

## Climate Change in Ontario

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### Assessment, efficiency of green policies, and optimal environmental stability

*Ontario possesses the technological and financial resources to address climate change. Yet, the Province has been unable to formulate coherent policies to significantly reduce emissions and adopt an environmentally friendly approach to this issue. This paper analyzes the response of the government to climate change and the barriers preventing efficient policy implementation in Ontario. The analysis draws from journal articles, governmental publications, and independent reports. It examines the effectiveness of public authorities to implement environmental policy. More precisely, this research points out the relationship that the Government of Ontario has developed with environmental issues. This essay reveals the challenges relating to policy implementation, for poor or mixed results have been achieved. This difficulty in achieving clear results is not a problem of policy implementation, but rather one of political will and accountability. The research highlights a persistent conflict between short-term and long-term goals. To address climate change efficiently, our current mode of governance needs to be reformed. This paper closes with a proposed solution to the current precarious state of climate change policy implementation in Ontario through a new method of environmental stewardship.*

#### **INTRODUCTION**

Climate change has arisen as a consequence of the unfettered production and consumption of resources. Climate change is a threat to societies, economies, and the environment as a whole. Through the emissions of greenhouse gases (GHG)—namely carbon dioxide, nitrous oxide, and methane—capitalist production has increased the concentration of these gases in the atmosphere, contributing to present and future rises in global temperatures. In 1992, the international community discussed the effects and impacts of climate change, as well as potential solutions. The conference, held in Kyoto, Japan, resulted in the Kyoto Protocol, in which signatory governments committed to reduce their GHG

## Climate Change in Ontario

emissions between 2008 and 2012, to levels below those recorded in 1990 (United Nations [UN], 1998, p. 3).

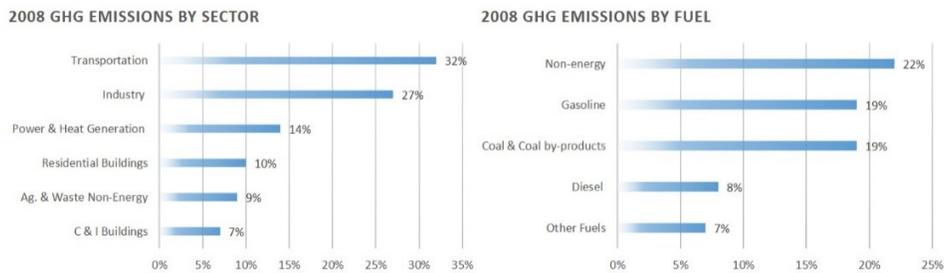
Ontario will be affected by climate change insofar as temperatures are expected to rise between 2.5°C and 3.7°C by 2050, and disturb ecosystems (Ontario Ministry of the Environment, [OMOE], 2011, p. 10). Ontario possesses the technological and financial resources to position itself as a leader in the effort to combat climate change, yet the province has been unable to formulate coherent policies to reduce significantly emissions and to implement an environmentally friendly approach towards accumulating wealth.

This paper analyzes the institutional response to climate change and the barriers preventing efficient policy implementation in Ontario; the implications and opportunities that climate change presents for the province; and the effectiveness of the policies already implemented by public authorities. More precisely, this research aims, through the example of climate change, to understand the relationship that the government of Ontario has developed with environmental issues. This paper will close with a proposed solution to the current precarious state of climate change policy implementation in Ontario through a new method of environmental stewardship.

### CLIMATE CHANGE AND ONTARIO

#### Sources of greenhouse gases in Ontario

The increase of anthropogenic emissions in the past fifty years has accelerated global warming (Intergovernmental Panel on Climate Change [IPCC], 2007, p. 72). In 2011, Ontario was the second largest GHG emitter in Canada after Alberta (Environment Canada, 2013, p. 11).



**Figure 1.** 2008 Emissions by sector and by fuel as per the Ontario Ministry of the Environment (2009).

The OMOE reports the share of GHG emissions through a “by Sector” and a “by Fuel” method illustrated in Figure 1 (2009, p. 42). The “by Sector” approach reports the GHG contribution of 6 economic sectors—industry, electricity and heat,

## Climate Change in Ontario

residential, agriculture, transportation, and commercial and institutional buildings—in total emissions. The “by Fuel” approach analyzes the fossil and non-fossil fuel sources of GHG in Ontario. In 2008, more than 75% of GHG emissions resulted from the use of natural gas, refined petroleum, and coal (OMOE, 2009, p. 42). Between 1990 and 2008, the transportation sector was the largest GHG-generating sector with 33% of total emissions (OMOE, 2009, p. 42). As a result of dependence on fuels producing GHGs, the emissions of the province rose by 8% between 1990 and 2008 (OMOE, 2009, p. 43).

