Edited by Patrick J. Applegate and Klaus Keller

Contributions by Patrick J. Applegate, Ryan L. Sriver, Gregory G. Garner, Alexander Bakker, Richard B. Alley, and Klaus Keller

This book is available from Leanpub at https://leanpub.com/raes.

Version History

- **Version 1.1, 2 December 2015**: Added Alexander Bakker as an author to Exercise #4. Updated the front cover, the title page, and the contributor biographies to reflect this change. Adjusted the introduction and title page to reflect where the book is distributed.
- **Version 1.0, 29 October 2015**: Uploaded an initial version of the book to Leanpub. This initial version included 10 chapters, including an introduction and nine lab exercises (Exercise #0-Exercise #8).

Greenhouse gas emissions have caused considerable changes in climate, including increased surface air temperatures and rising sea levels. Rising sea levels increase the risks of flooding for people living near the world's coastlines. Managing such risks requires an understanding of many fields, including Earth science, statistics, and economics. At the same time, the free, open-source programming environment R is growing in popularity among statisticians and scientists due to its flexibility and graphics capabilities, as well as its large collection of existing software libraries.

This e-textbook presents a series of laboratory exercises in R that teach the Earth science and statistical concepts needed for assessing climate-related risks. These exercises are intended for upper-level undergraduates, beginning graduate students, and professionals in other areas who wish to gain insight into academic climate risk analysis.