



Multihazard Weather Risk Perception and Preparedness: Results from the India Severe Weather Survey

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The “IndiaSevereWeather Survey”, a follow-up of the “International SevereWeather Survey” (Keul et al., 2018), covered north-eastern parts of India with complex topography. Field interviews in urban and rural Nagaland and West Bengal had 44 content and nine sociodemographic items, and gave 1,398 valid returns (59.3% male, 40.7% female). The mean age was 32 years (range 12-90), from all strata of society. Younger respondents were more educated. There was no gender education gap in the sample. Rural respondents were somewhat older. The gender proportion for Nagaland was equal, but West Bengal had more males.

The statistical analysis used Pearson correlations and Chi Square tests. The mean sum scores for all ten risk assessment estimates were higher for Nagaland than for West Bengal, also, they were higher for rural than for urban areas. Higher educated scored lower risk estimates, males slightly higher. The higher educated and males followed daily weather reports more closely and got local weather more easily. Female respondents were more weather-afraid. Finding out severe weather by own observations, higher educated, younger and male respondents performed better. Higher educated respondents felt better prepared for possible severe weather risks.

Higher educated and younger respondents read more about NDMA disaster protection safety tips. There was a significant correlation between estimated landslide risk and reported hit and a (paradox) inverse correlation between estimated flood risk and reported hit. There were no significant correlations for other weather risks (hail, lightning, heavy rainfall and storm). Significant relations for landslide risk versus risk knowledge were found, indicating that respondents who answered correctly also indicated a higher risk. Respondents were more afraid of “being killed instantly by lightning“ (wrong) estimated a higher lightning risk, which also did who answered “lie flat in the open in a thunderstorm” (wrong) correctly.

An inter correlation analysis of all ten assessed severe weather risk estimates showed a general individual tendency to give either all lower high risk assessments as well as all lower high hit report rates. Analysis of variance showed the total mean weather knowledge to be higher for West Bengal and for rural respondents. This does not support the preconception of a “more naïve rural population”.

A geographical information system analysis of objective and subjective risk locations at West Bengal showed correspondences between objective hazards and hits for floods, heavy rain and landslides, but none for the six subjective risk assessments which were emotion-, not experience-based.