

Contents

Chapter 21	Regional Context	1133
Chapter 22	Africa	1199
Chapter 23	Europe	1267
Chapter 24	Asia	1327
Chapter 25	Australasia	1371
Chapter 26	North America	1439
Chapter 27	Central and South America	1499
Chapter 28	Polar Regions	1567
Chapter 29	Small Islands	1613
Chapter 30	The Ocean	1655
Annex I	Authors and Expert Reviewers	1735
Annex II	Glossary	1757
Annex III	Acronyms	1777
Annex IV	List of Major IPCC Reports	1783
Index	1787

Cambridge University Press

978-1-107-05816-3 - Climate Change 2014: Impacts, Adaptation, and Vulnerability: Part B: Regional Aspects: Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

Edited by Vicente R. Barros and Christopher B. Field

Table of Contents

[More information](#)

Cambridge University Press

978-1-107-05816-3 - Climate Change 2014: Impacts, Adaptation, and Vulnerability: Part B: Regional Aspects: Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

Edited by Vicente R. Barros and Christopher B. Field

Table of Contents

[More information](#)

Cambridge University Press

978-1-107-05816-3 - Climate Change 2014: Impacts, Adaptation, and Vulnerability: Part B: Regional Aspects: Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

Edited by Vicente R. Barros and Christopher B. Field

Table of Contents

[More information](#)

Regional Context

Coordinating Lead Authors:

Bruce Hewitson (South Africa), Anthony C. Janetos (USA)

Lead Authors:

Timothy R. Carter (Finland), Filippo Giorgi (Italy), Richard G. Jones (UK), Won-Tae Kwon (Republic of Korea), Linda O. Mearns (USA), E. Lisa F. Schipper (Sweden), Maarten K. van Aalst (Netherlands)

Contributing Authors:

Eren Bilir (USA), Monalisa Chatterjee (USA/India), Katharine J. Mach (USA), Carol McSweeney (UK), Grace Redmond (UK), Vanessa Schweizer (USA), Luke Wirth (USA), Claire van Wyk (South Africa)

Review Editors:

Thomas Downing (USA), Phil Duffy (USA)

Volunteer Chapter Scientist:

Kristin Kuntz-Duriseti (USA)

This chapter should be cited as:

Hewitson, B., A.C. Janetos, T.R. Carter, F. Giorgi, R.G. Jones, W.-T. Kwon, L.O. Mearns, E.L.F. Schipper, and M. van Aalst, 2014: Regional context. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1133-1197.

Table of Contents

Executive Summary	1136
21.1. Introduction	1139
21.2. Defining Regional Context	1139
21.2.1. Decision-Making Context	1140
21.2.2. Defining Regions	1140
Box 21-1. A New Framework of Global Scenarios for Regional Assessment	1143
21.2.3. Introduction to Methods and Information	1144
21.3. Synthesis of Key Regional Issues	1144
21.3.1. Vulnerabilities and Impacts	1147
21.3.1.1. Observed Impacts	1147
21.3.1.2. Future Impacts and Vulnerability	1148
Box 21-2. Summary Regional Climate Projection Information	1152
21.3.2. Adaptation	1152
21.3.2.1. Similarities and Differences in Regions	1155
21.3.2.2. Adaptation Examples in Multiple Regions	1155
21.3.2.3. Adaptation Examples in Single Regions	1156
Box 21-3. Developing Regional Climate Information Relevant to Political and Economic Regions	1157
21.3.3. Climate System	1158
21.3.3.1. Global Context	1158
21.3.3.2. Dynamically and Statistically Downscaled Climate Projections	1159
21.3.3.3. Projected Changes in Hydroclimatic Regimes, Major Modes of Variability, and Regional Circulations	1162
21.3.3.4. Projected Changes in Extreme Climate Events	1162
Box 21-4. Synthesis of Projected Changes in Extremes Related to Temperature and Precipitation	1163
21.3.3.5. Projected Changes in Sea Level	1171
21.3.3.6. Projected Changes in Air Quality	1171
21.4. Cross-Regional Phenomena	1171
21.4.1. Trade and Financial Flows	1171
21.4.1.1. International Trade and Emissions	1171
21.4.1.2. Trade and Financial Flows as Factors Influencing Vulnerability	1173
21.4.1.3. Sensitivity of International Trade to Climate	1173
21.4.2. Human Migration	1175
21.4.3. Migration of Natural Ecosystems	1176

Cambridge University Press

978-1-107-05816-3 - Climate Change 2014: Impacts, Adaptation, and Vulnerability: Part B: Regional Aspects: Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

Edited by Vicente R. Barros and Christopher B. Field

Table of Contents

[More information](#)

21.5. Analysis and Reliability of Approaches to Regional Impacts, Adaptation, and Vulnerability Studies	1176
21.5.1. Analyses of Vulnerability and Adaptive Capacity	1176
21.5.1.1. Indicators and Indices	1177
21.5.1.2. Hotspots	1177
21.5.2. Impacts Analyses	1178
21.5.3. Development and Application of Baseline and Scenario Information	1179
21.5.3.1. Baseline Information: Context, Current Status, and Recent Advances	1179
21.5.3.2. Development of Projections and Scenarios	1181
21.5.3.3. Credibility of Projections and Scenarios	1182
21.6. Knowledge Gaps and Research Needs	1184
References	1184
Frequently Asked Questions	
21.1: How does this report stand alongside previous assessments for informing regional adaptation?	1150
21.2: Do local and regional impacts of climate change affect other parts of the world?	1151
21.3: What regional information should I take into account for climate risk management for the 20-year time horizon?	1156
21.4: Is the highest resolution climate projection the best to use for performing impacts assessments?	1182