (NSPI) in Nova Scotia\*:

pre-2001	~226 kg	base year
2006:	161 kg	29 % reduction
2007:	157 kg	30 % reduction
2008:	162 kg	28 % reduction
2009:	140 kg	38 % reduction

\* numbers revised based on most recent data

### How will we reach our target?

- ▶ a regulated mercury air emission cap for Nova Scotia Power Inc.
- ▶ on-going work with NSPI to reduce Hg air emissions



## air quality

continued...

**4(2)(h)** the Province will meet the Canada Wide Standard established by the Canadian Council of Ministers of the Environment for airborne fine-particulate matter by the year 2010

**Measure:** 98th percentile ambient fine particulate matter ( $PM_{2.5}$  = less than 2.5 microns), measured annually and averaged over three consecutive years

**Target:** 30  $\mu g/m^3$   $PM_{2.5}$  or less with a 24 hour averaging time by 2010

### Where are we now?

Significant improvements have been made to the provincial air monitoring network. New ambient fine particulate matter ( $PM_{2.5}$ ) measurement instrumentation has been installed at various stations across the province.

An implementation plan for  $PM_{2.5}$  is currently in place that demonstrates how the Canada Wide Standard (CWS) will be achieved.

The CWS for  $PM_{2.5}$  is currently being met within the Halifax Regional Municipality, one of two Census Metropolitan Areas (greater than 100,000 people), for which reporting is required. The CWS for the Cape Breton Regional Municipality cannot be calculated at present because of insufficient data.

#### 98<sup>TH</sup> percentile ambient fine particulate matter

	HRM
2003-2005:	14 $\mu g/m^3$
2004-2006:	14 $\mu g/m^3$
2005-2007:	16 $\mu g/m^3$
2006-2008:	15 $\mu g/m^3$

### How will we reach our target?

- ▶ upgrade provincial air monitoring network to include  $PM_{2.5}$  instrumentation
- ▶ implement a  $PM_{2.5}$  reduction plan
- ▶ continue to work with national committees to improve  $PM_{2.5}$  monitoring methodologies



## air quality

continued...

**4(2)(i)** the Province will meet the Canada Wide Standard established by the Canadian Council of Ministers of the Environment for ground-level ozone by the year 2010

**Measure:** 4th highest measurement annually of ambient levels of ground-level ozone, averaged over 3 consecutive years

**Target Achieved:**

the Canada Wide Standard for ground-level ozone of 65 ppb or less, with 8 hour averaging time, is consistently being met in the two Census Metropolitan Areas in Nova Scotia

### Where are we now?

Significant improvements have been made to the provincial air monitoring network. New ground-level ozone monitoring instrumentation has been installed at various stations across the province.

An implementation plan for ground-level ozone is currently in place that demonstrates how the Canada Wide Standard (CWS) will be achieved.

The CWS for ground-level ozone is consistently being met in the two Census Metropolitan Areas in Nova Scotia as reported below.

**ambient ground-level ozone:**

	HRM	CBRM
2000-2002:	57 ppb	49 ppb
2001-2003:	53 ppb	49 ppb
2002-2004:	51 ppb	46 ppb
2003-2005:	46 ppb	46 ppb
2004-2006:	48 ppb	48 ppb
2005-2007:	47 ppb	50 ppb
2006-2008:	51 ppb	55 ppb

### How will we reach our target?

- ▶ target has been achieved
- ▶ on-going implementation of the ground-level ozone reduction plan will continue



## renewable energy

### TAPPING INTO NATURE'S SOURCE OF ENERGY

**4(2)(g)** eighteen and one-half per cent of the total electricity needs of the Province will be obtained from renewable energy sources by the year 2013

**Measure:** annual electrical generation from renewable energy sources as a per cent of all electricity sales in the province\*

**Target:** 18.5 per cent renewable energy sources by 2013

\* This target is calculated based on the amount of renewable energy relative to the total electric energy used in the province. Total energy use declines and the percentage of renewable energy increases when major industrial customers are shut down for extended periods of time. An increase in conservation and energy efficiency will also have a positive effect on the renewable energy target.

#### Where are we now?

In 2007, the Renewable Energy Standard Regulations under the Electricity Act were enacted, establishing the requirement by 2013 for 10 per cent of the electricity supply to come from renewable sources built after 2001. Combined with pre-2001 renewable sources, this will result in at least 18.5 per cent of our electricity supplied by renewable sources, including hydro, wind, solar, tidal, and biomass.

Recent amendments to the Renewable Energy Standard Regulations under the Electricity Act provide for a one year extension (to 2011) for the NSPI interim target of 5 per cent post-2001 renewable energy. This will not affect the EGSPA target for 2013.

NSPI is currently being supplied with electricity from 60 Megawatts (MW) of post-2001 renewable energy and has signed long term power purchase deals with wind energy developers for an additional 245 MW.

On December 31, 2009, RMS Energy's Dalhousie Mountain wind farm project began generation (51 MW).

Government recently committed to increase the renewable electricity supply in the province to 25 per cent by 2015. A plan will be released in April 2010 to show how this new and aggressive target will be met.

#### Nova Scotia's renewable energy sources:

2001:	8.5 %
2006:	9.7 %
2007:	8.4 %*
2008:	11.0 %*
2009:	11.3 %*

\*revised based on load and generation

#### How will we reach our target?

- ▶ enforce Renewable Energy Standard Regulations under the Electricity Act with specific renewable energy targets
- ▶ continue efforts by NSPI to acquire renewable energy supplies
- ▶ conduct a tidal energy demonstration project on the Bay of Fundy
- ▶ continue to research and encourage investment in electricity from renewable energy sources



## contaminated sites

### BUILDING OUR ECONOMY BY RENEWING OUR LAND

**4(2)(m)** regulatory tools that use the framework within the Environment Act to stimulate redevelopment of contaminated land and contribute to economic development while protecting the environment will be developed by the year 2010

**Measure:** status of regulatory approach and tools to stimulate redevelopment of contaminated lands

**Target:** regulatory approach and tools to stimulate redevelopment of contaminated lands developed by 2010

#### Where are we now?

Contaminated sites in the province are currently dealt with using the Environment Act and Nova Scotia Environment policies and guidelines. A more formal process has been requested by the public, site owners, lenders, insurers and municipalities, among others.

Amendments to the Environment Act in 2006 included the authority to develop a new regulatory approach to deal with contaminated sites. New regulatory tools required in EGSPA will help to clarify liability, improve consistency, and formalize the current system.

Significant technical, legal and financial complexities as well as consideration of the implications for specific groups affected by potential changes in the current system have led to delays in the timeline for this target. A Stakeholder Advisory Committee was established and extensive internal and external consultations are on-going.

The Law Reform Commission of Nova Scotia released a discussion paper in April 2009 to gather public input on contaminated site processes and liabilities in Nova Scotia. Their final report, released in December 2009, presents recommendations for improving the current legislative regime.

The Department of Environment plans to release a discussion paper in the spring of 2010 to get public feed-back on policy options and regulatory tools under consideration. Consultation on the resultant draft regulation is planned for the fall of 2010.

#### How will we reach our target?

- ▶ research options and alternatives
- ▶ consult with stakeholders as changes are considered
- ▶ develop draft regulations and supporting tools and procedures
- ▶ consult with public on draft regulations



## energy efficient buildings

### SAVING MONEY AND ENERGY IN OUR BUILDINGS AT WORK, HOME AND PLAY

**4(2)(r)** all new residential dwelling units constructed in the Province that are within the scope of Part 9 of the National Building Code of Canada will be required to display an EnerGuide rating by the year 2008

**4(2)(s)** all new residential dwelling units constructed in the Province will be required to achieve an EnerGuide rating of 80, or meet energy conservation measures adopted in the Nova Scotia Building Code Regulations made under the Building Code Act after January 1, 2011

**Measure:** status of requirement for all new residential dwelling units to achieve an EnerGuide rating of 80, or meet energy conservation measures adopted in the Provincial Building Code

#### **Target Achieved and Exceeded:**

a requirement is in place for all new residential dwelling units, as well as home additions or major renovations and commercial buildings under 600 square metres to achieve an EnerGuide rating of 80, through performance or prescriptive options

#### **Where are we now?**

Actions have been taken to ensure that EGSPA's goals for energy efficiency of buildings (4(2) (r) and (s)) will be exceeded, significantly boosting benefits to the environment.

As part of the implementation plan, EnerGuide labelling continues to be encouraged as a voluntary tool to educate homeowners. In addition, energy efficiency amendments were made to the Building Code Act in December 2009, one year earlier than required by the act. These amendments, developed in consultation with the Nova Scotia Building Advisory Committee, establish new energy efficiency standards beyond the scope of the EGSPA target. The new standards apply not only to new home construction, but also to home additions and major renovations, and commercial buildings under 600 square metres.

To meet the new energy efficiency requirements, builders have a choice of either "performance" or "prescriptive" options. Under the performance-based option, the construction projects listed above must achieve a minimum EnerGuide rating of 80, the equivalent energy efficiency of an R-2000 home. Under the prescriptive

#### **How will we reach our target?**

- ▶ On-going implementation including:
  - building capacity to conduct energy audits/ assessments
  - training builders
  - working with the Nova Scotia Building Advisory Council, municipalities, builders and subdivision developers
  - consulting with stakeholders
  - enforcing the Building Code Act

*table continues on next page...*



## energy efficient buildings

continued...

### Where are we now? (continued...)

option, builders are required to use materials and techniques specified in the Code that are intended to achieve energy conservation requirements in building performance. Each of these options will be enforced by municipal building inspectors. By adopting the prescriptive solutions, Nova Scotia can enforce energy conservation upgrades to existing built stock as owners choose to renovate their buildings.

More than twenty seminars introducing the energy conservation requirements of the Code have been conducted across all regions of Nova Scotia, serving more than 1,700 individual architects, engineers, designers, contractors, sub trades, materials suppliers, and manufacturers.

In 2012, Nova Scotia plans to adopt new national energy codes for Buildings and Houses that will achieve uniform energy conservation measures for all new buildings and the renovation of, or addition to all existing buildings. These requirements will apply to all buildings and significantly broaden requirements established in 2009.



## energy efficient buildings

continued...

**4(2)(t)** a government facility will be constructed as a demonstration facility in accordance with a leading standard for building energy efficiency and sustainability, such as the Leadership in Energy and Environmental Design standard by the year 2015

**Measure:** phase of construction of a demonstration facility for energy efficiency and sustainability

**Target:** a new government facility that showcases leading edge energy efficiency and sustainable design principles by 2015

### Where are we now?

Government has partnered with the Nova Scotia Community College (NSCC) to construct Phase II of their waterfront campus in Dartmouth - the Centre for the Built Environment (CBE). Construction of the CBE is in the final phase and plans are to open in August 2010.

The CBE is striving to achieve Leadership in Energy and Environmental Design (LEED) Gold status. It incorporates such things as solar panels, a solar hot water system, wind turbines, geothermal heating and cooling, and a green roof to reduce heating and cooling demands. In addition to leading edge energy efficient and sustainable design and construction, this facility is unique in its ability to demonstrate and teach these principles to a wider audience.

Government has also been making steady progress on other green building initiatives. For example, a Green Building policy requires new buildings constructed by the province and those buildings that the province contributes financially towards are designed and constructed to meet specific energy efficiency and water conservation standards.

### How will we reach our target?

- ▶ partnership with the Nova Scotia Community College
- ▶ Centre for the Built Environment scheduled to open in August 2010, certification to follow





## solid waste

### CONTINUING TO BE AN INTERNATIONAL LEADER IN SOLID WASTE MANAGEMENT

**4(2)(o)** the solid-waste disposal rate will be no greater than three hundred kilograms per person per year by the year 2015 through measures that include the development of new programs and product stewardship regulations

**Measure:** annual solid-waste disposal rate (kg) per person per year

**Target:** 300 kg or less solid waste disposed per person per year by 2015

#### Where are we now?

Amendments to the Environment Act in 2006 established a new solid waste disposal target of 300 kg per person per year by 2015. According to the most recent data from Statistics Canada, the Canadian average waste disposal rate in 2006 was almost twice that of Nova Scotia.

Currently there are 17 materials banned from disposal in Nova Scotia and eight product stewardship agreements.

In 2008, a report assessing the original solid waste-resource strategy (1995) was released in preparation for the development of a new strategy to map out a path to reaching the ambitious 300 kg disposal target.

Over the next two to three years efforts will focus on a renewed solid waste resource management strategy, expansion of the household hazardous waste programs, a construction and demolition waste action plan and a sustainable funding mechanism.

#### Annual solid waste disposal rates (from Statistics Canada - four year time lag)

	NS	Canada
--	----	--------

2002	416 kg/person	760 kg/person
2004	427 kg/person	772 kg/person
2006	430 kg/person	835 kg/person
2008	data available summer of 2010	

#### How will we reach our target?

- ▶ research options and alternatives to minimize waste disposal and increase product stewardship
- ▶ consult with key stakeholders including municipalities and the Resource Recovery Fund Board
- ▶ consult with public
- ▶ develop and implement a work plan to reduce disposal to 300 kg/person/year
- ▶ develop and implement a renewed Solid Waste-Resource Management Strategy



## sustainable purchasing

### LEADING THE WAY IN THE PURCHASE OF ENVIRONMENTALLY AND SOCIALLY RESPONSIBLE GOODS AND SERVICES

**4(2)(q)** a sustainable procurement policy for the Province will be developed and adopted by the year 2009

**Measure:** status of development of a sustainable procurement policy

**Target Achieved:**

a provincial sustainable procurement policy was approved and in place on August 20, 2009

#### Where are we now?

Nova Scotia's Sustainable Procurement Policy was developed through extensive research and targeted internal and external consultations held throughout 2008 and 2009. This corporate policy was released on August 20, 2009, marking the achievement of this goal.

This policy takes a holistic approach to obtain the best value for government dollars. It integrates environmental, economic and social considerations into government purchasing decisions. This represents a substantial shift from the Lowest Competent Bid approach that was used in the past.

In-house education and awareness about sustainable procurement is proceeding through Talk SP newsletters and presentations. Both on-line and in-class training programs are in place, targeting employees with purchasing responsibilities. Communication about the policy and the implications for government suppliers is also on-going.

A Sustainable Procurement area has been established for the government Tenders website. Resources and tools are being developed and added to the site as they become available.

Work is also underway to include sustainability criteria in Standing Offer Tenders and Requests for Proposals.

#### How will we reach our target?

- ▶ target has been reached and policy implementation is on-going



## LETTER FROM THE ROUND TABLE

---

May 12, 2010

Honourable Sterling Belliveau  
*Minister*

Department of Environment  
5151 Terminal Road  
Halifax, Nova Scotia

### DEAR MR. BELLIVEAU

This letter from the Round Table provides you and your colleagues with our annual assessment of the Province's progress in satisfying the intent and goals in the Environmental Goals and Sustainable Prosperity Act. Overall, the Province continues to make progress in satisfying most of the goals set for the years 2007 to 2009.

In particular, we note that the Provincial Government adopted a sustainable procurement policy in 2009. Although the operational details are still being worked out, the signal sent by the government to its suppliers is indeed noteworthy. We also note that the Government has announced changes to the renewable energy goals which go far beyond those in the Act. Changes to the building code regulations have come into effect one year early and were expanded to include major renovations and small commercial buildings. Significant progress has been made in establishing an energy efficient and environmentally sustainable demonstration building on the site of the NSCC Waterfront Campus in Dartmouth well in advance of the 2015 target date. Nova Scotia Power has met and exceeded the government's requirements for nitrogen oxide emissions.

However some goals have been missed or remain elusive. The wetland policy scheduled for release in 2009 has been delayed. The Round Table believes that thorough consultation is important and necessary to gain support for new policies. However we caution that the Departments tasked with the responsibilities associated with EGSPA must put the necessary resources into the process. This will be particularly important in the case of the water strategy, a resource that involves every Nova Scotian. We noted last year our concern that mandatory labeling was not pursued as we believed such labeling would benefit buyers. Further we convey our continuing distress about delays in a number of municipalities which have not met the 2008 municipal drinking water standards.

