**Electronic Supplementary Material (ESM)**

**Detection and attribution of the spatiotemporal trend of climatic disaster impacts and vulnerability in Nepal**

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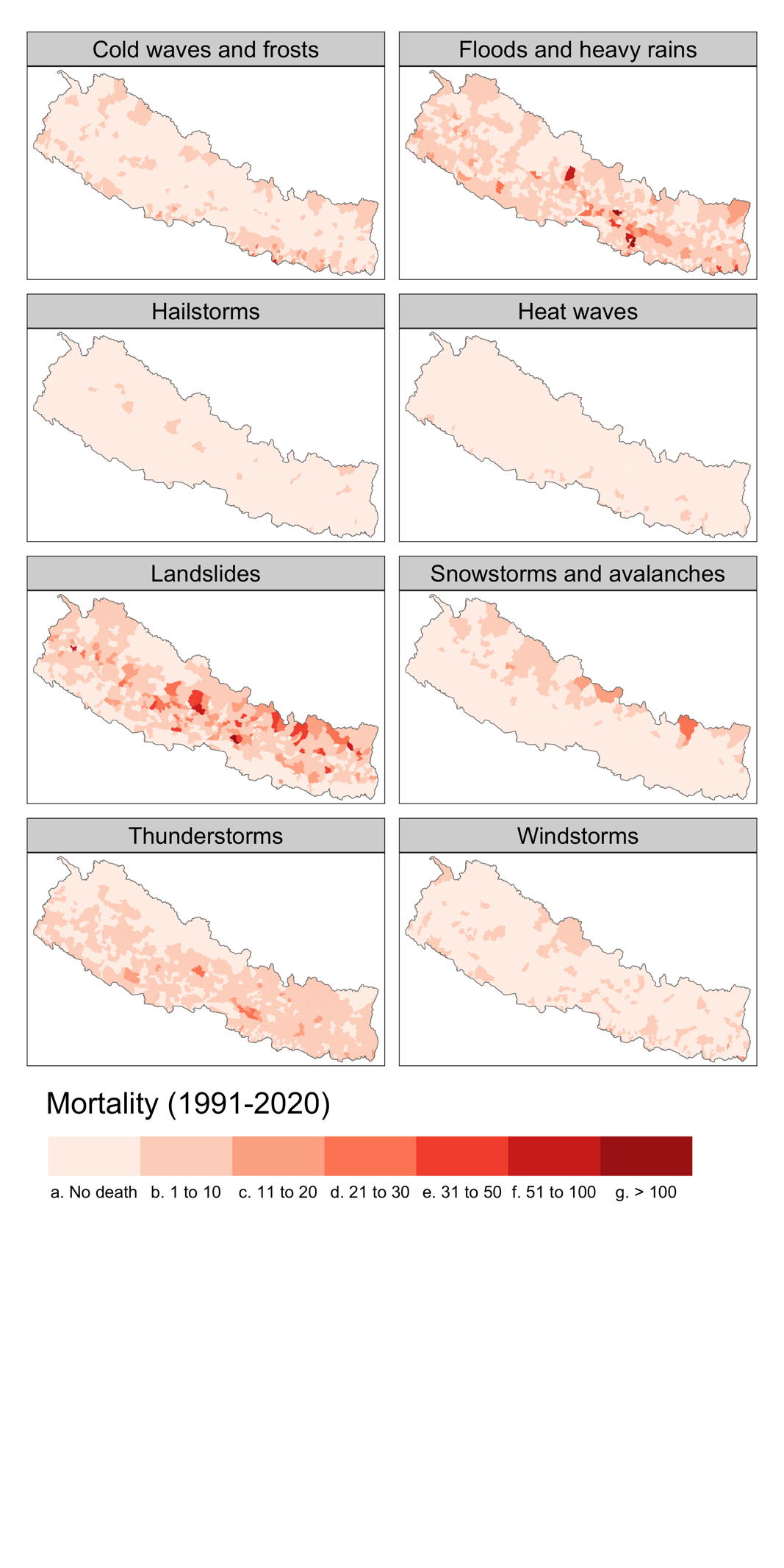
ORCHID iD: <https://orcid.org/0000-0002-2418-6343>

**Table S1: List of disaster types included in this study and respective disaster types as listed in the DesInventar and Nepal DRR Portal database.**

