



Regions at Risk: Climate and Weather Extremes in Local Perspective

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Abstract

In the coming decades, the effects of climate change will increasingly impact a significant portion of the global population, as the assessments project alteration in the frequency, intensity, spatial extent, or duration of weather and climate extremes (IPCC, 2014). Climate and hydrometeorological events such as average rise in temperatures, changes in precipitation patterns, rising sea levels, and other climate extremes, such as heatwaves and droughts, will become the norm (Jones & O'Neill, 2016).

In the context of the emergence of new vulnerabilities, such change will lead to increased stress on human and natural systems and a propensity for serious adverse effects in many regions around the world (UNISDR, 2009, 2011).

Despite progress in reducing casualties through early warning systems, social actions to address climate variability have not kept pace with the growing economic and social adverse effects (IPCC, 2014), particularly as climate and weather extremes are expected to have more severe impacts on agricultural production, indirectly affecting low and middle-low income regions where agriculture is a key source of employment, livelihood, and income (Barrios et al., 2006; Deschenes & Greenstone, 2007). Given the complexity of this new scenario and the uncertainty surrounding how these global phenomena manifest locally, adopting a regional perspective becomes essential for accurate analysis.

This special session aims to convey an in-depth and interdisciplinary discussion on the differential trends in regional-level patterns of climate and weather extreme events' impact on economic, social, and cultural factors. Topics of interest for this session include, but are not limited to :

- **Development and migration:** Extreme events hinder economic growth and inequalities, disrupt infrastructure, and worsen poverty, especially in resource-scarce regions. These disruptions often drive climate-induced migration, causing

demographic shifts, urban overcrowding, and increased strain on host regions' resources and services.

- **Electoral outcomes:** Research suggests that extreme events can influence voter behaviour, potentially leading to shifts in electoral preferences or even the rise of populist politics in response to perceived government inefficiencies.
- **Violence and Social Cohesion:** Natural disasters and climate shocks can weaken state capacities and disrupt economies, providing opportunities for organized crime to expand. Simultaneously, resource strain and livelihood disruption can increase violence, fuel conflicts, and erode social cohesion within communities.
- **Public health:** These events can trigger outbreaks of diseases, exacerbate mental health issues, and limit access to essential healthcare services, particularly in already underserved areas.
- **Access to resources:** Extreme events often disrupt water, food, and energy supplies, intensifying competition and inequality in access to these essential resources.
- **Climate and Prediction Models:** Insights into modelling uncertainties, local manifestations of global phenomena, and future climate scenarios are essential to understand better and address the socio-economic local challenges posed by these events.
- **Policy interventions:** Understanding the effectiveness of policy measures—such as social safety nets, early warning systems, and climate adaptation programs—remains crucial in mitigating the long-term impacts of these events.

We encourage submissions that employ quasi-experimental designs, natural experiments, instrumental variables, regression discontinuity designs, or other counterfactual methods to identify causal effects. Accepted papers will be presented during the in-person special session, allowing authors to engage in fruitful discussions.

References

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