Beyond tracking progress toward specific goals, it is with the intent of the Act wherein the Round Table has greater concerns. We believe that it is quite important to explain to Nova Scotians not only what the targets are, but also how the targets will be reached and who will be involved in reaching them. We would like to see more detail in the sections answering the question "how will we reach our target?" For example, information on the nature of consultations and dates would be helpful. This is necessary to further engage Nova Scotians in discussing the intent of the Act, its goals and targets.

As we move toward a public review of the Act in 2012 as required in the legislation, much more effort must be devoted to informing Nova Scotians about the Act and educating them about its objectives and



intent. We collectively have an opportunity to involve Nova Scotians in creating “one of the cleanest and most sustainable environments in the world” but it must involve each and everyone of us! This can only be achieved by creating more ways to engage people, communities, businesses, organizations and schools in urban as well as rural areas of the Province. One Round Table member put this eloquently: “What we need to do in Nova Scotia is create an environment that will encourage industry to not only accept the EGSPA goals but will take measures to incorporate changes in their business environment that will enable them to achieve the goals.” The various strategies which have been or are being developed are interconnected and how the government is planning to manage interrelationships and leverage synergies among strategies must be explained to stakeholders. For example the wetland policy, the coastal management strategy, and the climate change strategy will all implicate municipalities particularly with regard to adaptation policy and planning.

In Nova Scotia, sustainable prosperity is based on strengthening five capitals, namely natural, economic, social, human and built. The Provincial Government has made a commendable start at identifying indicators that will give Nova Scotians a means of measuring whether this is actually occurring. Unfortunately it is not possible at this time to easily link the proposed indicators with the five capitals. We encourage the responsible agencies to continue this work and to provide indicators that not only give the status of the measure but also its trend. While the Provincial Government works on a comprehensive and more appropriate approach to reporting on sustainable prosperity, it would also be helpful to include different ways of reporting GDP for comparative purposes including GDP per capita. The Government must continue its effort to demonstrate the integration of economic prosperity and environmental sustainability into sustainable prosperity. This is at the heart of the Act.

Finally, we have noted in the past that as the Act was designed to foster the integration of environment and economy, more effort must be devoted to exploring the costs and benefits associated with the goals and targets. There are at least three aspects that must be considered. These are the costs associated with implementing the target, the costs that may be involved if the issue is not addressed and the benefits to the economy and the environment that will be derived from implementing the goal with special emphasis on jobs. The Round Table recognizes that some of these will be more challenging than others. Therefore, we recommend that the Government proceed with a pilot project in 2010-2011 that will involve calculating costs and benefits of 2 or 3 goals and targets. It would be very helpful to have this analysis done before consultations begin in 2012. Paraphrasing a comment from one Round Table member “our challenge is about how to reconcile the divergent circumstances, opportunities and interests and find ways to collaboratively advance a society that finds value in both.”

The Round Table looks forward to continuing progress in implementing the intent, goals and targets in the Environmental Goals and Sustainable Prosperity Act. This is a unique and important piece of legislation that places Nova Scotia at the forefront of jurisdictions around the world concerned with sustainability.

Yours sincerely  
Raymond P. Côté,  
*Chair*



## LETTER FROM THE MINISTER

---

Raymond Côté

Kenneth C. Rowe  
Management Building  
Dalhousie University  
Suite 5010  
6100 University Avenue  
Halifax NS B3H 3J5

Dear Prof. Côté:

I would like to thank the Round Table on Environment and Sustainable Prosperity for providing feedback on the third annual progress report for the Environmental Goals and Sustainable Prosperity Act (EGSPA). Your feedback will be considered as we work towards achieving the goals and targets set out in the Act.

I agree that significant progress has been made. As we work toward achieving the goals we have been able to protect new land, improve air quality, and reduce government's impact on the environment, however, there are ongoing challenges as we move forward. In some instances, such as release of a wetlands policy, we have been delayed in meeting the goals. This is because we are committed to ensuring that we choose approaches that are the most effective and have support of stakeholders. I would like to assure you that the EGSPA goals will continue to be met within reasonable time frames and that we will continue to work with stakeholders to achieve our goals.

The Round Table has identified the importance of educating and engaging all Nova Scotians in EGSPA. Clearly our success depends on this. It is partly for this reason that the department created a new division, Environment and Sustainable Prosperity Partnerships. This division plays a role in promoting the province's goal of sustainability and building relationships with partners throughout the community.

Through the work of this division the department was able to promote EGSPA either directly or indirectly through a number of activities. The department participated in numerous public events where EGSPA was explicitly promoted with written materials and aided by buttons and t-shirts worn by staff inviting visitors to "Ask Me About EGSPA." The department was a key partner with the Nova Scotia Environmental Network and the Department of Education in presenting Green Roots. This event brought together communities and environmental groups to discuss education for sustainable development, municipal sustainability programs, citizen-based environmental science, community-university partnerships, government priorities and working with government. In addition, the department continues to work with Sustainability Education in Nova Scotia for Everyone (SENSE), the Environmental Education Caucus of the Nova Scotia Environmental Network and the Department of Education. The division's Environmental Technology and Innovation section continues to work with businesses, municipalities and universities on a variety of projects that move us toward the green economy envisioned by EGSPA.



The department will continue its work of building new relationships over the next year. It will work on improving the Second Nature web portal to reflect current trends in internet communication. The Round Table made a recommendation to provide more detail about the way the targets will be reached and who will be involved in reaching them. This will help engage the public in discussions on the intent of the act, its goals and its targets. We will incorporate this into our next report.

In your letter, the Round Table has made mention of the five capitals and the proposed indicators. The act is built on the principle that the environment and the economy go hand in hand. For this reason, it is important to measure economic prosperity in the context of environmental sustainability. Last year, a framework was established to measure this. This year a set of high level indicators will help track how Nova Scotia is doing over time, and also how the province compares with the rest of Canada. I agree with the Round Table that Gross Domestic Product (GDP) is an important component of our economy. That is why GDP is integrated throughout the proposed indicator set. The selection of meaningful indicators is a difficult task, and I encourage the Round Table to provide advice and recommendations on how we can improve our approach in next year's report.

I think your recommendation about a pilot project to investigate the costs associated with the goals and their benefits to the economy and the environment is interesting. It may help us to better define the linkage between these key elements of EGSPA. I have asked staff to consider this recommendation to determine how it could be accommodated within our current business plan.

I appreciate the Round Table's continued commitment, support, and advice. I look forward to further discussions on your recommendations.

Sincerely,  
Sterling Belliveau  
*Minister*



## APPENDIX 1

### Indicator Data Sources

#### Figure 1, 2

Gross Domestic Product (GDP) (2008) Statistics Canada, Cansim Table 384-0002.

### Indicator Table

#### **Sense of belonging to the community:**

Canadian Community Health Survey (CCHS) (2007) Statistics Canada.

#### **Income inequality:**

Gini coefficient of after-tax income (2007) Statistics Canada Cansim Table 202-0705.

#### **Persistence in low income:**

Persistence of low income (2007) Statistics Canada Cansim Table 202-0807.

#### **Post-secondary education:**

Labour force survey estimates (age 24-44) (2009) Statistics Canada Cansim Table 282-0004.

#### **Life expectancy:**

Life Expectancy at 65 (2006) Statistics Canada Cansim Table 102-0511.

#### **Employment ratio - diversity groups:**

Employment rates (ages 24-44) (2006) Statistics Canada Census of Canada.

#### **Labour productivity:**

Real labour productivity in the business sector (2008) Statistics Canada Cansim Table 383-0011.

#### **Net investment in capital stock:**

Flows and stocks of fixed non-residential capital (2009) Statistics Canada Cansim Table 031-0002

#### **Personal savings:**

Selected economic indicators, provincial economic accounts (2007) Statistics Canada Cansim Table 384-0013.

#### **Government debt:**

Public debt as a percentage of GDP (2008) Statistics Canada Cansim Table 032-0002.

#### **Value of natural resources (unharvested stock of timber, oil, gas and minerals):**

Value of Natural Resources per Capita (2008) Statistics Canada, compiled by Canadian Centre for the Study of Living Standards, Canadian Index of Economic Well-being, 2009.

#### **Electricity generated from fossil fuels:**

Electricity generated from fossil fuel per capita (2007) Statistics Canada Cansim Table 128-0014.

#### **Forest Harvest Sustainability**

under development - Department of Natural Resources

#### **Water Quality**

under development - Department of Environment

### Discussion:

1. Statistics Canada (2009) Incidence of employees missing work due to illness or disability. Labour Force Survey.
2. Statistics Canada (2005) Asthma, by age group and sex, household population aged 12 and over. Cansim Table 105-0401.
3. Statistics Canada (2006) New cases and age-standardized rate for ICD-O-3 primary sites of cancer (based on the July 2009 CCR tabulation file). Cansim Table 103-0553.
4. Statistics Canada. (2009) Labour force survey estimates (LFS), by educational attainment, sex and age group, annual, CANSIM Table 282-0004.
5. Statistics Canada (2009) Labour force survey estimates, employment rates. Cansim Table 282-0002.
6. Statistics Canada (2007) Cansim Table 032-0002 - Public and private investment; Cansim table 384-0002 - Gross domestic product.
7. GHG emissions per capita (2008): Environment Canada - Greenhouse Gas Inventory. Canada's 2008 Greenhouse Gas Inventory.
8. Economic cost of air pollution: Annual Economic Damage of Air Pollution (O<sup>3</sup> and PM) per Capita (2008) Canadian Medical Association: No Breathing Room - National Illness Costs of Air Pollution.



## APPENDIX 2

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### The Five Capitals Defined

**Social Capital**

the relationships and networks that support individual and societal well-being and healthy, prosperous communities. This includes a broad range of formal and informal support systems such as families, friends, communities, governments, institutions, organizations and associations.

**Human Capital**

the capacity of individuals to participate actively and productively in society and the economy. Individual capacity includes health, skills, knowledge, creativity, education, training and experience.

**Financial Capital**

the funds available for public and private sector investment in business activity, research and development, and social programs and services.

**Built Capital**

manufactured physical assets - equipment, technology, and infrastructure - that support productive economic and social activities. This includes a broad range of public assets (e.g., transportation networks, educational facilities) and private assets (e.g., factories, housing, and infrastructures for energy and communications).

**Natural Capital**

the natural environment, made up of dynamic, interacting systems of organisms and the habitats (air, water, land, minerals) on which they depend. Renewable and non-renewable natural resources are components of natural capital that contribute to economic activity and our quality of life.





# IMPORTANT REMINDER



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Recycle % and FSC  
logo in this area

ENVIRONMENTAL GOALS AND SUSTAINABLE PROSPERITY ACT

# **PROGRESS Report 2·0·1·0**

## **MEASURING UP - TRACKING ECONOMIC PROGRESS TECHNICAL REPORT**



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**ENVIRONMENTAL GOALS AND SUSTAINABLE PROSPERITY ACT  
MEASURING UP - TRACKING ECONOMIC PROGRESS  
TECHNICAL REPORT**

This document provides technical background for the indicator set presented in Measuring Up – Tracking Economic Progress, pages 5-9, Environmental Goals and Sustainable Prosperity Annual Report, 2010.

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# 1. INTRODUCTION AND BACKGROUND

The *Environmental Goals and Sustainable Prosperity Act* (EGSPA) outlines two overarching objectives:

- (1) **The long-term environmental and economic objective of the Province is to fully integrate environmental sustainability and economic prosperity and to this end to:**
  - (a) **demonstrate international leadership by having one of the cleanest and most sustainable environments in the world by the year 2020; and**
  - (b) **provide certainty to all sectors of the economy through the Government's economic development strategy entitled Opportunities for Sustainable Prosperity and establish clear environmental goals while improving the Province's economic performance to a level that is equal to or above the Canadian average by the year 2020.**

An inter-departmental working group was formed to determine an approach to assess economic performance with the intention of tracking provincial progress toward the objective in (1)(b), "while improving the Province's economic performance to a level that is equal to or above the Canadian average by the year 2020."

## *Economic Performance under EGSPA*

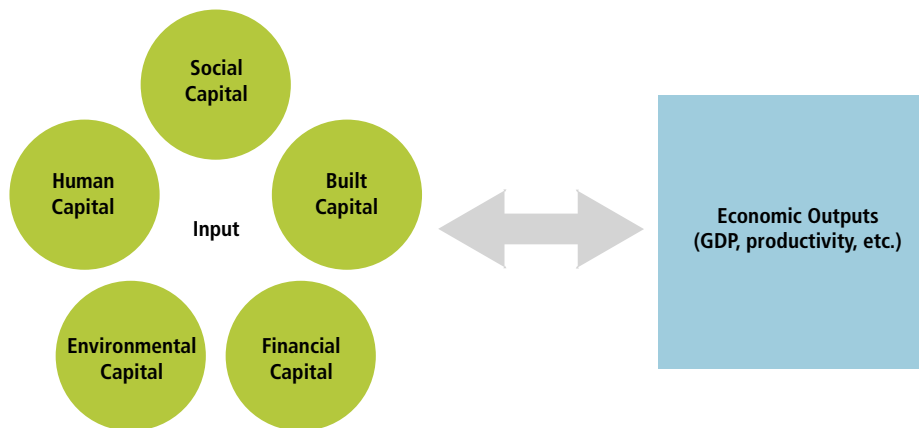
The *Environmental Goals and Sustainable Prosperity Act* is based on the following principles:

- (a) the health of the economy, the health of the environment and the health of the people of the Province are interconnected;
- (b) environmentally sustainable economic growth that recognizes the economic value of the Province's environmental assets is essential to the long-term prosperity of the Province.

Gross Domestic Product (GDP), the market value of all goods and services produced in an economy, has long been used to measure economic growth and as a proxy for economic well-being. However, GDP was never designed to measure the sustainability of economic progress, or the well-being of citizens:

- GDP does not take into account unpaid human efforts or contributions, such as childcare or volunteer work, essential as they may be.
- It was not designed to measure any impact on environmental resources and quality of life.
- It does not consider whether economic activity is the direct result of negative factors such as increased pollution, debt, crime, accidents or health problems.
- It provides no indication of future performance.

To understand what makes economic progress sustainable, it is important to consider the foundation of economic prosperity.



Without inputs from each capital, the economy cannot function well. Economic outputs should, in turn, support continued reinvestment in the capitals.

It is clear that traditional measures of economic performance, which tend to focus on output alone, cannot capture whether economic progress is sustainable. In the context of EGSPA's goals and objectives, economic performance is defined as a "measure of the Nova Scotia economy's success in providing citizens with economic security, a healthy environment and social well-being, without compromising future generations."

## 1.1 THE FIVE CAPITALS

For much of Nova Scotia's history, the environment has been an important contributor to our economy. Natural resources, whether renewable (fisheries, forestry, farming) or non-renewable (minerals, gas) have provided employment and supported trade. The environment, however, is more than an important source of income. The environment, our natural capital, sustains and supports all life and human activity.

In addition to natural capital, social, human, financial and built capital are the building blocks which must interact to form the foundation of a strong economic structure. Without the foundation, the house cannot be built.

These five capitals are defined as follows:

**Natural Capital** – the natural environment, made up of dynamic, interacting systems of organisms and the habitats (air, water, land, minerals) on which they depend. Renewable and non-renewable natural resources are components of natural capital that contribute to economic activity and our quality of life.

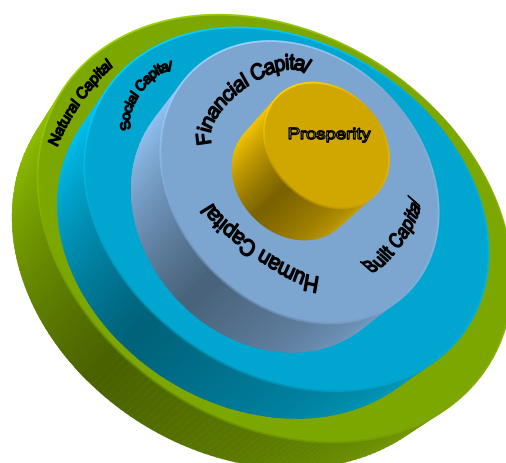
**Social Capital** – the relationships and networks that support individual and societal well-being and healthy, prosperous communities. This includes a broad range of formal and informal support systems such as families, friends, communities, governments, institutions, organizations and associations.

