Chapter 8
Coping with Uncertainty and Risk

INTRODUCTION

In the previous chapters, reference has been made to the uncertainty, which characterizes measurements and assessments related to climate change, and the risks accompanying policies to adapt to and/or mitigate the impacts of global warming.

Particularly in the case of the facts, based on (IPCC, 2007a), about global warming and relevant projections into the future presented in chapter 2, the presence of uncertainties is strong (Stainforth et al., 2005; Meinshausen, 2006). The same is true in the case of the global warming impacts presented in chapter 3. On the other hand, it is obvious that such uncertainties, coupled with other uncertainties stemming from sources related to society and economy, imply that any policy to adapt to and/

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or mitigate the impacts of global warming is accompanied with some degree of risk, and the outcome of such a policy will be, to a bigger or lesser degree, uncertain.

At the national level, as pointed out in a report by the Institutional Investors Group on Climate Change (IIGCC, 2006), although many countries have announced national long-term climate targets and have started to implement strategies relating to energy and environmental policy, and despite the significant progress on policy frameworks, policy uncertainty remains a significant issue. Apart from scientific uncertainties related to the magnitude of climate change and how changes in climate will translate into impacts on human society, policy responses are also uncertain, including the degree of political support for action on climate change, the specific policy instruments that will be used and the sectors that will be targeted. These uncertainties imply that it is difficult for companies and investors to predict the likely implications of policy for their investments. (IIGCC, 2006) referring to one of the critical issues for any company, namely competitiveness, and how this affects the decisions made by policymakers, cites the example of Phase 1 of the EU Emissions Trading Scheme (EU ETS) for the period 2005-2007, where a number of countries over-allocated emissions, and where the majority of countries ensured that companies or sectors exposed to international competition were given most or all of the allowances that they required. Specific sources of uncertainty mentioned include the degree of government support for international policy action on climate change over the short and long-term and whether there will be a post-Kyoto international regime and whether this will involve setting greenhouse gas emission reduction targets for participating countries. Such considerations in view of the global recognition of the deteriorating climate and its impacts due to the greenhouse effect may seem rather too pessimistic. However they contribute to the uncertainties characterizing company decision-making. In addition, other sources of uncertainty include, according to (IIGCC, 2006), the specific policy instruments (e.g. command and control regulation, taxes, emissions trading, subsidies, etc) to be used by governments, and how these will influence the cost of greenhouse gas emissions, the degree of government commitment at the national level to action on climate change, the timing of policy responses and the relationship between climate policy goals and other policy goals such as energy security and diversity of supply.

Risk is generally related to opportunities and threats. It is only natural, therefore, that risk connected with climate change, in particular, has attracted the attention of the business world, which has realized its importance for investors and enterprises, as discussed above. Information regarding a company's business threats and opportunities resulting from climate change, as well as the company's efforts to address them, are important for investors, who require this information in order to analyze the company's status and perspectives and compare it with other companies and investment options. In October 2006, a group of leading institutional investors from