



Using remotely sensed data to assess war-induced damage to agricultural cultivation: Evidence from Ukraine

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This review verifies the reproducibility of the exhibits included in the paper “*Using remotely sensed data to assess war-induced damage to agricultural cultivation: Evidence from Ukraine*”.

Contents in this review:

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2. List of exhibits and reproducibility status
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Main findings

- **Every exhibit has been reproduced accurately.**
- The code was successfully executed on a new computer after:
 1. Updating the working directory.
- The output demonstrates consistent stability across multiple runs. Specifically, executing the code two times consecutively yielded identical results.
- The code takes approximately 6 hours to run.
- We conducted our reproducibility analysis based on the paper shared by the authors in the package.
- **Verification Process and Data Handling:**
 - The reproducibility package relies on 2 types of data: open, and accessible (public but not included in the reproducibility package).
 - * Open data that had been published is included in the public reproducibility package.
 - * Reviewers used the data provided directly by the authors to conduct the reproducibility verification, and the unpublished data is not included in the public reproducibility package. This data is available on the World Bank Development Data Hub.
 - * The accessible data sources are updated on a weekly basis. As a result, the specific version or access date of the data may affect both the underlying values and the resulting outputs. Users should therefore expect discrepancies in results depending on when the data is retrieved.
 - *data_hash_report.csv* lists the SHA256 hashes of all files in the Data folder to support data integrity checks. Users who acquire the accessible/restricted data can use this file to verify that the data has not been altered.

- **Reproducibility Summary:**

- **Data:** All data sources are publicly available but not all are 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

- **Table 1 Reproduced.** Although the code produces a different value, we verified that the correct total is obtained by summing winter and summer crops. The 'Total' row in the 'Total' column reflects this calculation.
- **Table 2 Reproduced.**
- **Table 3 Reproduced.**
- **Table 4 Reproduced.**
- **Table 5 Reproduced.**
- **Table 6 Reproduced.**
- **Table 7 Reproduced.**
- **Figure 2.1 Reproduced.**
- **Figure 2.2 Reproduced.**
- **Figure 2.3 Reproduced.**
- **Figure 2.4 Reproduced.**
- **Figure 3.1 Reproduced.**
- **Figure 3.2 Reproduced.**

Results in the Annex

For the Appendix, we did not review every exhibit. Instead, we randomly selected 10 exhibits from the remaining datasets to assess the appendix. Our review was based on those 10 exhibits. Since they were chosen randomly, we are operating under the assumption that if all randomly selected exhibits are reproducible, then the rest should be as well. The seed used to generate the random selection was 645504, the Stata version used was 18 MP, and the exhibits selected were: Tables A2, A3, A6, A7, A8, A10, A13, A14, A15, and A18.

- **Table A2 Reproduced.**

- **Table A3** Reproduced.
- **Table A6** Reproduced.
- **Table A7** Reproduced.
- **Table A8** Reproduced.
- **Table A10** Reproduced.
- **Table A13** Reproduced.
- **Table A14** Reproduced.
- **Table A15** Reproduced.
- **Table A18** Reproduced.

Reproduction Environment

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

- OS: Windows 11 Enterprise
- Processor: INTEL(R) XEON(R) PLATINUM 8562Y+ 2.80 GHz (2 processors)
- Memory available: 128 GB
- Software version: Stata 18.0 MP