**Built Capital** – manufactured physical assets – equipment, technology, and infrastructure – that support productive economic and social activities. This includes a broad range of public assets (e.g., transportation networks, educational facilities) and private assets (e.g., factories, housing, and infrastructures for energy and communications)

**Human Capital** – the capacity of individuals to participate actively and productively in society and the economy. Individual capacity includes health, skills, knowledge, creativity, education, training and experience.

**Financial Capital** – the funds available for public and private sector investment in business activity, research and development, and social programs and services.

There are a number ways to view the capitals. From an accounting perspective, the capitals represent the major categories of inputs into the economy. These inputs must be maintained to ensure that they are able to support a resilient, diverse economy. The capitals can also be regarded as interacting elements from which emerges a complex, dynamic system. A depletion or overabundance in one capital will eventually have an impact on the system as a whole. The economic state is an emergent system, dependent on the capitals. In both perspectives, a sustainable economy feeds back into and supports the five capitals.





## 2. MEASUREMENT APPROACH

As a discipline, economics has tended to regard social and environmental elements as externalities, with a result that social and environmental implications tended to be excluded from economic decisions.

Over the past few decades, there have been a number of attempts to address this issue. The Working Group reviewed a number of approaches:

a) *Sustainable Development Indicator Sets:*

Are often used to compare progress and performance across jurisdictions, often countries, balancing economic progress against social and environmental impacts.

The earliest sustainable development indicator sets attempted to be comprehensive, sometimes including as many as several hundred indicators. This created challenges in terms of interpretation and communication of findings to non-specialists.

Over the years, standards have been developed for sustainable development indicators. It is now common practice for indicators be selected according to a conceptual framework with clearly identified domains, as in the Eurostat Indicators of Sustainable Development in the European Union. A framework provides a basis for the selection of indicators and communicating the results.

BellagioSTAMP:  
Sustainability Assessment and  
Measurement Principles from the  
International Institute for Sustainable  
Development are outlined here.  
[www.iisd.org/pdf/2009/brochure\\_bellagiostamp.pdf](http://www.iisd.org/pdf/2009/brochure_bellagiostamp.pdf)

b) *Composite Indices:*

Combine a number of disparate measures into a single value. For example, GPI Alberta combines 51 indicators into a single number. This allows the GPI to be tracked against GDP.

The use of a composite index can be very powerful in terms of communicating results to the general public. However, it takes considerable expertise and research capacity to select appropriate indicators and determine an appropriate weight for each indicator in the index. Extrapolation may be required to provide a complete set of data for each year. Trends for individual indicators will vary and important trends may be masked or cancelled out. Given these drawbacks, composite indices are usually presented as part of a comprehensive reporting system that includes detailed analysis of indicators or categories.

c) *Green Accounting:*

Has a number of different approaches which seek to assign monetary values to environmental and social assets and assess the cost of environmental and social degradation. These include Green GDP, which deducts the cost of pollution and environment damage from GDP, and environmental accounting systems.

After exploring several approaches, it was decided to develop sustainable economic development indicators using a conceptual framework based on the five capitals.

## 2.1 PRESENTATION OF HEADLINE INDICATORS IN THE ANNUAL REPORT

In this model, the five capitals plus economic state serve as the domains of the measurement framework. Indicators were selected for each of the domains based on the following questions:

- What do we have?
- What is it producing for us? How well are resources used?
- Is it sustainable over time?

A working group screened indicators on the basis of the following criteria:

- readily available and updated periodically
- easily compared to Canada and other provinces
- able to show long-term trends
- contain valid and reliable information
- make sense to the general public

The use of the five capitals as domains provided its own set of challenges. As defined, the capitals are very broad. For this reason, the working group chose to use an “economic lens,” focusing on headline indicators for each capital that can be related to economic performance.

A number of very significant challenges were encountered in identifying and selecting appropriate indicators:

- Data that meets the ideal is very limited
- Data isn’t usually updated every year
- Data can be 2-5 years (or more) out-of-date
- Important information is often collected at the provincial level – difficult to locate, compile and do cross-jurisdictional comparisons
- The most valid and useful indicators may be difficult for the general public to interpret

The greatest challenge remains completing a headline indicator set for natural capital (environment). In attempting to provide a balanced view of the environment and the economy, the selection of appropriate environmental performance indicators is essential. Data on the environment, including natural resources, is collected by a number of separate entities for very different purposes. Information on important natural resources, such as fisheries, has tended to focus more on harvesting than sustainability. Environmental monitoring often takes place at a local or ecosystem level rather than according to provincial boundaries, and, even when collected at the national level, the data reported may be too narrow for use as a headline indicator. For example, although there is data monitoring for a number of specific air pollutants, an overall measure of air quality suitable for year-to-year or jurisdiction-to-jurisdiction comparison is not currently available. In the analysis of indicators for natural capital, comparison to a pre-determined critical level may be more meaningful than cross-jurisdictional comparisons. Government will continue to work on these indicators, and placeholders will be replaced with indicators in the 2011 EGSPA annual report.

The initial indicators and how they fit into the measurement framework are presented in the following table:

Headline Indicators			
Domains	What does Nova Scotia have?	What is being produced? How well are resources used?	Sustainability
<b>Social Capital</b>	71.7 % of Nova Scotians report a strong sense of belonging to the community.	Income equality is higher than Canadian average and remains unchanged.	Percentage in persistent low income has declined significantly.
<b>Human Capital</b>	Two-thirds of 25-44 year-olds have post-secondary education, NS is falling behind the Canadian average.	Employment rates for visible minority 25-44 year-olds are improving.	Nova Scotians have a lower life expectancy and poorer health than the average Canadian.
<b>Natural Capital</b>	Value of unharvested natural resources per capita is relatively low.	Forest harvest sustainability (under development)	Electricity generated from fossil fuels is high but shows signs of decline.
	Water quality (under development)		Air quality (under development)
<b>Financial Capital</b>		Government debt is high but declining slightly.	Personal savings rates are declining.
<b>Built Capital</b>			Net investment in capital stock shows an overall decline.
<b>Economic State</b>		GDP per capita is lower than Canadian average, but shows steady, modest growth in recent years.	Labour productivity is low relative to the Canadian average and shows little overall growth in recent years.

### 3. PRESENTATION OF HEADLINE INDICATORS IN THE IN ANNUAL REPORT





For simplicity, the six domains have been collapsed into three for presentation in the annual report. The three domains chosen for the purposes of reporting are based on the following EGSPA principle: “the health of the economy, the health of the environment and the health of the people are interconnected”.

People	Human capital Social capital
Economy	Financial capital Built capital Economic state
Environment	Natural capital

Each indicator was categorized according to four criteria:

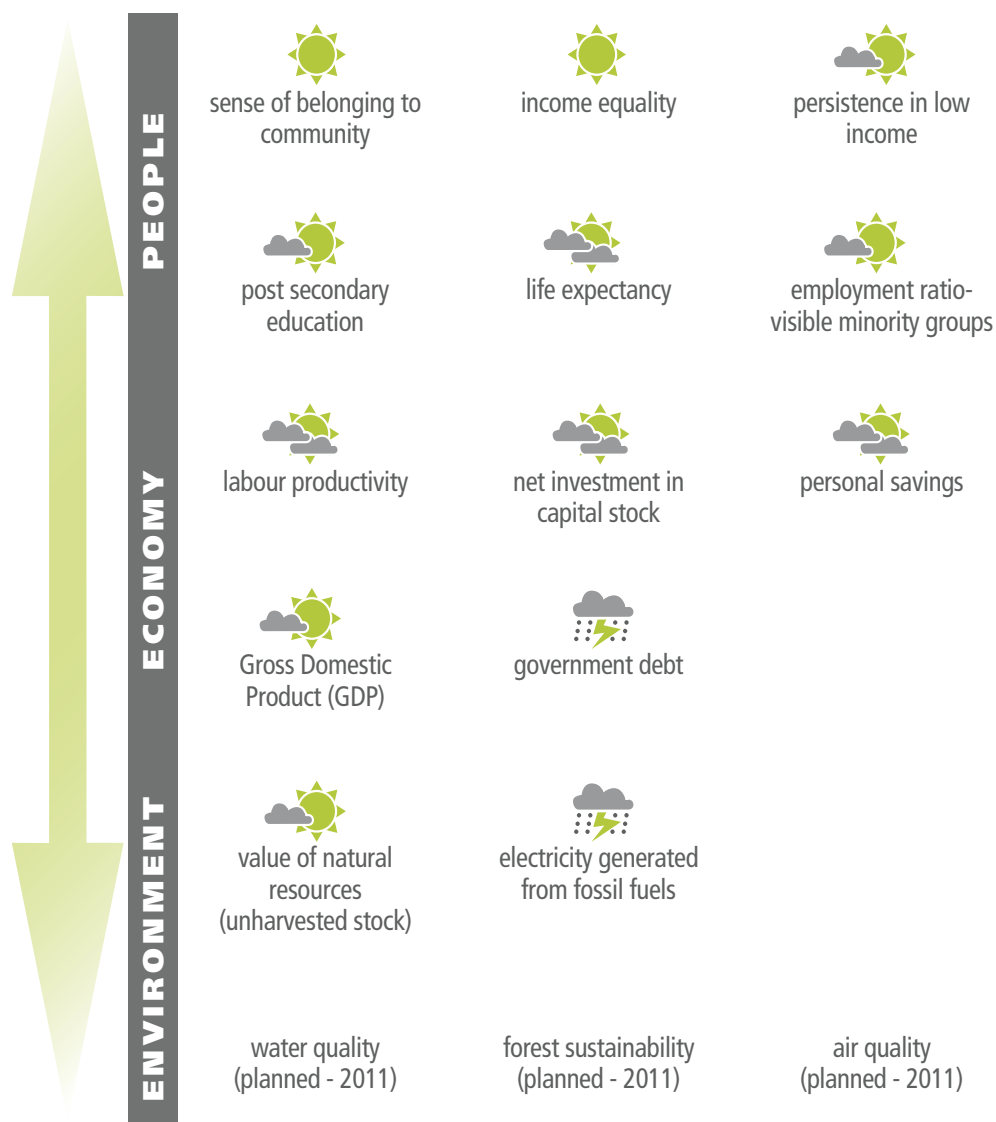
- Level – Without comparison to the rest of Canada, would the level be considered favourable, neutral or unfavorable
- Comparison to Canadian average
- Rank out of ten provinces
- Trend over the past few years

For ease of interpretation, weather icons were assigned to each indicator:

-  Favorable level, high to middle Canadian ranking, overall positive trend
-  Favorable to neutral level, middle to low Canadian ranking, flat or positive trend
-  Neutral to unfavorable level, middle to low Canadian ranking, flat or negative trend
-  Unfavorable level, low Canadian ranking, flat or negative trend

This provides a simple at-a-glance overview of the province’s performance in key areas.

## 3.1 INDICATOR SET




### Key:

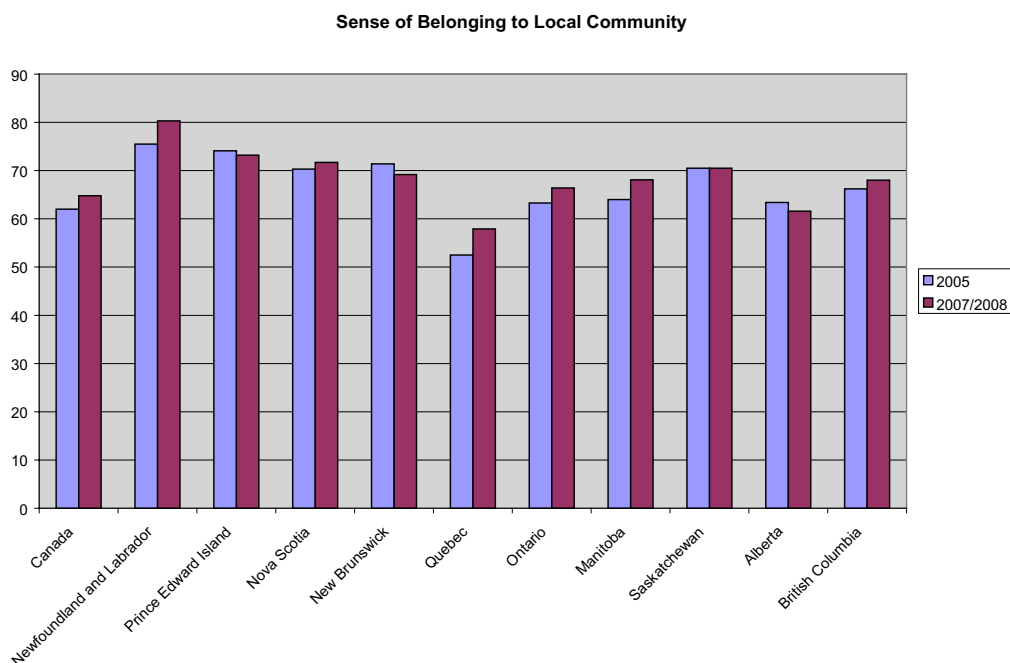
- Favorable level, high to middle Canadian ranking, overall positive trend
- Favorable to neutral level, middle to low Canadian ranking, flat or positive trend
- Neutral to unfavorable level, middle to low Canadian ranking, flat or negative trend
- Unfavorable level, low Canadian ranking, flat or negative trend

Note: Data sources are found in Appendix 1.