### **Economic opportunities of green growth**

Decreasing GHG emissions represents an opportunity to shift from unfettered capitalist production to greening our economic activities by “fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies” (Organisation for Economic Co-operation and Development [OECD], 2011, p. 4). Green growth offers benefits to Ontario through increased productivity, opportunities for innovation, new markets, and enhanced investor confidence to revitalize the economy. For instance, green building may correspond to a 30% decrease of GHG emissions by 2020, while energy efficiency retrofits may yield 13 to 16 jobs for each \$1 million increase of the production of goods and services (Blue Green Canada [BGC], 2012, p. 3). The expansion of energy-efficient low-carbon transportation would raise employment by as much as 10%, boosting the local automotive industry while helping the economy as a whole by tackling congestion costs amounting to between \$3 and \$5 billion per year (BGC, 2012, p. 4).

Fighting climate change is a virtuous cycle: implementing policies to reduce GHG emissions would bring greater efficiency and competitiveness to the economy, which would positively impact the preservation of the environment. As the environment is protected, society benefits, which would lead to greater economic activity and as a result every other aspect of society and the environment affected by the economy.

### **Poor public management costs to the economy, society, and the environment**

Current public management that promotes increasing GHG emissions leads to heavy economic costs. Consequently, adaptation and mitigation costs will have to match the impact of the increasing levels of emissions and the growing effects of climate change. A cost between \$1 and \$7.4 billion is likely in Ontario, as timber resources diminish due to drought and fire caused by climate change. In the forest industry alone, losses are expected to amount to \$75 billion by 2080 (National Round Table on the Environment and the Economy [NRTEE], 2011, pp. 53-54). The current practices, propagating the release of GHGs, are, consequently, contributing to Ontario’s impoverishment.

## Climate Change in Ontario

Continued GHG emissions have negative impacts on society as policies do not absorb the negative externalities resulting from our current practices. A warmer climate will ease the propagation of diseases, such as Lyme disease or Malaria, as insects migrate to the warming northern climates (Berrang-Ford, MacLean, Gyorkos, Ford, & Ogden, 2009). Climate change, if it is not addressed in an effective manner, will severely affect our ecosystems, disturbing wildlife habitats as temperature increases. Prolonged growing seasons, warmer winters, and extreme weather conditions will become frequent as wildlife habitats are disturbed (OMOE, 2011, pp. 10-16). Given this, it is difficult to understand why the Ontario government is failing to find a proper solution to such a pressing issue. This points to the inertia of the system and highlights factors behind receding attention to climate change.

Global warming is both a problem and a set of untapped opportunities to be unlocked by public authorities. Climate change calls for the introduction of innovative ways of pursuing economic growth and formulating policy.

### **GREEN POLICIES IN ONTARIO**

Ontario's previous government, headed by Dalton McGuinty, implemented policies to ease the shift from current economic practices towards a greener path. Some of these policies are analyzed in the following section.

#### **Recent measures introduced by the Ontario government**

By introducing its Green Energy and Economy Act of 2009, the Ontario Ministry of Energy encouraged the development of renewable energies and the green economy. To reduce GHG emissions and adapt to climate change, Ontario set three targets: 6% below 1990 levels by 2014, 15% below 1990 levels by 2020, and 80% below 1990 levels by 2050 (NRTEE, 2012, p. 149). The OMOE established five strategies to reach these emission levels, as reported by Foon and Dale (2014):

1. Phasing out coal-fired power plants and supporting more renewable energy
2. Creating a culture of conservation
3. Creating a cap-and-trade system for industry
4. Giving provincial sales tax breaks for energy-efficient products
5. Introducing programs and incentives for consumers, businesses, and municipalities to go green.

The province adopted new practices to fight GHG emissions, conserve energy, and alleviate their resulting negative impacts by investing \$150 million in green energy programs, tax rebates, and exemptions. At the same time, the dependence on renewable energy will be doubled by 2025 (OMOE, 2007a, p. 21).

## Climate Change in Ontario

The OMOE claims that its efforts to reduce GHG emissions confirm the government's new "realization" of the severity of climate change in Ontario; however, the success of these policies relies on proper implementation. In the next sections, the government's action is evaluated by analyzing the results of environmental policy in Ontario.

