



Tara Ivanochko: Think, do, and communicate environmental science

University Printing House, Cambridge, UK, 2021, 250 pp, £29.99 (Paperback), ISBN: 9781108437578

Esteban Menares¹

Received: 5 May 2022 / Accepted: 9 May 2022 / Published online: 14 June 2022

© The Author(s) 2022, corrected publication 2022

Planning a new study or research program can be full of unexpected challenges. Much can be learned along the way, but a well-planned project can avoid painful delays and hiccups and increase workflow efficiency and the result of our effort. The goal of *Think, Do, and Communicate Environmental Science* is to help make a research experience smoother. The book is structured into three interconnected sections. The first section explains how to *think* like a scientist. How to systematically and critically read scientific papers, going beyond just looking for facts, and how to choose the right type of graph to convey results. It also explains, in general, the process of collecting data, how monitoring programs work, and the differences between direct and indirect measurements. In the second section, Ivanochko illustrates how to *do* science. By using real examples and comparing different research questions, the reader learns what good research questions are, how to approach answering those questions, and how to search for peer-reviewed literature and data. Afterward, she shows how to select data with the best resolution and how to understand, visualize, and fill gaps in a dataset. She puts great emphasis on working with environmental time-series data, particularly on how to identify and isolate different signals in composite data, differentiating signal from noise, and using several descriptive statistical and simple modeling methods

to characterize your data. The third section finishes with a guide on how to *communicate* scientific work in the form of a research proposal or an abstract. Overall, the book is easy to read, also thanks to the content boxes with detailed practical information. Using traditional, pay-for software is fine, but the author could have incorporated other free and open-source software. As a doctoral student, I am glad to have come across such a book. It is a valuable resource and a practical guide that can be used by pre-graduate students that need to write a thesis and by early/mid-stage graduate students that are becoming researchers.

Funding Open Access funding enabled and organized by Projekt DEAL.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

✉ Esteban Menares
esteban.menares@b-tu.de

¹ Department of Ecology, Brandenburg University of Technology, Konrad-Wachsmann-Allee 6, 03046 Cottbus, Germany