## 4. HEADLINE INDICATORS

### Sense of belonging to community

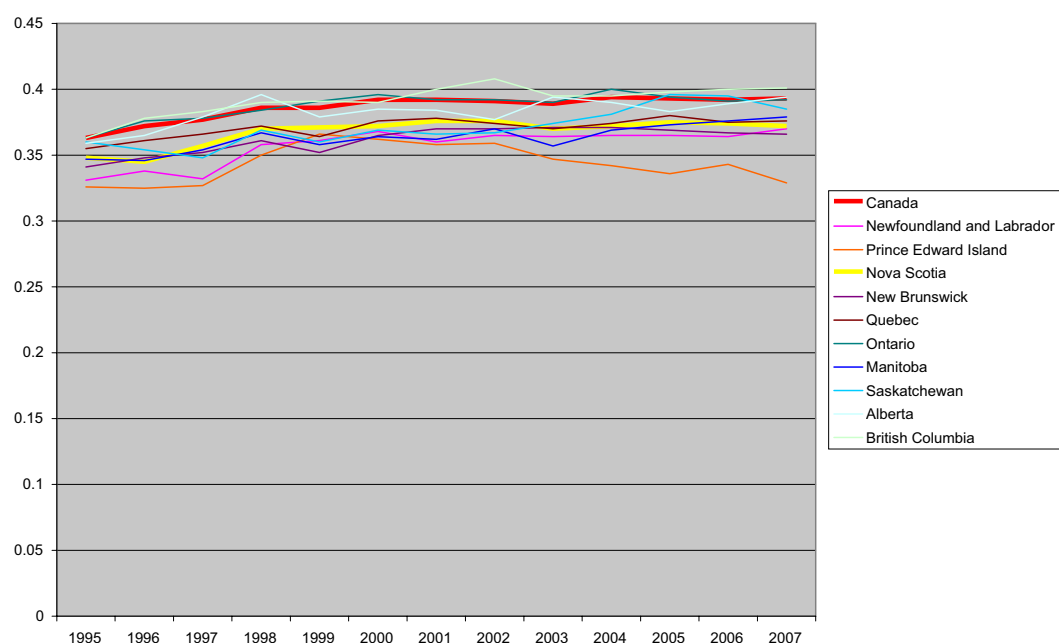
<i>Indicator</i>	Sense of belonging to the local community
<i>Capital</i>	Social
<i>Source of Data</i>	Sense of belonging to local community, by age group and sex, household population aged 12 and over, Statistics Canada (2005) CANSIM Table 105-0390.  Health indicator profile, two year period estimates, by age group and sex, Statistics Canada (2007/08) CANSIM Table 105-0502.
<i>Description of Data</i>	Percentage of respondents (age 12 and over) to Canada Community Health Survey who described their sense of belonging to the local community as strong or very strong.
<i>Most recent data</i>	2007/2008
<i>Data availability</i>	Every two years For all provinces
<i>Rationale for selection</i>	Research shows a high correlation of sense of community-belonging with physical and mental health.
<i>What it tells us</i>	A variety of formal and informal social networks form the basis of social capital. Local communities are the fundamental level of social capital. This captures, at the local community level, how inter-connected people perceive themselves to be.
<i>Performance</i>	 Level: Above Canadian average Rank: Third out of ten Canadian provinces Trend: Increasing (improving)




## Income equality

<i>Indicator</i>	Gini coefficient
<i>Capital</i>	Social
<i>Source of Data</i>	Gini coefficients of after-tax income for economic families and unattached individuals, Statistics Canada (2007) CANSIM Table 202-0705.
<i>Description of Data</i>	"The Gini coefficient is a number between zero and one that measures the relative degree of inequality in the distribution of income. The coefficient would register zero (minimum inequality) for a population in which each member received exactly the same income and it would register a coefficient of one (maximum inequality) if one member received all the income and the rest received none." Statistics Canada
<i>Most recent data</i>	2007
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	Commonly used measures of economic growth will appear positive, even if economic growth primarily benefits only a small percentage of the population. Higher levels of income equality have been correlated with positive social and personal outcomes for all individuals, regardless of income.
<i>What it tells us</i>	Reflects the impact of changes in society and the economy on the distribution of income across the population.
<i>Performance</i>	 <p>Level: Nova Scotia's level of income equality is higher than the Canadian average</p> <p>Rank: Fourth out of ten Canadian provinces. In 2007, Nova Scotia ranked fourth out of the Atlantic provinces, with a Gini coefficient very close to third-ranked Newfoundland</p> <p>Trend: There has been no significant change since 1998</p>

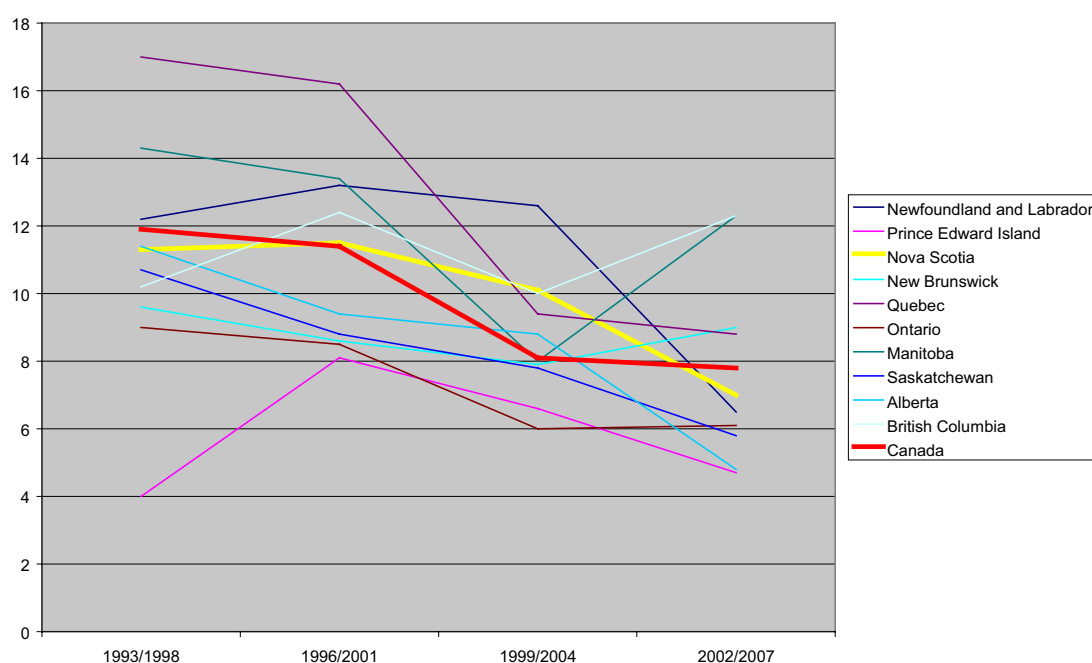
**Gini Coefficient of After Tax Income**



## Persistence in low income


<i>Indicator</i>	Individuals reporting three or more years of low income in the previous six years.
<i>Capital</i>	Social
<i>Source of Data</i>	Persistence of low income, by selected characteristics, every three years, Statistics Canada (2007) CANSIM Table 202-0807.
<i>Description of Data</i>	Based on the Survey of Labour and Income Dynamics (percentage of respondents reporting three or more years of low income in the previous six years)
<i>Most recent data</i>	2007
<i>Data availability</i>	Every three years For all provinces
<i>Rationale for selection</i>	Persistence in low income is correlated with to poor health, limited employment and life skills and lower levels of income equality.
<i>What it tells us</i>	Many people face barriers to participation even when the economy is doing well, often the result of low levels of education and inadequate social supports.
<i>Performance</i>	 <p>Level: In 2007, the province's rate of persistence in low income was below the Canadian average. However, 7% of the population in persistent low income remains a concern.</p> <p>Rank: Fifth out of ten Canadian provinces</p> <p>Trend: Improving. There was a significant downward trend between 2001 and 2007.</p>

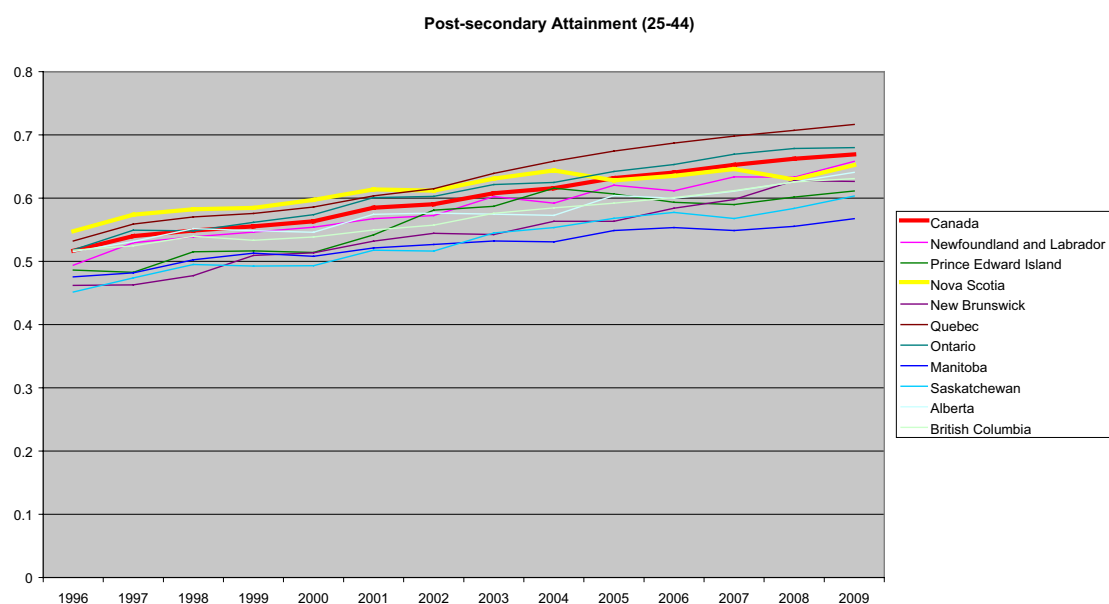
**Persistence of Low Income (3+ years)**






## Post-secondary education

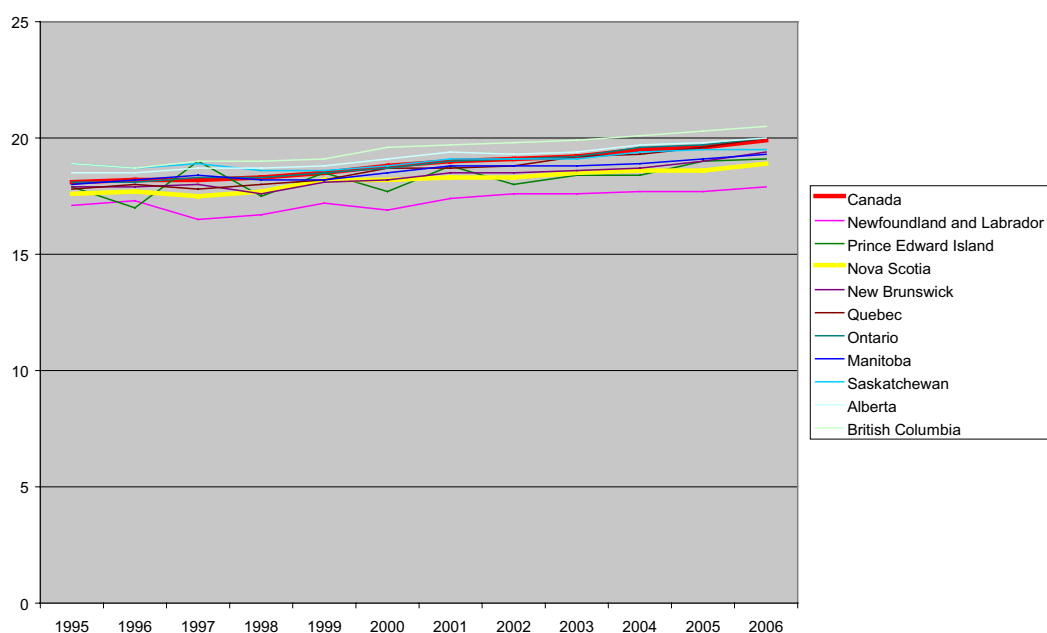
<i>Indicator</i>	Post-secondary educational attainment 25-44 year olds
<i>Capital</i>	Human
<i>Source of Data</i>	Population with post-secondary education (age 24-44), Statistics Canada (2009) Labour force survey estimates , CANSIM Table 282-0004
<i>Description of Data</i>	Percentage of 25 to 44 year olds with completion of post-secondary certificate diploma or university degree
<i>Most recent data</i>	2009
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	Educational attainment is related to average earnings, labour productivity, health, and incidence of poverty. This indicator reflects trends in post-secondary choices and Nova Scotia's ability to retain highly skilled workers.
<i>What it tells us</i>	Almost two-thirds of 25 to 44 year-olds living in the province have completed a university, college, or trades apprenticeship program. Although our rates continue to increase, we have fallen below the Canadian average and other provinces are moving ahead of us in terms of a developing and attracting a highly skilled younger working age population.
<i>Performance</i>	 <p>Level: Slightly below Canadian average Rank: Fourth out of ten provinces. Trend: Increasing (improving)</p>




## Life expectancy

<i>Indicator</i>	Life expectancy in years at age 65
<i>Capital</i>	Human
<i>Source of Data</i>	Life expectancy, abridged life table, at age 65, Statistics Canada (2006) CANSIM Table 102-0511
<i>Description of Data</i>	Estimated years of life remaining at age 65.
<i>Most recent data</i>	2006
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	Life expectancy is related to overall health, levels of chronic disease, social supports, and level of education. Life expectancy, as a reflection of overall health, has implications for future health expenditures and labour market participation of older workers
<i>What it tells us</i>	Although life expectancy at 65 is increasing, the rate of increase is slower than the Canadian average.
<i>Performance</i>	 <p>Level: Below Canadian average Rank: Ninth lowest among Canadian provinces Trend: Improving</p>

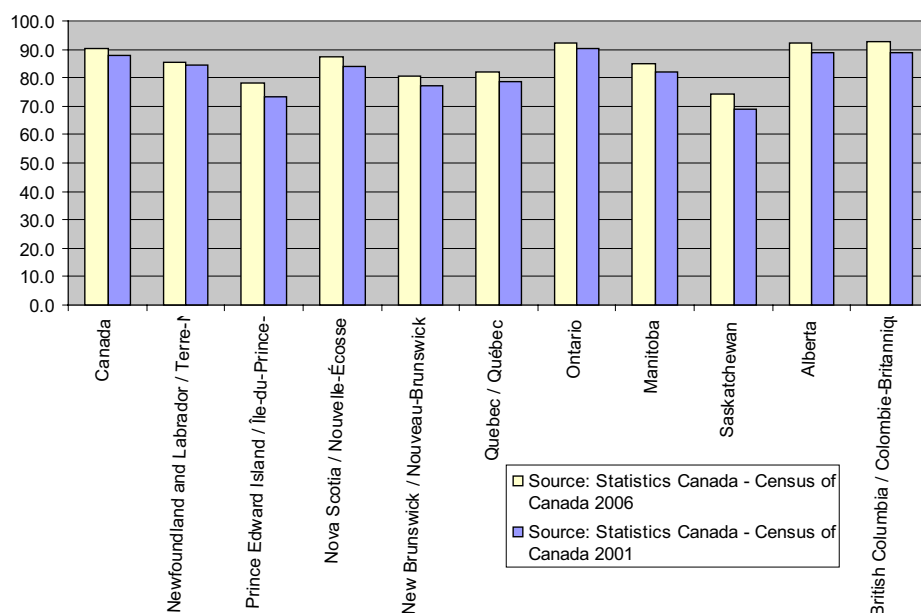
Life Expectancy Age 65




## Employment ratio – visible minorities

<i>Indicator</i>	Employment rates of 25-44 year-olds (visible minority diversity groups) indexed to employment rate of 25-44 year-old population as a whole
<i>Capital</i>	Human
<i>Source of Data</i>	Census of Canada, Statistics Canada, (2006).
<i>Description of Data</i>	The Employment Diversity Index is measured by indexing the employment rate for visible minority groups aged 25 to 44 corrected for population size.
<i>Most recent data</i>	2006
<i>Data availability</i>	Every five years For all provinces
<i>Rationale for selection</i>	Employment participation is related to literacy, levels of education, and the effectiveness of informal and formal social supports. Barriers to full participation in the labour market have been a longstanding issue for visible minorities. As the labour force gets smaller, barriers to participation need to be addressed to create an employment climate that will be attractive to an increasingly diverse workforce.
<i>What it tells us</i>	Although below the average for the population of 25-44 year-olds as a whole, the employment rate of visible minorities has increased.
<i>Performance</i>	 <p>Level: Below Canadian average Rank: Fourth best ranking among Canadian provinces Trend: Increasing (Improving)</p>

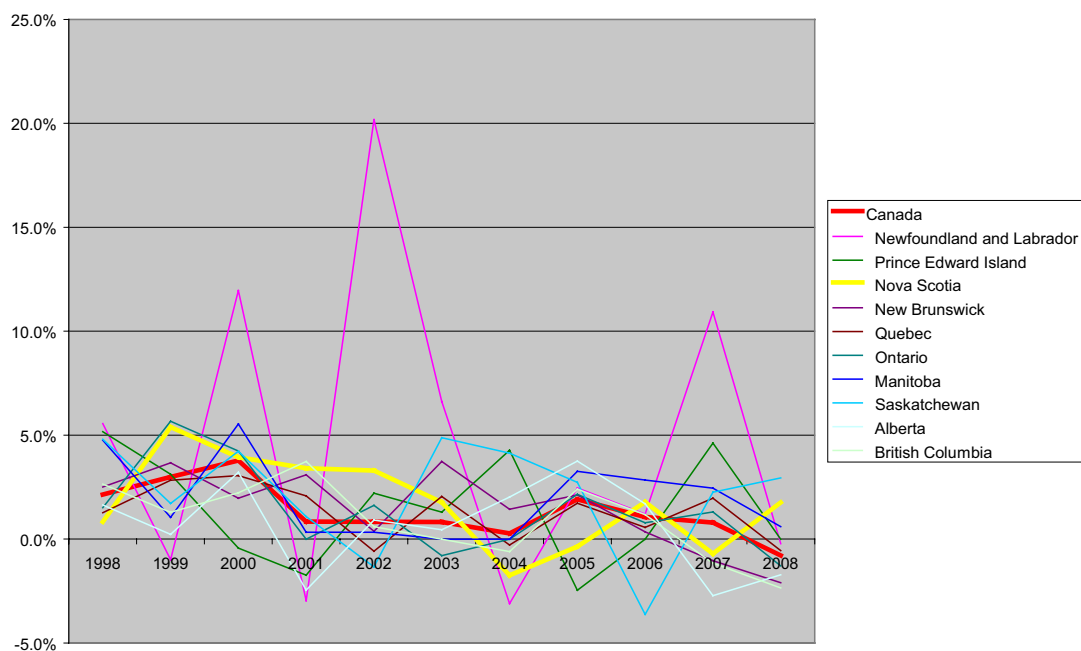
Employment Diversity Index




## Labour productivity

<i>Indicator</i>	Labour productivity growth in the business sector
<i>Capital</i>	Human/Economic State
<i>Source of Data</i>	Real Labour Productivity Growth in the Business Sector, (Chained (2002) dollars per hour), Statistics Canada (2008), CANSIM Table 383-0011
<i>Description of Data</i>	Labour productivity is the ratio between real value added and hours worked.
<i>Most recent data</i>	2008
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	Effective use of human capital, matching labour force skills to business requirements, is a major factor in labour productivity growth. Labour productivity related to literacy and educational attainment in the labour force and a business culture of competitive thinking and willingness to adopt innovative practices.
<i>What it tells us</i>	The growth rate has fluctuated between positive and negative between 2004 and 2008. There has been an overall downward trend in labour productivity growth in the business sector since 1999.
<i>Performance</i>	 Level: Above Canadian average in 2008 Rank: Ranked second highest among ten Canadian provinces in 2008 Trend: Labour productivity rates are volatile, but overall trend in recent years is flat.