### **Results of policies**

The introduction of the Green Energy and Economy Act brought 30 green energy companies to Ontario, reinforcing economic dynamism with business creation and 13,000 additional jobs (BGC, 2012, p. 2). Emissions from the production of electricity were predicted to decrease by 85% between 2003 and 2014 as the province phased out its use of coal (OMOE, 2007b, p. 4). In 2009, Ontario reduced its emissions by over 6% (a positive signal in the context of the Kyoto Protocol, especially in light of the federal government's withdrawal from the agreement), thereby reaching its stated goal for 2014 five years early (NRTEE, 2012, p. 149). Positive results were achieved.

While the government made tremendous strides in managing its contribution to climate change, the policies implemented display serious weaknesses.

### **Barriers and limitations of policies**

In 2009, emissions shrank due to the economic recession that slowed industrial activity in Ontario but are expected to rise as nuclear power is replaced by natural gas (Environmental Commissioner of Ontario [ECO], 2011, p. 5). The Climate Change Action Plan (2009-2010) reports that the 2014 and 2020 targets will not be achieved, while the ECO is of the opinion that the tools to ease the transition towards the green economy are lacking (2011, p. 5).

The policies of the government do not allow for a proper assessment of each sector emitting GHGs as governmental segment-specific objectives are not required (ECO, 2011, p. 4). Defined sectorial goals are necessary as they allow for better monitoring and evaluation of the government's actions and ensure the greening of activity in all economic divisions (ECO, 2011, p. 4). Ministries are not expected to work together towards greening the economy—the main factor that allowed meeting the 2014 target in 2009 results mainly from the closure of coal-fired power plants. The non-imposition of sector targets points to an unclear governmental strategy regarding the issue of climate change.

The measures taken to reduce GHG emissions have not provided effective results; the province had not proposed any new strategies by 2011 to achieve the 2020 targets (ECO, 2011, p. 5). The government has failed to implement its own policies and has not been held accountable for showing lack of consistency in its actions.

## Climate Change in Ontario

Market barriers add to inefficient policies. Consumers do not have easy access to information on the energy market: 59% of energy consumers believe that they have insufficient information to consume electricity efficiently (Ontario Clean Air Alliance, [OCAA], 2011, p. 6). The presence of energy subsidies creates uneconomical conditions in the market: Ontario's expensive fossil and nuclear energy are subsidized, which adds pressure to the Province's finances. As a result of cheaper access to electricity, the development of green energies throughout Ontario is delayed (OCAA, 2011, p. 6). Excessive electricity usage is encouraged while consumers generate inflated and non-taxable GHG emissions (OCAA, 2011, p. 6). These policies do not encourage consumers to change habits that have a clear negative environmental, social, and economic impact.

Most importantly, several ministries failed to comply with the Environmental Bill of Rights (EBR) (ECO, 2012, p. 9). The Ministry of the Environment, the Ministry of Natural Resources, the Ministry of Energy, the Ministry of Northern Development and Mines, and the Ministry of Transportation all neglected to abide by the EBR during the 2011-2012 reporting year: the public's right to provide its contribution on amendments pertaining to environmental laws was ignored (ECO, 2012, p. 10). The EBR was created to bring greater transparency and accountability from the government and to enable public participation in the decision-making process (ECO, 2012, p. 15). Currently, the Ministry of Infrastructure, the Ministry of Aboriginal Affairs, and the Ministry of Education—whose actions often have environmental impacts—are not prescribed under the EBR, adding to the inconsistency relating to the Government's implementation of policies (ECO, 2012, p. 15).

### **PROPOSED CASE FOR THE INDEPENDENCE OF ENVIRONMENTAL POLICY**

The apathy of Ontario's governments over several decades to address climate change leads one to question the viability of the policies introduced and their commitment to resolving this issue. The numerous barriers to addressing the rising levels of GHG emissions call for an alternative approach to climate change policy implementation. This section introduces a proposed model, advocating the independence of environmental policy benefiting from the model of central banks.

#### **Advantages of independent institutions: the case of the Central Bank**

Central banks with greater independence from governments enforce efficient monetary policy (Fisher, 1995, p. 201). Goal independence allows the central bank to set its own policy goals, while instrument independence enables the bank to monitor monetary policy through instruments giving it the authority to determine interest rates and freedom from financing public budget deficit (Fisher, 1995, p. 202). Through independence, political pressures affecting monetary policy such as the inflationary bias—the increase of the general price level due to the rising

## Climate Change in Ontario

volume of money and credit relative to available goods and services—are prevented (Fisher, 1995, p. 205).