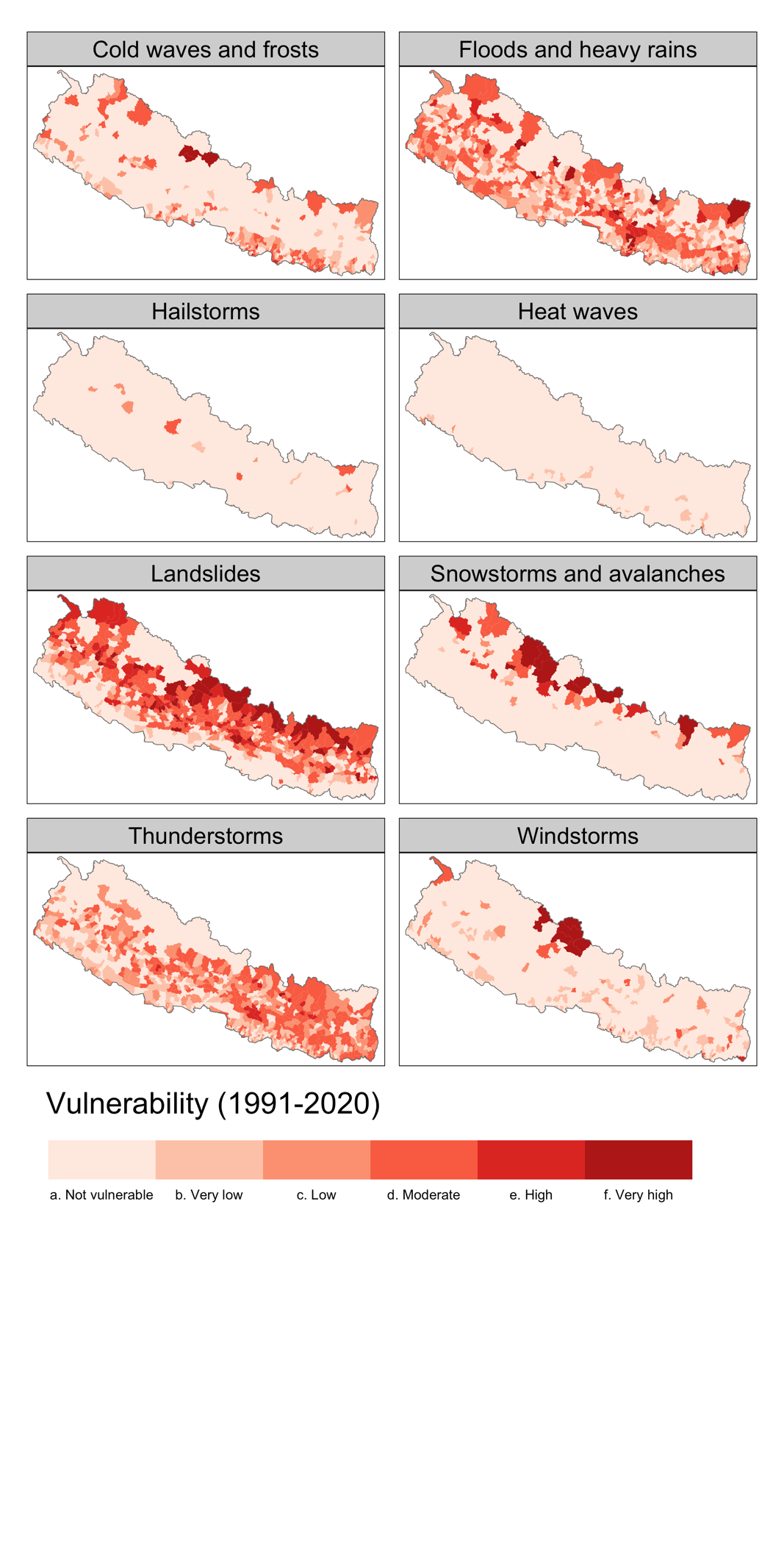
|  |  |  |
| --- | --- | --- |
| **Disaster Types** | | |
| **Grouped in this study** | **As listed in DesInventar** | **As listed in Nepal DRR Portal** |
| 1. Landslides | Landslides | Landslides |
| 1. Floods and heavy rains | Floods  Rains | Floods  Heavy Rainfall  Flash Floods |
| 1. Thunderstorms | Thunderstorms | Thunderbolt |
| 1. Cold waves and frosts | Cold Waves  Frosts | Cold Waves  Frosts |
| 1. Windstorms | Strong Wind  Storms | Strong Wind  Wind Storms  Storms |
| 1. Snowstorms and avalanches | Snow Storms  Avalanches | Snow Storms  Avalanches |
| 1. Heat waves | Heat Waves | Heat Waves |
| 1. Hailstorms | Haim Storms | Hailstones  Hail Storms |

**Table S2: List of analytical dimensions of the Nepal Living Standard Survey (NLSS)**

|  |  |
| --- | --- |
| **S. No.** | **NLSS Analytical Dimensions** |
|  | Mountains |
|  | Urban-Kathmandu |
|  | Urban-Hills |
|  | Urban-Tarai |
|  | Rural-Hills-Eastern |
|  | Rural-Hills-Central |
|  | Rural-Hills-Western |
|  | Rural-Hills-Mid & Far Western |
|  | Rural-Tarai-Eastern |
|  | Rural-Tarai-Central |
|  | Rural-Tarai-Western |
|  | Rural-Tarai-Mid & Far Western |



**Figure S1: Spatial distribution of climatic disaster impacts (mortality) by disaster types in Nepal during 1991-2020. The color code range in the maps is manually created and the range values are as shown in the legend.**



**Figure S2: Spatial distribution of climatic disaster vulnerability (mortality normalized by exposed population) by disaster types in Nepal during 1991-2020. The color code range in the maps is manually created and the range values are as shown in the legend in Fig. 6.**

**Table S3: Results of the regression analysis**

|  |  |  |
| --- | --- | --- |
|  | Dependent variable: No. of people died (log) | |
|  | OLS model | Location fixed effect model |
| Constant | 3.643\*\*\* (0.221) |  |
| No. of people exposed to disaster (log) | -0.043\*\*\* (0.015) | -0.056 (0.109) |
| No. of disaster incidences recorded (log) | 1.160\*\*\* (0.026) | 1.157\*\*\* (0.029) |
| Per-capita income (log) | -0.271\*\*\* (0.022) | -0.340\*\*\* (0.034) |
|  | | |
| Observations | 3,554 | 3,554 |
| R2 | 0.371 | 0.516 |
| Adjusted R2 | 0.370 | 0.391 |
| Residual Std. Error | 0.595 (df = 3550) | 0.585 (df = 2824) |
| F Statistic | 697.499\*\*\* (df = 3; 3550) | 4.127\*\*\* (df = 729; 2824) |
| *Note:* | *\*p<0.1; \*\*p<0.05; \*\*\*p<0.01*  Estimate std. error in parentheses | |