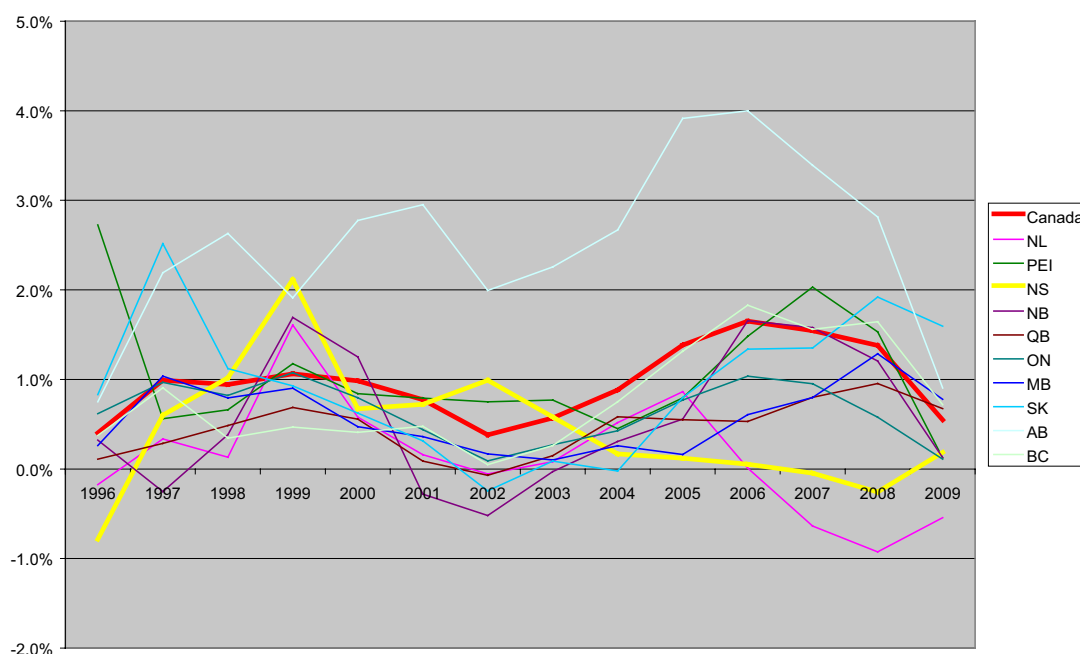
Productivity Growth (Business Sector)




## Net investment in capital stock

<i>Indicator</i>	Investment less depreciation for non-residential capital stock
<i>Capital</i>	Built
<i>Source of Data</i>	Flows and stocks of fixed non-residential capital , Statistics Canada (2009), CANSIM Table 031-0002.
<i>Description of Data</i>	Annual investment in non-residential capital stock minus annual depreciation
<i>Most recent data</i>	2009
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	Built capital assets support productive economic and social activities.
<i>What it tells us</i>	Ongoing investment in capital stock is required to maintain old stock and build new stock. Levels above zero imply that new capital stock is being built to meet ongoing and emerging needs. Low investment levels imply that, not only is little new stock being built, but that maintenance is being deferred on existing stock.
<i>Performance</i>	 <p> Level: Below Canadian average  Rank: Sixth among ten Canadian provinces in 2009  Trend: An increase in 2009 after a steady decline since 2002 </p>

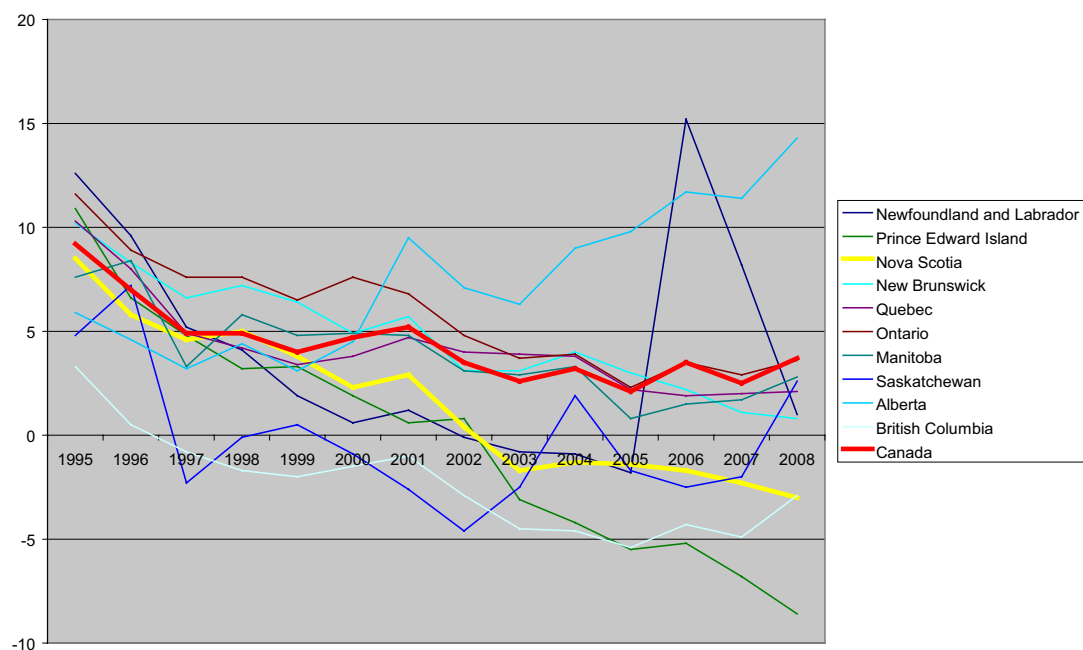
Investment-Depreciation/Capital Stock




## Personal savings

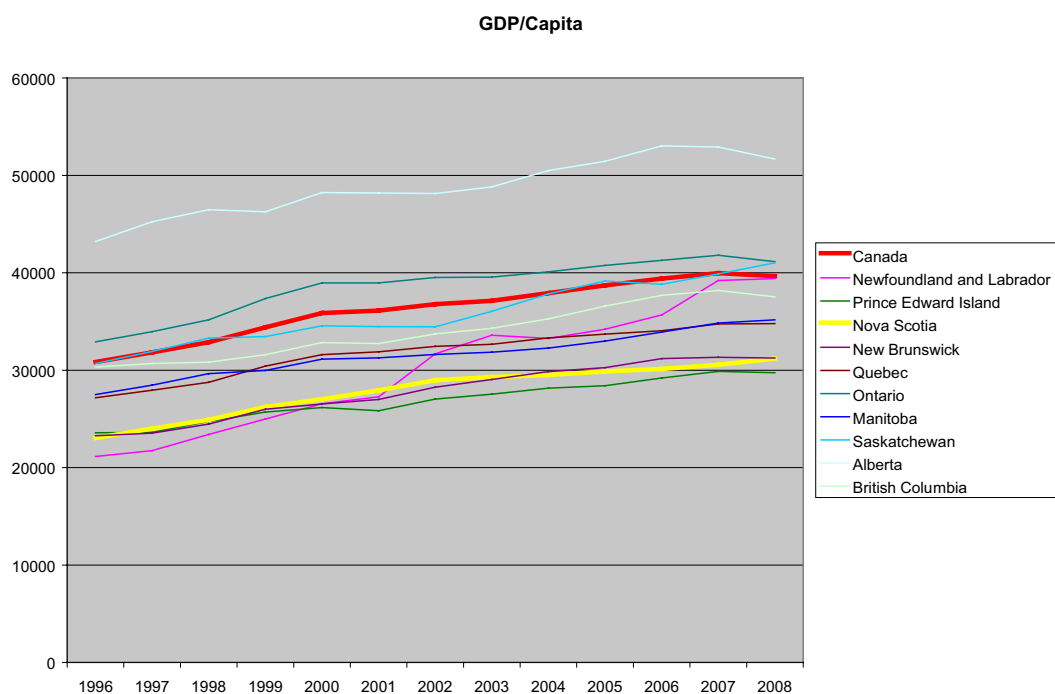
<i>Indicator</i>	Rate of personal savings
<i>Capital</i>	Financial
<i>Source of Data</i>	Selected economic indicators, provincial economic accounts, Statistics Canada (2008), CANSIM Table 384-0013
<i>Description of Data</i>	Income minus expenditures
<i>Most recent data</i>	2008
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	Savings rates are used as a proxy for personal debt
<i>What it tells us</i>	This indicator measures the combined impact of debt-based personal expenditures and an increasing percentage of retirees in the population, who are spending investment income. These both potentially have an impact on personal funds available for investment.
<i>Performance</i>	 <p>Level: Below Canadian average  Rank: Second lowest savings rate among Canadian provinces  Trend: Nova Scotia's personal savings rate fell below zero in 2003 and continued to decline</p>

Personal Savings Rate




## Gross Domestic Product

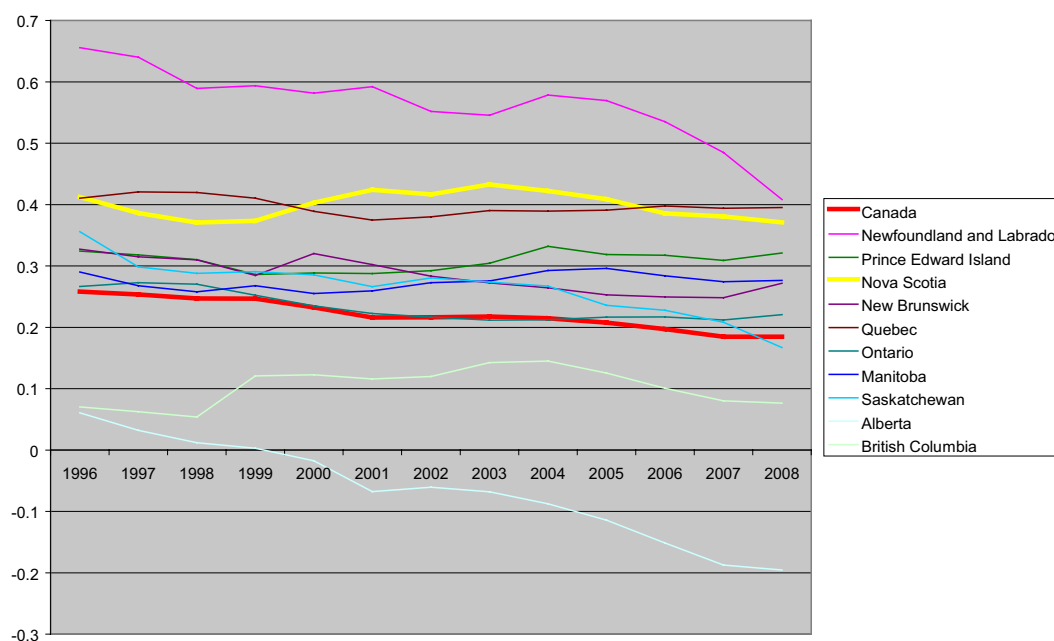
<i>Indicator</i>	GDP per capita
<i>Capital</i>	Economic state
<i>Source of Data</i>	Annual gross domestic product (GDP) (chained), expenditure-based, provincial economic accounts, Statistics Canada (2008), CANSIM Table 384-0002.  Estimates of population, annual, Statistics Canada (2009) CANSIM Table 051-0001.
<i>Description of Data</i>	Represents the rate of growth entire annual economic output of the province
<i>Most recent data</i>	2008
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	A well-known measure of economic output
<i>What it tells us</i>	The cumulative and interconnected inputs from the five capitals support economic output, which in a sustainable economy, are reinvested to maintain and enhance the five capitals. Economic growth also provides increased tax revenue to pay down public debt.
<i>Performance</i>	 Nova Scotia has maintained GDP growth during the global economic downturn  Level: Below Canadian average Rank: Nova Scotia has the second lowest GDP among ten Canadian provinces Trend: Increasing



## Government debt


<i>Indicator</i>	Public debt per unit of GDP
<i>Capital</i>	Financial
<i>Source of Data</i>	Net financial debt, balance sheet of federal, provincial and territorial general and local governments, annual, Statistics Canada (2008) CANSIM Table 385-0014.  Gross domestic product (GDP), expenditure-based, provincial economic accounts, Statistics Canada (2008), CANSIM Table 384-0002.
<i>Description of Data</i>	Net financial debt divided by GDP
<i>Most recent data</i>	2008
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	High levels of debt reduce government funds available for investment in the capitals and may lead to in reduced programs and services, increased taxes and higher borrowing costs for the province.
<i>What it tells us</i>	Nova Scotia's level of public debt remains problematic, especially in light of an aging population and increasing health care costs.
<i>Performance</i>	 Level: Government debt to GDP ratio is more than twice the Canadian average Rank: Only Newfoundland has a higher debt to GDP ratio Trend: Efforts to date have had only a modest effect

