Stanford



Sudeshna Kumar

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Bio

BIO

Sudeshna Kumar is an urbanist and socio-ecological modeller specializing in neighborhood sustainability, urban ecology, climate-risk assessment, and environmental justice. She is a Visiting Postdoctoral Scholar at Stanford University's Woods Institute for the Environment, affiliated with the Governance for Risk, Resilience, and Recovery (GR3) initiative, and a Postdoctoral Researcher at the Basque Centre for Climate Change (BC3), Spain.

Her interdisciplinary research examines the interactions among urban ecological processes, climate hazards, socio-spatial vulnerability, and adaptive capacity, with particular emphasis on urban heat, ecosystem-based adaptation, and place-based resilience. Her methodological expertise encompasses spatial statistics, geospatial analysis, Bayesian networks, integrated socio-ecological modeling, and participatory approaches to climate-risk and vulnerability assessment. Through these methods, she investigates the spatial distribution of climate risks and adaptation benefits, and their implications for environmental equity and urban sustainability.

At Stanford, her research focuses on multi-hazard risk governance, cascading climate impacts, and the institutional and infrastructural dimensions of resilience. Her work seeks to strengthen the integration of climate-risk science, urban systems analysis, and governance frameworks to translate scientific evidence into actionable, equitable, and context-sensitive resilience planning and investment decisions.