

Towards critical studies of climate adaptation planning: uncovering the equity impacts of urban land use planning

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Municipal jurisdiction over land use planning and development is an opportunity for implementing climate adaptation actions at the local level. Cities in the global North and South deploy diverse strategies to integrate climate considerations into land use plans, sectoral infrastructure and water strategies with clear land use implications, and different land development and management tools. To boost political salience and feasibility, these efforts often emphasize co-benefits with other developmental objectives. However, the emphasis on “win-win” adaptation solutions may obscure the uneven costs and benefits borne by different groups, provoking the question of: adaptation for whom, by whom, and how? While momentum and funding grows for cities to adapt, researchers need to investigate whether some adaptation efforts are effectively prioritizing the needs of marginalized and vulnerable populations or whether they merely re-package business-as-usual land use planning approaches that have so often left such groups behind. Efforts to reduce climate vulnerability through land use planning tools are indeed embedded in the very institutions and development processes that are currently reproducing uneven risk exposure and socio-economic vulnerability.

However, while recent research has focused on how to mobilize local government adaptation action, few studies have empirically assessed the impact of emerging adaptation plans and interventions on the vulnerability of the urban poor. Scholarship is especially needed in the context of land use-related adaptation interventions since land use planning is one of the fundamental tools under local government control – one that can allow them to shape efforts to not only protect, accommodate, or retreat in the face of climate impacts, but also lead a transformative adaptation path. This research agenda is particularly important in the context of many adaptation projects being presented or repackaged by municipal governments in such a way that they seem to address risks, vulnerabilities, or impacts, and to be “win-win” solutions for all, even though they are in reality perpetuating long-lasting patterns of inequitable development. Moreover, the increasingly used language of resilience tends to obscure the fact that municipalities committed to becoming less vulnerable or more resilient are still perpetuating deeply engrained injustices. Since climate change adaptation is still a new policy arena for municipalities, it is timely to examine the extent to which cities that take climate projections or risk assessments seriously are reproducing -- or will likely reproduce -- inequities as they, among others, build flood protection infrastructure or relocate residents away from landslide-prone areas.

This paper studies how a sample of current climate adaptation planning approaches exacerbate or create new urban socio-spatial inequalities. Our study addresses the lack of critical scholarship at the nexus of land use planning and climate adaptation by examining the experiences of eight cities around the world: Boston (USA), New Orleans (USA), Medellín (Colombia), Santiago (Chile), Metro Manila (Philippines), Jakarta (Indonesia), Surat (India), and Dhaka (Bangladesh). These cities have adopted diverse planning strategies, including developing explicit adaptation plans, linking adaptation to disaster risk reduction efforts or to resilience goals, and meeting long-standing infrastructure and developmental backlogs. We selected cities in both the global North and South to identify the different ways land use planning for adaptation can affect urban equity and justice regardless of developmental, political, and ecological contexts.

Our analysis shows that land use plans in the name of climate adaptation or resilience can produce maladaptive outcomes for historically marginalized residents through two types of injustices: acts of commission and acts of omission. We find acts of commission when infrastructure investments, land use regulations, or new protected areas disproportionately affect or displace disadvantaged groups. Conversely, acts of omission refer to plans that protect economically valuable areas over low-income or minority neighborhoods, frame adaptation as a private responsibility rather than a public good, or fail to involve affected communities in the process. These patterns echo experiences of past urban development and infrastructure projects, and represent a “double” injustice (Leichenko and O’Brien 2008) because disadvantaged groups that contributed the least to global carbon emissions are bearing the brunt of the social costs of adaptation and, at the same time, are being excluded from the benefits of climate adaptation.

Our analytical framework highlights how inequitable planning outcomes stem from the inter-related and co-dependent mechanisms of favoring certain privileged groups while simultaneously denying resources and voice to marginalized communities. We in turn contend that just adaptation cannot be framed solely around the goal of reducing the social vulnerability of informal, low-income, or marginalized groups. Rather, just adaptation planning needs to more broadly assess the distribution of adaptation benefits, costs, and responsibilities across social groups, and apply interventions that - at a minimum - treat groups similarly regardless of socio-economic status, or - even better - prioritize benefits for disadvantaged groups. Our findings also point to the need for further research on the distributive impacts of adaptation interventions, on why cities with vastly different characteristics are producing adaptation strategies with similar implications for social equity, and on cases where planners and designers have been able to overcome existing structural limitations to advance equitable adaptation.

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