Public Debt/GDP

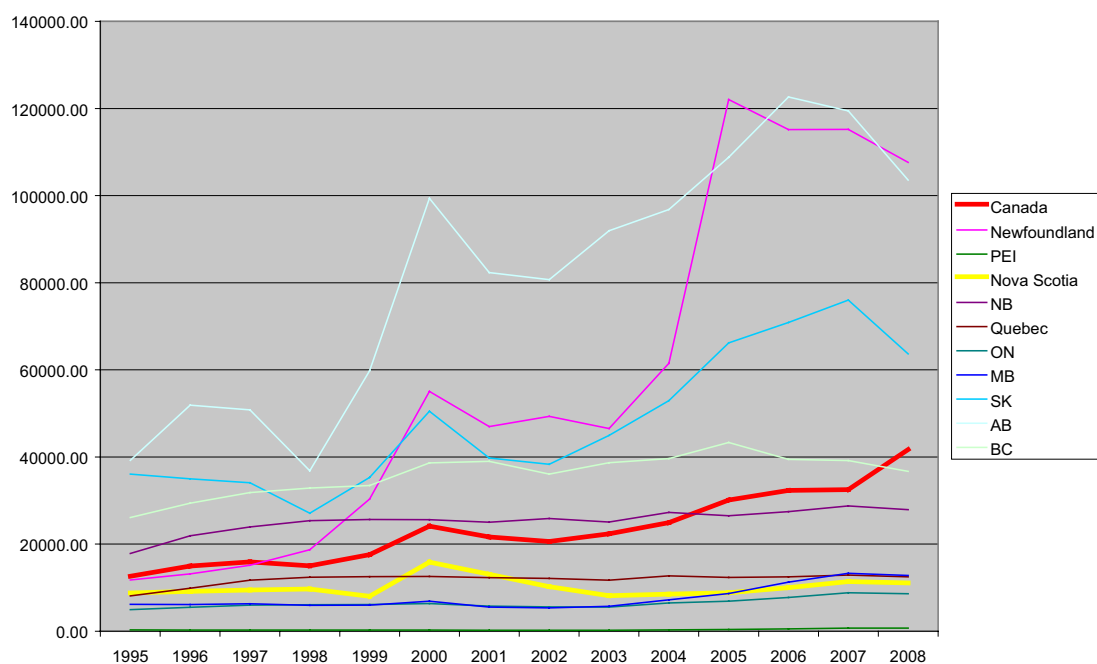





## Value of natural resources

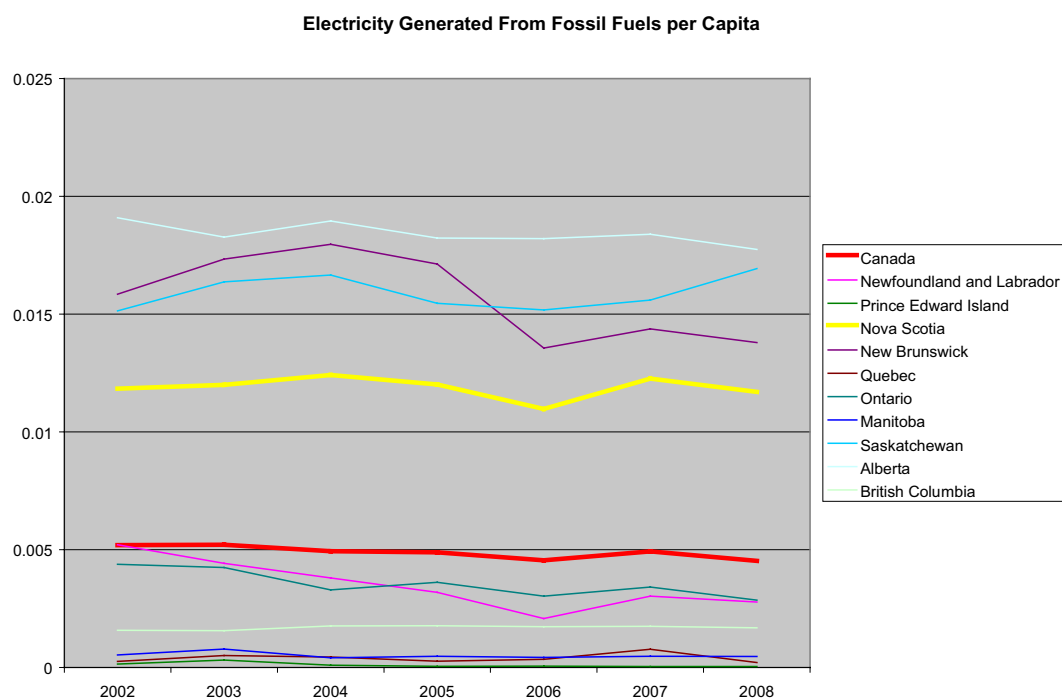
<i>Indicator</i>	Value per capital of unharvested stock (timber, oil, gas and minerals)
<i>Capital</i>	Natural
<i>Source of Data</i>	Value of natural resources per capita (2008) Statistics Canada, compiled by Canadian Centre for the Study of Living Standards, Canadian Index of Economic Well-being, 2009.
<i>Description of Data</i>	Compiled dollar value of timber stocks, known oil and gas reserves and unmined minerals
<i>Most recent data</i>	2008
<i>Data availability</i>	Annual For all provinces
<i>Rationale for selection</i>	Natural resources are a major input into GDP growth in Canada. When comparing economic performance, it is important to consider the value of the province's natural resources.
<i>What it tells us</i>	Nova Scotia has relatively low levels of natural resource wealth (in timber, oil and gas and minerals) compared to Canada as a whole.
<i>Performance</i>	 <p>Level: Nova Scotia is well below the Canadian average  Rank: Nova Scotia has the third lowest per capita value of natural resources  Trend: There has been an increase in value between 2006 and 2008</p>

Value of Natural Resources per Capita



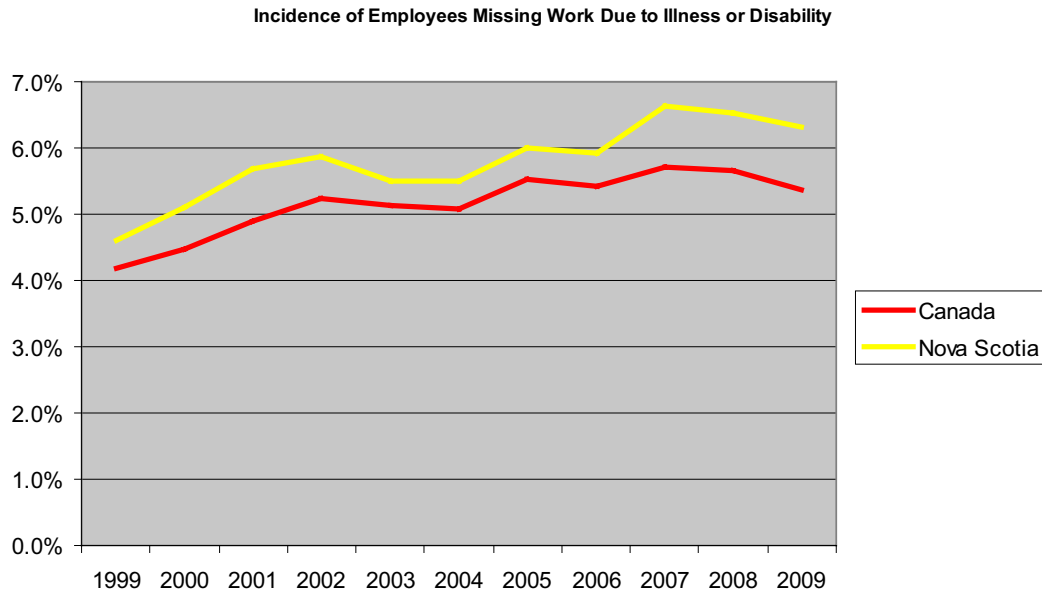
## Electricity generated from fossil fuels

<i>Indicator</i>	Electricity generated from fossil fuels per capita
<i>Capital</i>	Natural
<i>Source of Data</i>	Electricity generated from fossil fuels, annual (gigawatt hours), Statistics Canada (2008), CANSIM Table 128-0014.  Estimates of population, annual, Statistics Canada (2009), CANSIM Table 051-0001.
<i>Description of Data</i>	Based on electric power thermal generating station fuel consumption divided by population
<i>Most recent data</i>	2008
<i>Data availability</i>	Annual All provinces
<i>Rationale for selection</i>	Electricity generation represents an unusually high portion of total per capital fossil fuel usage in Nova Scotia compared to most other provinces. Monitoring this indicator will capture the impact of efforts to develop renewable sources of energy for electrical generation and improve efficiency of energy use. Reduced use of fossil fuel will help protect electricity consumers from oil price shocks and contribute to reduced air pollution and greenhouse gas reduction.
<i>What it tells us</i>	Electricity generation in Nova Scotia dipped in 2006 as a result of the temporary Stora closure in Port Hawkesbury. Overall usage declined between 2007 and 2008.
<i>Performance</i>	 Level: Much higher than Canadian average Rank: Fourth among ten Canadian provinces Trend: Improved between 2007 and 2008

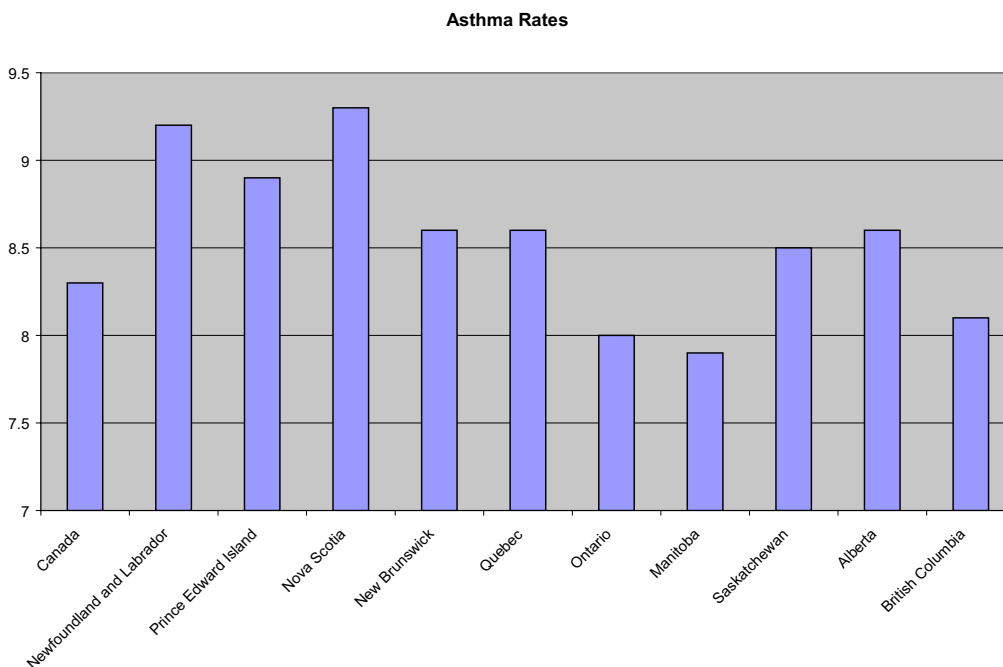


## 4.1 SUPPORTING INDICATORS

### HUMAN AND SOCIAL CAPITALS

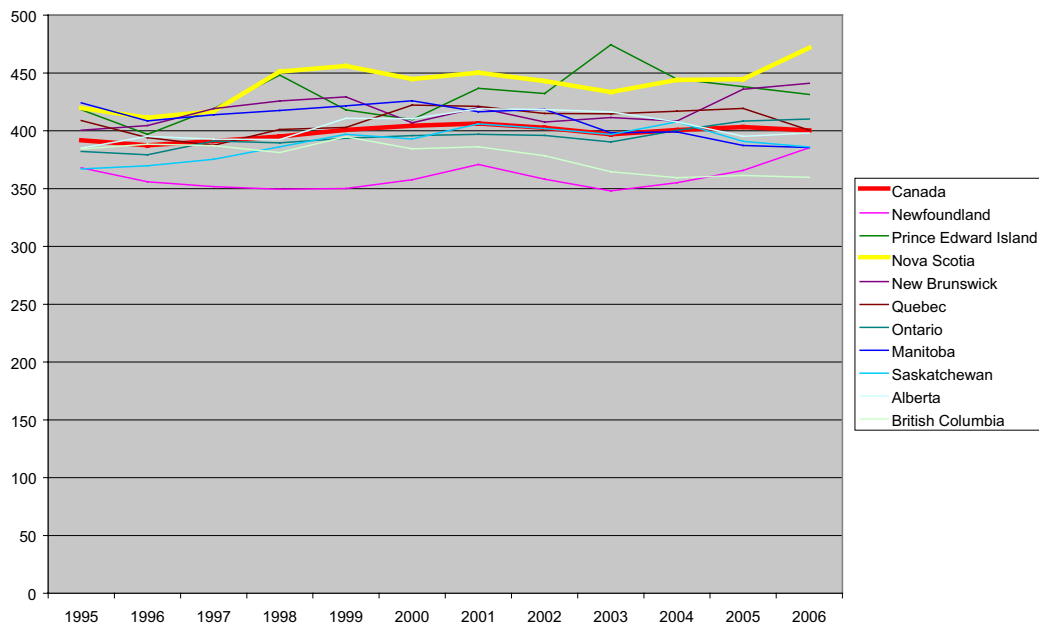


Source: Incidence of employees missing work due to illness or disability, Statistics Canada (2009) Labour Force Survey.



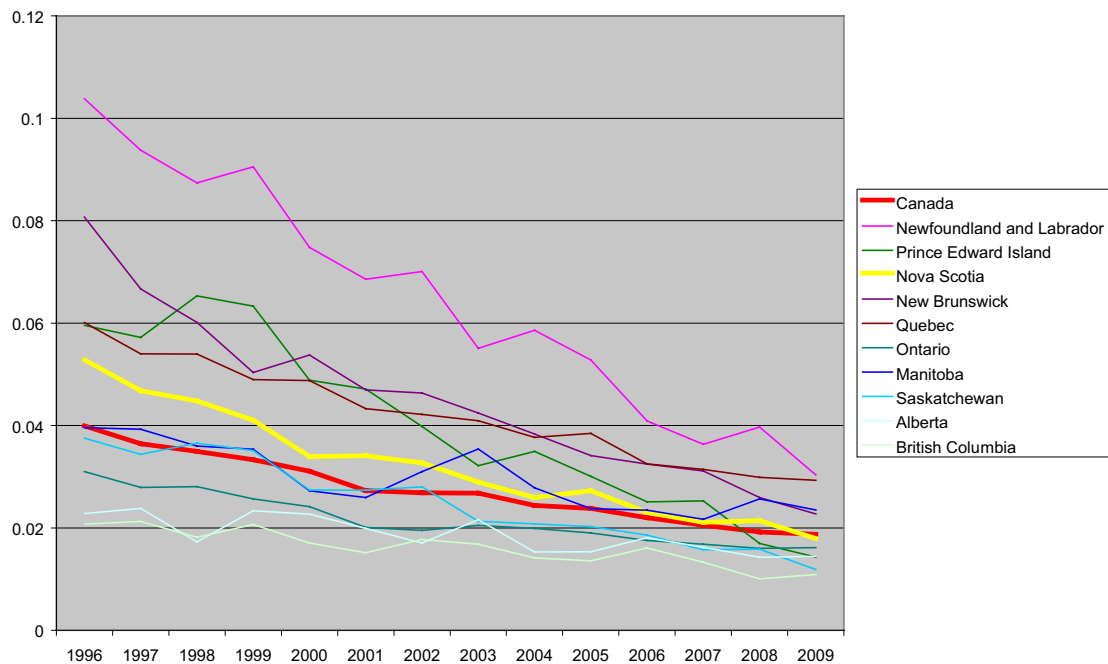
Source: Asthma, by age group and sex, household population aged 12 and over, Statistics Canada (2005), CANSIM Table 105-0401.

### New Cases of Cancer



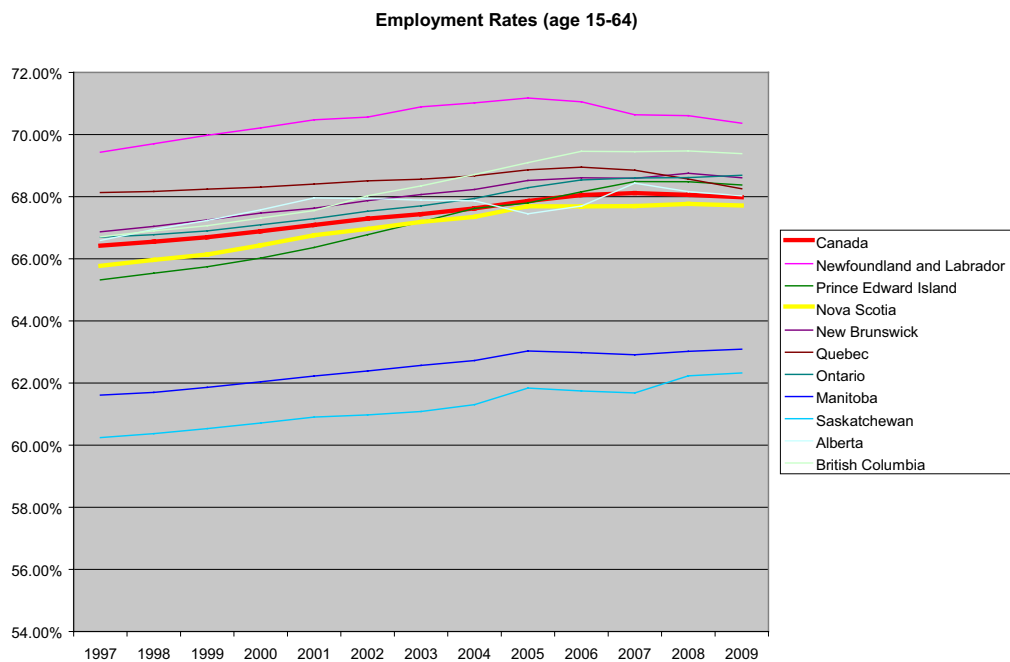
Source: New cases and age-standardized rate for ICD-O-3 primary sites of cancer (based on the July 2009 CCR tabulation file), Statistics Canada (2009), CANSIM Table 103-0553.

