

## **The vulnerability of settlements to climate change in Botosani, Iasi and Vaslui counties, Romania**

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The altitudinal intervals between which villages are found in the three counties analyzed in this study determine the vulnerability to the thermal and rain gradient, to meteorological phenomena (early and late frost, hail, blizzard), extreme hydroclimatic conditions, the impact of temperature inversions, contamination with pollutants, and the result of those factors about the impact of villages that are located in valleys. The distance to main roads (DN, DE) is useful to determine the degree of connection or isolation, and to study the risk of exclusion generated by isolation. The distance to main rivers shows that a big proportion of villages are situated at a distance under 10 m from river valleys, which indicates high vulnerability to floods. The aspect of the terrains on which settlements are located could which areas have favorable exposition for renewable energies (e.g., solar). The proximity to a forested area has a number of environmental, ecological advantages: topoclimatic, aesthetic and recreational, but where this distance is very large, we find that the impact of gullies and torrents increases, as well as the occurrence of landslides, which is also influenced by the geological substrate.