Mishkin and Serletis highlight the fact that a politician's main goal is to win elections. Politicians may not understand the importance of long-term targets, such as supporting the price level or preventing GHG emissions. They look for short-term answers to society's present problems, such as unemployment or purchasing power and do not usually take into consideration that policies designed to satisfy short-term aims may have long-term consequences. For example, a politician could support an inflationary monetary policy and its negative effects to be re-elected. These policies negatively impact the economy in the long run by propagating unemployment and price instability. Hence, an independent central bank can easily pursue unpopular policies on a political level that are good for the society's long-term interest (Mishkin & Serletis, 2010, p. 339).

In the context of climate change, the involvement of politicians in power, and to a larger extent governments, in the environmental portfolio remains weak. This discontinuity in interest between the economy and the environment is revealed by politicians giving priority to short-term goals to the detriment of the long-term goals required by the environment, society, and economy that survive them. Similarly, environmental challenges stand beyond the scope of politics. To be tackled in an effective manner, environmental issues should be managed by an independent institution that will ensure that the long-term goal of finding a balance between the preservation of the environment, society, and the economy is achieved.

### **Ontario governments and eco-centrism**

This section juxtaposes the action of several governments with that of an independent environmental institution.

Most Ontario governments' approaches to environmental issues have been human-centred. The governments' efforts have conventionally favoured economic expansion—believed to ensure the well-being of the society they administered. Since 1945 and more so after 1985, governments have adopted a facilitative /managerial role of environmental issues: to be implemented, environmental policies have had to satisfy economic growth and development concerns through traditional sectors, such as natural resource extraction or industrialization. Environmental policies have become applicable depending on their level of political significance to leaders and society (Winfield, 2012, p. 190). The Progressive Conservative governments of Frost, Robarts, Davis, and the Liberal McGuinty governments searched for a balance between environmental issues and traditional economic development, causing tensions between these two pillars, which yielded mixed results (Winfield, 2012, p. 190). The McGuinty government in particular failed to achieve its long-term vision of finding a balance between society, economy, and environment (Winfield, 2012, p. 194). It displayed

## Climate Change in Ontario

confusion in adopting the Green Energy and Economy Act, while leaving nuclear energy at the heart of energy production (Winfield, 2012, p. 181).

Analyzing the strategy of the McGuinty government and previous governments—their relationship with the environment, the economy, and society—points to an incoherent understanding of these three pillars: externalities are analyzed in a “compartmentalized manner” (Giddings, Hopwood, & O’Brien, 2002, p. 189). For instance, externalities such as GHG emissions, health problems, intensified environmental catastrophes, are costs relating to economic development which are not accounted for when assessing the real value created for society and the environment. These externalities are evidence of the existence of trade-offs between the three pillars of sustainability—building the case for strong interdependence. It is clear that to achieve economic growth, economic activity is only possible based on heavy reliance on resources made available by both the environment and society. Human interactions encourage economic activity within our society contained within the environment, while the economy is part of the environment and society on which it remains dependent (Giddings et al., 2002, p. 191).

To operate the shift towards the green economy, our society needs an independent institution to reposition the government’s action. This independent institution would ensure the balance between economic growth and social and environmental stability. The implementation of bold policies will contribute to establishing a new model of growth building its foundation on sustainable policies for greater efficiency.

### **CONCLUSION**

It is undeniable that Ontario is affected by climate change, which, as a result of GHG emissions, negatively impacts the three pillars of sustainability. Climate change, however, provides the opportunity to shift towards green growth.

Measures have been taken to address climate change in Ontario. Although results have been achieved, policies have not proven sufficient to bring down GHG emissions. Environmental challenges demonstrate a poor commitment towards the implementation of environmental policies, and hence confirm the weaknesses of our mode of governance in achieving balance between the three pillars. Several barriers hindering policy implementation have been noted, including those posed by the markets, politics, and a lack of accountability, transparency, and consistency in action.

Governments, right and left, have not been able to address the implications of climate change efficiently. The failure of Ontarian governments to reduce GHG emissions forces us to analyze the divergence between short-term and long-term interests. The barriers identified herein make clear a conflict of interest between

## Climate Change in Ontario

economic growth and environmental conservation, between biased and short-sighted agents and the long-term goals needed to ensure environmental prosperity.

Giving an independent status to environmental policy would inhibit conflicts of interest and ensure an efficient implementation of policy to bring greater balance between the economy, the environment, and society. The long-term goals required for guaranteeing environmental stability, societal well-being, and economic health would be ensured. An independent institution would provide assurances of unbiased policy formulation. This institution's action would monitor policy formulation, not just relating to the environment, but of the government's actions as a whole. The scope of this paper does not allow proposing a fully developed study of this case; however, this could be a seed for future research.

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## Climate Change in Ontario

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