## INTRODUCTION

## Understanding the Economic Aspects of the Fight against Climate Change

From November 30 to December 11, Paris will be playing host to the 21<sup>st</sup> United Nations Climate Conference at which a future agreement is to be negotiated, intended to apply to every country as a way of limiting global warming. Following conferences that were widely regarded as failures, and in the absence of a binding successor agreement to the Kyoto Protocol, the Paris meeting is seen as a turning point. Will there, or will there not, be an agreement? What about North-South negotiations? Will the BRIC countries sign on to the agreement? Will binding targets be set?

All international negotiations pose challenges. This case is no exception, especially with the fight against climate change blending political rhetoric, economic logic and climate science. We are economists, not climatologists, and as such we will not enter into the current scientific debate on climate change. Our premise is that of the great majority of scientists, who hold the view that global warming since the pre-industrial era is caused mostly by human activity. We will content ourselves with presenting an overview of the basic ideas used by climatologists in areas more closely related to the economics of climate change.

Our most relevant contribution focuses on the analysis of public policy, market dynamics, and the choices that lie ahead in dealing with the reality of climate change. The aim of this *Research Paper* is threefold. It seeks to:

- use accessible language to present readers with the key notions surrounding political debate and negotiations on the issue of climate change;
- provide an explanation of the mechanisms under discussion as well as current public policies and the trends at work, especially those affecting the Canadian reality more specifically;
- avoid emotional or moralizing approaches so as to understand public policy choices and to base them on the most pertinent facts.

We have aimed to stay away from declarations and good intentions, focusing instead on results. Around the world, various politicians have spoken loudly, but their words are not always matched by deeds. Opinion leaders talk passionately about our moral responsibility, but neglect certain issues of vital importance. Activists exalt

the benefits of certain solutions, but are silent about the costs. An economic approach to climate change pays more heed to tangible results and to the various facets of the issue, taking account of benefits as well as costs.

Four chapters provide an understanding of the climate change issue based on a wide variety of documentary sources, with 43 charts and tables. A bibliography will enable readers to continue seeking answers on their own.

Given our ambition of making the issue understandable to the broadest possible public, it seemed essential to us to start with the facts. An unvarnished diagnosis is necessary, especially as regards the global level of greenhouse gas emissions, which keeps rising despite all the international gatherings since 1979. This is the aim of the first chapter, organized in the form of 20 questions and answers concerning the international negotiations leading up to the Paris Conference.

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Even if the conference were to end in failure, with the world's countries failing to settle on or comply with a binding universal agreement that could serve to limit the likelihood of more than 2°C of warming, this would not prevent various governments from adopting policies to fight climate change. The second chapter shows that, although it is not easy to convert some of the less certain results of climate science into public policy, there are many tools available to governments, and some of them are already being put to use. This applies in particular to Quebec's carbon market and British Columbia's carbon tax. Fuel taxes, as we shall see, are already widely used.

In addition to governments, communities and businesses are also involved in worthwhile developments, many of them highly promising. The third chapter outlines the global trends that offer reason to believe an energy transition is already in progress, even if its effects are still

marginal. Global emissions continue to rise, but the intensity of emissions is falling, and some promising technologies could become more widespread.

Finally, the issue of adaptation is addressed in the fourth chapter, since adaptation has always been the way humans respond to variations in climate. Even with warming limited to 2°C, there will be transformations that have both negative and positive effects on various population groups. Factors such as economic development and the availability of technologies will be decisive if adaptation is to be successful.