



Country-Level Pathways to 30x30 and Their Implications for Global Biodiversity Protection

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This review verifies the reproducibility of the exhibits included in the paper “*Country-Level Pathways to 30x30 and Their Implications for Global Biodiversity Protection*”.

Contents in this review:

1. Main findings
2. List of exhibits and reproducibility status
3. Reproduction Environment

Main findings

- **Every exhibit in the paper has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Recovering the environment by running `renv::restore()`
 2. Running the main script.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 20 minutes to run.
- We conducted our reproducibility analysis based on the paper shared by the authors by email on November 14th.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 1 types of data: open data.
 - Open data is included in the public reproducibility package.
 - `data_hash_report.csv` lists the SHA256 hashes of all files in the Data folder to support data integrity checks.
- **Reproducibility Summary:**
 - **Data:** All data sources are publicly available and included in the reproducibility package.

- **Code:** All code files (from cleaning to analysis) are included in the reproducibility package.
- **Outputs:** All outputs are generated by code included in the reproducibility package.
- **Dependencies environment:** The reviewers created a new environment using the latest versions of dependencies available at the moment of the review.

List of exhibits and reproducibility status

Results in the Main Section of the Paper

- **Figure 1** Reproduced.
- **Figure 2** Reproduced.
- **Figure 3** Reproduced.
- **Figure 4** Reproduced.
- **Figure 5** Reproduced.
- **Figure 6** Reproduced.
- **Figure 7** Reproduced.
- **Figure 8** Reproduced.
- **Figure 8** Reproduced.
- **Figure 9** Reproduced.
- **Figure 10** Reproduced.
- **Figure 11** Reproduced.
- **Table 1** Reproduced.
- **Table 2** Reproduced.
- **Table 3** Reproduced.
- **Table 4** Reproduced.
- **Table 5** Reproduced.
- **Table 6** Reproduced.
- **Table 7** Reproduced.
- **Table 8** Reproduced.
- **Table 9** Reproduced.
- **Table 10** Reproduced.
- **Table 11** Reproduced.

- **Table 12** Reproduced.
- **Table 13** Reproduced.

Results in the Annex

- **Appendix 1** Does not apply
- **Appendix 2** Reproduced.
- **Appendix 3** Reproduced.

Reproduction Environment

Paper exhibits were reproduced on a computer with the following specifications:

- OS: macOS Sequoia
- Processor: Apple M4 Pro
- Memory available: 24 GB
- Software version: R 4.5.2