### Less Than Grade Nine Attainment (25-44)

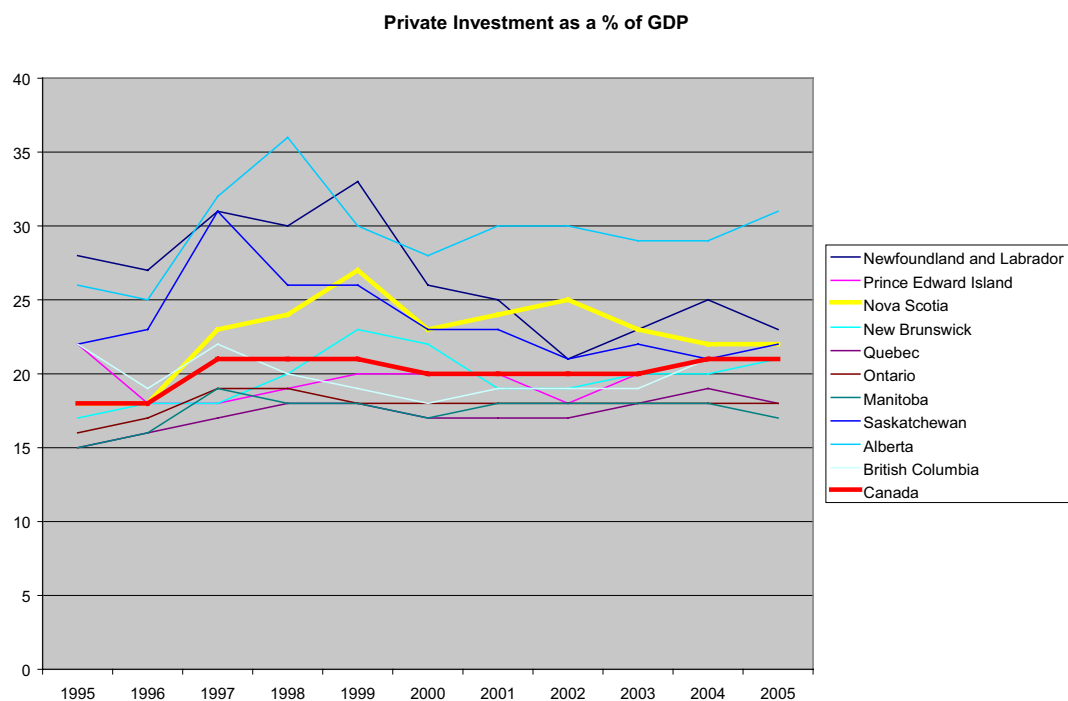


Source: Labour force survey estimates (LFS), by educational attainment, sex and age group, annual (2009) Statistics Canada, CANSIM Table 282-0004.

## FINANCIAL AND BUILT CAPITALS

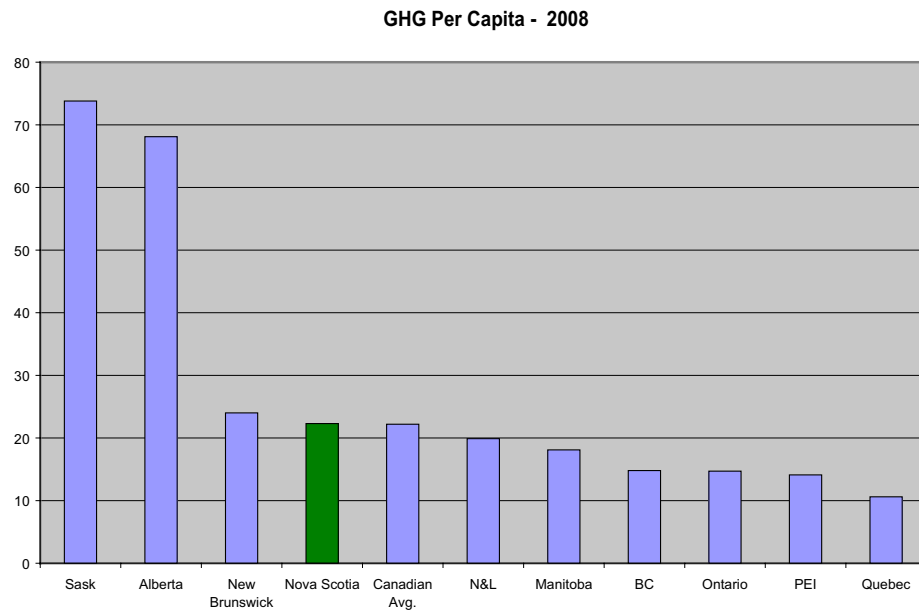


Source: Labour force survey estimates, employment rates, Statistics Canada (2009) CANSIM Table 282-0002.



Source: Public and private investment (2007), Statistics Canada CANSIM Table 032-0002 ; Gross domestic product, Statistics Canada (2008), CANSIM Table 384-0002.

## NATURAL CAPITAL



Source: Environment Canada - Greenhouse Gas Inventory. (2008) GHG emissions per capita.

## 5. INTERPRETATION

Headline indicators serve the same purpose as red or green lights on the dashboard. They indicate where attention is needed. Monitoring headline indicators over time in Nova Scotia, and across Canada, will identify where further analysis is required to understand emerging challenges and opportunities.

Headlines are only a part of the story. Other measurement and reporting initiatives, both within government and without, are source of in-depth information that supports, complements, and inform these headline indicators.

### Examples of government-generated reports:

Nova Scotia Economic Overview, 2009  
[www.gov.ns.ca/finance/statistics/agency/publications/default.asp?id=Pub39](http://www.gov.ns.ca/finance/statistics/agency/publications/default.asp?id=Pub39)

Nova Scotia Labour Market Review, 2008  
[novascotiacaereroptions.ca/images/LMI%20portal%20documents/LabourReview\\_08\\_EN.pdf](http://novascotiacaereroptions.ca/images/LMI%20portal%20documents/LabourReview_08_EN.pdf)

Nova Scotia Social Profile, 2001-2006  
[www.gov.ns.ca/finance/statistics/agency/publications/default.asp?id=Pub47](http://www.gov.ns.ca/finance/statistics/agency/publications/default.asp?id=Pub47)

## 6. OTHER MEASUREMENT INITIATIVES

Under EGSPA, our goal is to expand our economy while sustainably managing the basis of our prosperity. Measuring progress toward this goal is crucial, because if we don't measure it properly, we will not manage it well.

Governments in recent years have seen major rethinking of how we measure progress, and Nova Scotia has taken some steps forward. We have joined other regions in realizing that economic progress cannot be separated from social stability and environmental sustainability. Yet it seems our measurement systems haven't caught up. We depend on old familiar indicators of economic output as the picture of progress.

But many economists now realize that measuring economic growth alone, measured by output and productivity (GDP and GDP per Capita), leaves a weak, if not distorted picture of our economic well-being. Output measurement (GDP) is essential for many public policy purposes such as public finance planning. But as a comparison with other provinces, it is blind to the capital intensive nature of energy endowed economies (Alberta, Saskatchewan, Newfoundland), which will always have larger GDP per capita.

The compilers of GDP remind us it was never intended as a complete measure of economic well-being. Yet it is still used that way. Measuring output alone ignores degradation of our human, social, or natural capital - our ultimate sources of wealth.

The EGSPA goal of sustainable prosperity means accounting for our assets, our capital, and not just our output and productivity. Ironically, that means being more aligned with standard business practice. It means developing an annual balance sheet of our basic assets: our human, social, natural, financial, and built capital.

Advanced tools to make this important shift are well established. They include the *Genuine Progress Index*, and the *Index of Economic Well-Being* (IEWB), and more recently the *Canadian Index of Well-Being* and others. Viewed together, these different approaches provide a more complete picture of the complex relationships between the economy, the environment, and our well-being. But rather than debate which tool is the best, the key is to recognize they all have the same message. We must stop using economic output alone as the primary indicator of progress and by association, as the primary policy target of governments.

*The Genuine Progress Index* for Nova Scotia is composed of more than three hundred indicators in five key domains: natural capital, human impact on the environment, social capital, time use, and living standards. In addition to assessing the progress and trends in the headline indicators, GPI Atlantic has calculated costs and savings accrued from changes in indicators of stocks and flows. An integrated database of headline indicators, drawn from over 20 reports GPI Atlantic has created over the years, is currently housed with the Department of Finance. All of the EGSPA measures are in the database. Finance has also reviewed the indicators to identify those that are sub-provincial and could be added to the province's Community Counts database. A GPI user manual, *New Policy Directions for Nova Scotia*, was developed to provide a guide to policy relevance of GPI Atlantic research reports. All publications are available at [www.gpiatlantic.org](http://www.gpiatlantic.org).

The Index of Economic Well-being, developed by the Centre for Study of Living Standards, is intended to be more comprehensive than GDP per capita, while still focused on the economic dimension of life. It includes four dimensions of economic well-being: effective per capita consumption flows, net societal accumulation of productive resources, income distribution – poverty and inequality, and economic insecurity, are used in the calculation of a composite index. The latest report on the Index of Economic Well-being is available at [www.csls.ca](http://www.csls.ca).

The Canadian Index of Well-Being is a new national measurement instrument currently in development. Its purpose is to track the overall well-being and quality of life of Canadians, as measured by eight domains: arts, culture and recreation; community vitality; democratic engagement; education; environment; healthy populations; living standards; and use of time. When the CIW framework is fully developed, a composite index reflecting trends in all eight domains will be created, which can easily be tracked against GDP. To date, four reports have been produced on living standards, healthy populations, community vitality, and democratic engagement. For information on the Canadian Index of Well-being, or to download the reports, go to [www.ciw.ca](http://www.ciw.ca).

A realistic report card on progress and sustainable prosperity must be like any report card – provide a balanced view. Commentators, policy makers, industry and the public must now shift their attention, and understand that the state of all of our assets (natural, human, etc.) along with our outputs (GDP) are crucial if we are to attain sustainable prosperity.



## 7. NEXT STEPS

A complete set of headline indicators will be published in the 2011 Environmental Goals and Sustainable Prosperity annual report. Feedback and comments on the interim indicators presented in this document may be forwarded to: [secondnature@gov.ns.ca](mailto:secondnature@gov.ns.ca)

## 8. SELECTED RESOURCES

Commission of the European Communities (2009) "*GDP and Beyond: Measuring Progress in a Changing World*" Communication from the commission to the council and European Parliament. Brussels, 20.8.2009. COM (2009) 433.

Commission on the Measurement of Economic Performance and Social Progress (April 2008) "*Survey of Existing Approaches to Measuring Socio-economic Progress.*"

Institute of Wellbeing (June 2009) "*How are Canadians Really doing? The first report of the Institute of Wellbeing.*"

International Association for Community Development, Community Development Alliance Scotland, SCDC, Dundee City Council and Carnegie UK Trust. (2009) *Measuring What Matters Conference Report* Falkland: International Association for Community Development.

Osberg, Lars and Andrew Sharpe (2009) "*New Estimates of the Index of Economic Well-being for Canada and the Provinces, 1981-2008,*" Centre for the Study of Living Standards.

Panozzo, Linda et al (December 2008) "*The 2008 Nova Scotia Genuine Progress Index*" GPI Atlantic.

Segnestam, Lisa (2002) "*Indicators of Environment and Sustainable Development: Theories and Practical Experience*" Paper No. 89, Environmental Economics Series. The World Bank Environment Department.

Smith, Robert B, C. Simard and A. Sharpe (January 2001) "*A Proposed Approach to Environment and Sustainable Development Indicators Based on Capital*" prepared for The National Round Table on the Environment and the Economy's Environment and Sustainable Development Indicators Initiative.

Stiglitz, Joseph, A. Sen, and J-P Fitoussi (2009) "*Report by the Commission on the Measurement of Economic Performance and Social Progress.*"

Talbert, John (2008) "A New Bottom Line for Progress" State of the World 2008. ([www.worldwatch.org](http://www.worldwatch.org))

United National Economic Commission for Europe (2009) "*Measuring Sustainable Development*" Prepared in cooperation with the Organisation for Economic Co-operation and Development and the Statistical Office of the European Communities (Eurostat)

Wesselink, Bart et al. (November 2007) "*Measurement Beyond GDP*" Background paper for the conference Beyond GDP: Measuring progress, true wealth, and the well-being of nations.

# **MEMORANDUM OF UNDERSTANDING On Climate Change**

Between  
THE UNION OF NOVA SCOTIA MUNICIPALITIES  
And  
THE PROVINCE OF NOVA SCOTIA

**WHEREAS:** The Province is responsible for the implementation of the *Environmental Goals and Sustainable Prosperity Act* and the *Climate Change Action Plan*; and

Service Nova Scotia and Municipal Relations (SNSMR) is responsible for provincial/municipal relations; and

Nova Scotia Environment (NSE) is the provincial body responsible initiating and coordinating action on climate change;

**AND WHEREAS:** The Union of Nova Scotia Municipalities (UNSM) represents the provincial interests of municipalities in Nova Scotia;

**AND WHEREAS:** The Parties share a common understanding that climate change is unequivocal; that actions to reduce greenhouse gas emissions and build adaptive capacity in Nova Scotia are essential; and that the Parties can benefit from a more coordinated and collaborative approach to addressing common climate change challenges and opportunities.

**THEREFORE,** the purpose of this Memorandum of Understanding (MOU) is to outline the terms and conditions upon which the Parties agree to work together to address the challenges and opportunities of climate change.

## **GUIDING PRINCIPLES**

The following guiding principles set out in this MOU form the basis of the relationship between UNSM and the Province with respect to climate change. The principles serve as statements of intention between the Parties regarding climate change however this MOU is not intended to create legal or binding obligations.

### **1. The basis for cooperation rests on the common understandings that:**

1.1. Acting on climate change is a priority of the Parties;

1.2. Climate change is unequivocal and human activity is the primary cause;

- 1.3. The impacts of a changing climate are already being observed in Nova Scotia;
- 1.4. The Parties recognize that failure to address climate change will result in significant long-term environmental, economic and social consequences.
- 1.5. Reducing greenhouse gas emissions (mitigation) and enhancing the capacity of all Parties to adapt to new climate trends (adaptation) will have economic, health and environmental benefits for individuals, families, municipalities and the province;
- 1.6. Reducing greenhouse gas emissions and preparing for climate change may require significant up-front resources from all Parties but may also generate new economic opportunities and savings over the long-term; and
- 1.7. Immediate and collaborative action is needed by the Parties in order to meet provincial and municipal climate change commitments.

**2. The Parties acknowledge that each has an important role to play:**

- 2.1. The Province will continue to implement the commitments made in the Nova Scotia Climate Change Action Plan (2009), in the *Environmental Goals and Sustainable Prosperity Act (2007)* and continue to work with the New England Governors/Eastern Canadian Premiers committees.
- 2.2. Municipalities will continue to take action on climate change impacts through direct actions including policy development, land-use planning initiatives, emission reductions, the development and implementation of Integrated Community Sustainability Plans and through the initiatives of the UNSM Municipal Sustainability Office.

