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Climate And Statistics

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Preface

Author: Henri Funk

As the world faces the reality of climate change, natural hazards and extreme weather events have become a major concern, with devastating consequences for nature and humans. The quantification and definition of climate change, extreme events and its implications for life and health on our planet is one of the major concerns in climate science.

This book explains current statistical methods in climate science and their application. We do not aim to provide a comprehensive overview of all statistical methods in climate science, but rather to give an overview of the most important methods and their application. This book is the outcome of the seminar "Climate and Statistics" which took place in summer 2024 at the Department of Statistics, LMU Munich.

FIGURE 1: Creative Commons License

[1] http://creativecommons.org/licenses/by-nc-sa/4.0/

Technical Setup

The book chapters are written in the Markdown language. To combine R-code and Markdown, we used rmarkdown. The book was compiled with the bookdown package. We collaborated using git and github. For details, head over to the book's repository[2].

[2] https://github.com/henrifnk/Seminar_ClimateNStatistics

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The most important contributions are from the students themselves. The success of such projects highly depends on the students. And this book is a success, so thanks a lot to all the authors! The other important role is the supervisor. Thanks to all the supervisors who participated! Special thanks to Helmut Küchenhoff[1] who enabled us to conduct the seminar in such an experimental way, supported us and gave valuable feedback for the seminar structure. Thanks a lot as well to the entire Department of Statistics[2] and the LMU Munich[3] for the infrastructure.

The authors of this work take full responsibilities for its content.

[1] https://www.stablab.stat.uni-muenchen.de/personen/leitung/kuechenhoff1/index.html
[2] https://www.statistik.uni-muenchen.de/
[3] http://www.en.uni-muenchen.de/index.html