

Springer Climate

Karl W. Steininger · Martin König  
Birgit Bednar-Friedl · Lukas Kranzl  
Wolfgang Loibl · Franz Prettenthaler  
*Editors*

# Economic Evaluation of Climate Change Impacts

Development of a Cross-Sectoral  
Framework and Results for Austria



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## Economic Evaluation of Climate Change Impacts

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This volume deals with the multifaceted and interdependent impacts of climate change on society from the perspective of a broad set of disciplines. The main objective of the book is to assess public and private cost of climate change as far as quantifiable, while taking into account the high degree of uncertainty. It offers new insights for the economic assessment of a broad range of climate change impact chains at a national scale. The framework presented in the book allows consistent evaluation including mutual interdependencies and macroeconomic feedback. This book develops a toolbox that can be used across the many areas of climate impact and applies it to one particular country: Austria.

"This study is a landmark, setting a new standard for the assessment of the impacts of climate change. It stands out for the comprehensiveness of its coverage of potential impacts across different sectors of the economy and its methodological innovations, including tracing climate impacts to economic endpoints."

*Michael Hanemann, Professor of Economics, Arizona State University and Professor of the Graduate School, University of California, Berkeley*

"This volume develops a consistent, bottom-up approach for a robust evaluation across the whole range of impact fields, acknowledging their macroeconomic feedbacks and budgetary implications."

*Thomas Sterner, Professor of Economics, University of Gothenburg*

"The lasting value of this book will come from the methodology with its frameworks, consistent toolbox and comprehensive integration, as well as the lessons learnt and shared, exemplified through application in Austria."

*Roger Street, Director of UK Climate Impacts Programme, University of Oxford*

Environment

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Karl W. Steininger  
University of Graz  
Graz, Austria

Birgit Bednar-Friedl  
University of Graz  
Graz, Austria

Wolfgang Loibl  
Austrian Institute of Technology  
Vienna, Austria

Martin König  
Environment Agency Austria  
Vienna, Austria

Lukas Kranzl  
Vienna University of Technology  
Vienna, Austria

Franz Prettenthaler  
Institute for Economic and Innovation Research  
Graz, Austria

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## Preface

Our current actions determine the future options. Beyond climate change, the scale of action and potential impact on the world's poor appropriate response may entail a radical change. There is a clear need for adequate information.

Climate change impacts  
high degree of uncertainty.  
broad set of disciplines and

In this volume, we show how climate change impacts can be integrated into the generation of information relevant to the assessment of climate change. A tool for the assessment of climate impact is developed

Climate scenario analysis associated with climate change values are surrounded by a number of uncertainties. To consider the potential range of outcomes (including lower damage values), Identifying and clarifying that several different socio-economic development scenarios of greenhouse gas emissions will determine how resilient societies are (and whether they will be in a position to take measures in response). For example, investing in infrastructure in flood prone areas may increase the urban heat island effect, as people's homes are equipped with air conditioning (expected future ageing), which increases energy demand for transport, production processes, etc. This is crucial in determining a society's resilience.