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Does the Future Hold? -- CHAPTER TWELVE: Modeling Species and Vegetation Distribution under Climate Change -- CHAPTER THIRTEEN: Climate Change and Marine Biodiversity -- CASE STUDY 5: Anticipating Climate-Driven Movement Routes -- CHAPTER FOURTEEN: Impacts of Ocean Acidification on Marine Biodiversity -- CHAPTER FIFTEEN: Tropical Forests in a Changing Climate -- CASE STUDY 6: Postponing the Amazon Tipping Point -- CHAPTER SIXTEEN: Temperate and Boreal Responses to Climate Change -- CHAPTER SEVENTEEN: Climate Change Impacts on Mountain Biodiversity -- CASE STUDY 7: Climate Change and Frost Effects in Rocky Mountain Plant Communities -- CHAPTER EIGHTEEN: Climate Change: Final Arbiter of the Mass Extinction of Freshwater Fishes -- CHAPTER NINETEEN: The Asymmetrical Impacts of Climate Change on Food Webs -- CASE STUDY 8: Dynamic Spatial Management in an Australian Tuna Fishery -- CHAPTER TWENTY: Invasive Species and Climate Change -- CHAPTER TWENTY-ONE: Climate Change and Disease -- PART V: How Can Conservation and Policy Respond? -- CHAPTER TWENTY-TWO: Protected-Area Management and Climate Change -- CASE STUDY 9: Extinction Risk from Climate Change -- CHAPTER TWENTY-THREE: Ecosystem-Based Adaptation -- CHAPTER TWENTY-FOUR: Climate Change Mitigation Using Terrestrial Ecosystems: Options and Biodiversity Impacts -- CASE STUDY 10: Connectivity by Design: A Multiobjective Ecological Network for Biodiversity That Is Robust to Land Use and Regional Climate Change -- CHAPTER TWENTY-FIVE: Regreening the Emerald Planet: The Role of Ecosystem Restoration in Reducing Climate Change -- CASE STUDY 11: Enlisting Ecological Interactions among Animals to Balance the Carbon Budget -- CHAPTER TWENTY-SIX: Increasing Public Awareness and Facilitating Behavior Change: Two Guiding Heuristics -- CHAPTER TWENTY-SEVEN: Climate Change, Food, and Biodiversity -- CHAPTER TWENTY-EIGHT: Saving Biodiversity in the Era of Human-Dominated Ecosystems -- Contributors -- Index

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## Sommario/riassunto

An essential, up-to-date look at the critical interactions between biological diversity and climate change that will serve as an immediate call to action. The physical and biological impacts of climate change are dramatic and broad-ranging. People who care about the planet and manage natural resources urgently need a synthesis of our rapidly growing understanding of these issues. In this all-new sequel to the 2005 volume *Climate Change and Biodiversity*, leading experts in the field summarize observed changes, assess what the future holds, and offer suggested responses. Edited by distinguished conservationist Thomas E. Lovejoy and climate change biologist Lee Hannah, this comprehensive volume includes the latest research and explores emerging topics. From extinction risk to ocean acidification, the future of the Amazon to changes in ecosystem services, and geoengineering to the power of ecosystem restoration, this volume captures the sweep of climate change transformation of the biosphere. An authoritative, up-to-date reference, this is the new benchmark synthesis for climate change scientists, conservationists, managers, policymakers, and educators.

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