**3. The Parties share the common goals of:**

- 3.1. Encouraging stronger inter-governmental and inter-municipal cooperation on the subject of climate change;
- 3.2. Reducing greenhouse gas emissions;
- 3.3. Enhancing capacity to adapt to and increase resilience to climate change impacts;
- 3.4. Identifying and removing legislative, regulatory, policy or other barriers to mitigating and adapting to climate change; and
- 3.5. Implementing programs, policies, or legislative actions, within their respective jurisdictions, that facilitate reduced greenhouse gas emissions and enhance adaptation capabilities and actions, where appropriate.

## **GOVERNANCE STRUCTURE**

The Parties agree to establish a provincial-municipal coordinating committee on climate change to oversee the establishment and implementation of goals and targets for municipal-provincial cooperation on climate change. The coordinating committee will comprise at least one representative from each of SNSMR, NSE, and the UNSM or as otherwise agreed to by the Parties. This committee will be established within one (1) month of the signing of this MOU.

The coordinating body will report, at a minimum, on a yearly basis to:

- The Provincial/Municipal (UNSM) Roundtable;
- The Ministers of SNSMR and Environment; and
- The UNSM Board of Directors and its members.

## **COMMITMENTS**

Upon signing of the MOU, the Parties, via the work of the coordinating committee, commit to the actions outlined in Appendix A. The coordinating committee will:

- Establish an implementation plan for the commitments within 6 months of signing of this MOU;
- Report annually on the progress made with respect to the commitments; and
- Make any recommendations regarding changes to the commitments and the implementation plan.

## **REVIEW OF THE MOU**

The Parties will review the MOU within one year of its adoption and annually thereafter, unless all Parties agree otherwise, to ensure its relevance and appropriateness, to maintain a common understanding of its meaning, and to monitor progress towards the achievement of the deliverables and goals and commitments set out herein.


## **OVERSIGHT AND ADMINISTRATION OF THE MOU**

Oversight with respect to this MOU rests jointly with the President of the Union of Nova Scotia Municipalities, the Minister of Service Nova Scotia and Municipal Relations and the Minister of Nova Scotia Environment. The lead contacts for ongoing administration and action related to the MOU are the UNSM's Sustainability Coordinator, the Director of Nova Scotia Environment's Climate Change Directorate and the Executive Director of the Municipal Services Division, Service Nova Scotia and Municipal Relations.

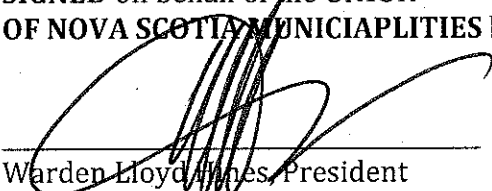
## COMMITMENT

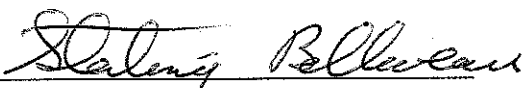
The Parties are signing this Memorandum of Understanding on the **6th** day of November, 2009.

**SIGNED** on behalf of the **PROVINCE**  
**OF NOVA SCOTIA** by:

  
Ramona Jennex, Minister  
Service Nova Scotia and Municipal  
Relations

**SIGNED** on behalf of the **UNION**  
**OF NOVA SCOTIA MUNICIPALITIES** by:

  
Warden Lloyd Jones, President  
Union of Nova Scotia Municipalities

  
Sterling Belliveau, Minister  
Nova Scotia Environment

## APPENDIX A: ACTION ITEMS

### EXISTING COMMITMENTS

The Parties recognize that actions have already been initiated with respect to climate change. Where applicable, reference to the action item in *Towards a Greener Future: Nova Scotia's Climate Change Action Plan* (CCAP) is provided.

The Parties hereby confirm their intention to commit to the following actions:

EXISTING COMMITMENTS	RESPONSIBLE PARTY(IES)*	ASSOCIATED ACTION FROM CCAP **
1. Using funds from the federal Gas Tax Agreement, continue to fund UNSM's Sustainability Coordinator.	SNSMR	Action 45
2. Work cooperatively to amend Gas Tax Agreements with municipalities by 2010 to require climate change strategies in municipal Integrated Community Sustainability Plans.	SNSMR & UNSM	Action 48
3. Through the ecoNova Scotia Municipal Program, invest \$7.5 million in municipally led projects that will result in greenhouse gas and air pollution emissions reductions until March 31, 2011.	NSE ( <a href="http://www.gov.ns.ca/ecoNovaScotia">www.gov.ns.ca/ecoNovaScotia</a> )	
4. Continue to support municipal anti-idling initiatives including the development of a model anti-idling by-law and municipal best practices guide.	SNSMR, NSE & UNSM	
5. Using funds from the federal Gas Tax Agreement, provide funding in 2009 to help municipal governments plan for climate change.	SNSMR & NSE	Action 46
6. UNSM and pilot municipalities*** will work with the Province and project partners to achieve the adaptation goals of the Atlantic Adaptation Collaborative. This includes producing flood risk, erosion and sedimentation maps under different climate scenarios and using those scenarios to develop appropriate adaptation policy and planning in the designated vulnerable coastal and inland areas of this study.	NSE, UNSM, Municipal Pilot Coordinators (a representative from the pilot communities)	Action 59

7. The Province will develop a web-based clearinghouse of information and tools to support adaptation to climate change in Nova Scotia in 2009. The Province will work with the UNSM and staff within select municipalities to ensure the database meets the needs of local municipal planners, engineers and emergency management personnel.	SNSMR & NSE	Action 57
8. Create a climate change Adaptation <sup>1</sup> Fund within Nova Scotia Environment to encourage adaptation research and development starting in 2009. Municipalities will be eligible to apply for funding to advance adaptation research and policy planning in their own municipalities	SNSMR & NSE	Action 53
9. The Province will develop, in consultation with municipalities, Provincial Statements of Interest on adaptation by 2010.	SNSMR, NSE & UNSM	Action 54
10. Every two years the Province will conduct a vulnerability assessment of Nova Scotia to climate change. This will provide municipalities with critical information on local climate impacts and help identify information gaps, adaptation barriers and policy priorities.	NSE	

**\* SNSMR- Service Nova Scotia and Municipal Relations, NSE- Nova Scotia Environment, UNSM- Union of Nova Scotia Municipalities**

**\*\* CCAP- Climate Change Action Plan, Province of Nova Scotia**

**\*\*\*Pilot municipalities include: Halifax Regional Municipality, Municipality of the County of Cumberland, Municipality of the District of Lunenburg, Municipality of the District of West Hants, Municipality of the County of Kings, Municipality of the District of Yarmouth, Town of Hantsport, Town of Oxford, Town of Amherst, Town of Wolfville, Town of Windsor, Town of Kentville, and Town of Yarmouth.**

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<sup>1</sup> Climate change adaptation refers to the recognition that changes in our climate are already occurring, and Nova Scotia must prepare for their impacts by adapting current policies and infrastructure to better cope.



## NEW COMMITMENTS

The Parties recognize that substantial effort is needed by all Nova Scotians to address the challenges and realize the opportunities presented by climate change.

The Parties hereby confirm their intention to commit to the following new actions:

NEW COMMITMENTS	RESPONSIBLE PARTY(IES)*
1. Conduct a policy scan to determine changes to regulations, legislation, policy or other activities that may be required to enable municipalities to meet climate change goals/targets by 2012.	SNSMR, NSE & UNSM
2. Identify funding opportunities to help municipalities reach their climate change goals/targets and promote these resources via a central 'clearing house' by 2011.	SNSMR, NSE & UNSM
3. Share information and explore additional opportunities to support climate change mitigation and adaptation at the municipal level and promote these resources via a central 'clearing house' by 2011.	SNSMR, NSE & UNSM
4. Work with Nova Scotia municipalities to complete a municipal corporate inventory of greenhouse gas emissions using UNSM's Corporate Energy & Emissions Inventory Toolkit, with the goal to have all municipalities complete their inventory by 2011.	NSE & UNSM
5. Research climate change action plans and develop a model that outlines best practices in greenhouse gas reduction measures for Nova Scotia municipalities.	SNSMR, NSE & UNSM
6. Work with Nova Scotia municipalities to develop climate change action plans to meet corporate greenhouse gas emissions targets, with the goal that all municipalities have plans completed by 2013. This plan will include recommendations and initiatives such as: <ul style="list-style-type: none"> <li>a. Establishment of corporate greenhouse gas emissions targets;</li> <li>b. Increase the overall energy efficiency of municipal operations by 20% over 2008 levels by 2020; (Action 4 from CCAP**);</li> <li>c. Adopt environmental building standards for new municipal buildings and retrofits (such as LEED Silver, BOMA BEST); or: Require that all new government-owned buildings achieve LEED Silver Certification after 2010 and be carbon neutral after 2020;</li> <li>d. Require that climate change impacts are considered in the design/construction of new buildings (Action 37 from CCAP);</li> <li>e. Develop and adopt a sustainable procurement policy by 2012 (Action 44 from CCAP);</li> <li>f. Develop land use planning documents (i.e. compact, mixed use development, etc) to encourage sustainable transportation, and mitigate against future climate impacts (Action 19 from CCAP); and</li> <li>g. Commit to purchase or lease vehicles that are in the top 20% of their class for energy efficiency by 2010; (Action 42 from CCAP).</li> </ul>	SNSMR, NSE & UNSM

NEW COMMITMENTS	RESPONSIBLE PARTY(IES)*
7. Continue to develop model renewable energy by-laws that provide clarity for development and encourage municipalities to adopt them, where applicable, by 2011.	SNSMR, NSE & UNSM
8. Develop a best practices document that focuses on the impacts of sea-level rise and its implications for land-use planning and the design of waste water treatment plants.	SNSMR, NSE & UNSM
9. Develop an education and awareness program by 2011 through UNSM's Municipal Sustainability Office to build local government's capacity to plan and implement climate change initiatives	SNSMR, NSE & UNSM
10. Cooperate in the research, development and execution of a provincial Sustainable Transportation Strategy.	SNSMR, NSE & UNSM
11. Establish adaptation goals and targets for municipalities (such as coastal mapping for sea-level rise and storm surges) and incorporate results in planning strategies by 2012.	SNSMR, NSE & UNSM
12. Identify one or more new Statements of Provincial Interest relating to climate change mitigation and/or adaptation to be incorporated into the MGA by 2011.	SNSMR, NSE & UNSM
13. Establish a municipal "Climate Change Leaders" program to recognize Nova Scotia municipalities that demonstrate leadership through early action on climate change.	SNSMR, NSE & UNSM

\* SNSMR- Service Nova Scotia and Municipal Relations, NSE- Nova Scotia Environment, UNSM- Union of Nova Scotia Municipalities

**Sustainable Transition Team**  
2010

**Attachment 5**

Community Development	Andy Fillmore	Transportation and Public Works	Hanita Koblents
Community Development	David Lane	Transportation and Public Works	Gord Helm
Community Development	Susan Corser	Transportation and Public Works	Gordon Hayward
Community Development	George Taylor	Transportation and Public Works	Kelly Hopkins Goodwin
CAO's Office	Annette Verge	Transportation and Public Works	Paul Beauchamp
CAO's Office	Shaune Mackinlay	Transportation and Public Works	Replacement for Roxane MacInnis
CAO's Office	Jim Donovan	Halifax Water	Tony Blouin
Infrastructure and Asset Management	Blair Blakeney	Finance	Anne Feist
Infrastructure and Asset Management	Lou Dursi	Business Planning and Information Management	Michael Pappas
Infrastructure and Asset Management	Peter Duncan	Fire Services	Chris Mitts
Infrastructure and Asset Management	Julian Boyle	Police	Greg Murray

Chair: Richard MacLellan, Manager, SEMO

Champion: Phillip Townsend, Director, Infrastructure and Asset Management

Plus all SEMO staff support the team and efforts, including: Cameron Deacoff, Kathryn Cooper MacDonald, Shannon Miedema and Claudine Fougere

## HRM Sustainability Planning Tool

**Project Title:** \_\_\_\_\_

**Project Department Lead:** \_\_\_\_\_

Attachment 6



**Briefly describe the project/decision:** \_\_\_\_\_

In the table below, please make comments regarding the extent which this initiative moves HRM closer to or farther away from its strategic priority of sustainability. Please use specific examples or metrics where appropriate.

Sustainability Goals and Metrics		Not Applicable	Positive, moves HRM toward sustainability goals	Negative, moves HRM away from sustainability goals
To encourage HRM to:				
General	Smart use of alternative fossil fuels and metals.			
specific	...reducing use of fossil fuels			
specific	...encouraging use of alternative fuels and energy sources			
specific	...reducing use of scarce metals			
specific	...encouraging use of recycled, recyclable, reused, and reusable components and materials			
General	Smart use of synthetic chemicals and substances.			
specific	...reducing product/chemical toxicity			
specific	...reducing negative impact on human health			
specific	...encouraging use of products made with natural components			
specific	...encouraging use of recycled, recyclable, reused, and reusable components and materials			
specific	...product/chemical is eco-label certified			

Note: The traditional Natural Step language for the Sustainability Principles is shown on page 4 of this planning tool.



Sustainability Goals and Metrics		Not Applicable	Positive, moves HRM toward sustainability goals	Negative, moves HRM away from sustainability goals
To encourage HRM to:				
General	<b>Smart land and eco-system management.</b>			
				
specific	... protection of natural habitat			
specific	... protection and enhancement of green-space			
specific	... improvement of land quality			
specific	... materials taken from well managed eco-systems			
specific	... encouraging use of recycled, recyclable, reused, and reusable components and materials			
specific	... wood taken from FSC certified forest			
General	<b>Enhance the ability of people to meet their human needs.</b>			
				
specific	... creating a safe work environment			
specific	... enhancing inclusive and transparent decision-making			
specific	... improving human health			
specific	... activities encourage community engagement			
specific	... activities support diversity			
specific	... activities that enhance accessibility			
specific	... activities that contribute to the local economy			
specific	... activities that contribute to and/or preserve local culture			

Note: The traditional Natural Step language for the Sustainability Principles is shown on page 4 of this planning tool.

Strategic Questions:

**Adaptability:** To what extent and in what way does this decision limit or enhance our ability to take advantage of new technologies, investments, or opportunities that relate to this issue in the foreseeable future?

**Life-cycle Analysis:** Does your analysis take into account the full life-cycle of the product/project? Please briefly describe.

**Costs:** What are the anticipated costs associated with this decision/investment?

**Return on Investment:** In what way will this decision provide a return to the department and/or HRM (financial, environmental, political, social, cultural)?

**Fit with Strategic Priorities:** To what extent and in what way does this decision fit with the EMT strategic priorities of HRM?

1. Implementation of Strategic Initiatives
2. Practising Fiscal Responsibility
3. Making HRM an Employer of Choice
4. Providing Excellence in Service Delivery

1. Strategic Initiatives

2. Fiscal Responsibility

3. Employer of Choice

4. Excellence in Service

**Fit with other decisions/investments:** To what extent is this decision consistent with, complement, or balance with other policies and initiatives?

**Other stakeholders:** Have you considered impacts on and influence of other stakeholders (e.g. community, businesses, other HRM departments, etc.)? If so, who and how?

**Overall Sustainability Assessment:** Please score each sustainability principle (SP) as to the extent to which this decision/investment/initiative moves HRM toward or away from sustainability. Highest possible score 8, Lowest possible score -8

Strong contribution toward sustainability	2	SP1	
Weak contribution toward sustainability	1	SP2	
Neutral contribution toward sustainability	0	SP3	
Weak negative impact (against sustainability)	-1	SP4	
Strong negative impact (against sustainability)	-2	Average Score	

**Other Opportunities:** If in the above question "negative impact" for any of the sustainability principles was selected, are there any possible opportunities (even beyond the bounds of this project) to avoid or minimize this?