Rewetting of peatlands has been considered as an option to combat climate change. The efficacy of this approach for greenhouse gas (GHG) reduction and biodiversity enhancement is still under debate. The methodology, emission trading, and enforcement are the concerns in terms of social and economic benefits in peatland restoration. This book is a good resource to understand all of these aspects from a pilot project that examined nine rewetted peatlands in the peatland rich Republic of Belarus between 2008 and 2011. This book also provides data and conclusions for scientific, economic, and political considerations of peatland rewetting practices.

There is a total of ten chapters in the book. Chapter 1, “Introduction,” gives the background information for the 3-yr project and a layout of this book. Chapter 2, “Peatlands in Belarus,” provides an excellent overview of the peatlands in Belarus, including extent, types, history, methods of peatland drainage, use of peatlands, and rewetting projects. Belarus ranks 8th in the world in terms of peatland CO₂ emission and occupies 3rd place in peatland emissions per unit land area. Chapter 3, “Peatlands and Climate,” is an informative chapter for wetland scientists and managers that addresses the importance of peatlands with respect to climate and particularly focuses on GHG emissions. Greenhouse gas measuring techniques (such as closed chamber and eddy covariance), calculation of global warming potential of a peatland site, and vegetation as a proxy are discussed. Chapter 4, “Peatlands and Biodiversity,” discusses biodiversity values of Belarusian peatlands and their relationships with peatland conditions. This chapter will interest bird lovers since it provides background information on the Aquatic Warbler (Acrocephalus paludicola) breeding population and describes the avifauna of two famous protected areas – Zvaniec zakaznik and Biarezinski zapaviednik. Chapter 5, “Driving Forces and Funding Options,” summarizes legal obligations and funding for degraded peatlands in Belarus. Issues related to peatlands rewetting idea on the voluntary or mandatory carbon credit markets are discussed. Chapter 6, “Rewetting Peatlands,” provides a review of GHG emission, vegetation development, biodiversity enhancement, and expected climate, biodiversity benefits, and management recommendations at each site. Chapter 7, “The BMU-ICI Project,” is the longest chapter of the book and provides a comprehensive overview of the partnerships, approaches, and outcomes of the rewetted peatland project in Belarus. Many aspects, including climate, biodiversity, policy, funding options, and economic considerations are discussed. Chapter 8, “Practical Examples,” provides detailed descriptions of five of the nine sites in the project. Site characteristics, GHG emission, expected climate, biodiversity benefits, and management recommendations at each site are described in detail. Chapter 9, “Recommended Research and Monitoring Activities in Rewetted Peatlands,” recommends the importance of vegetation development, vegetation management recommendations, expected climate, biodiversity, and future research and monitoring activities. Chapter 10, “Acknowledgments,” is an appreciation of the involvement of funding agencies and other involved parties.

The vast amount of information related to wetland rewetting makes this book an excellent reference for scientists, policy and decision makers, developers, and land-use planners interested in peatland management and carbon credits through wetland restoration. This book can also be used for upper-level undergraduate and graduate courses related to natural resource economics and land-use planning. The detailed case studies integrating basic and applied research are good teaching examples for wetland and environmental management.