

Adapting Cities to Climate Change

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Cities and the Mitigation and Adaptation Agendas: An Inconvenient Truth

Analysis of the relationship between cities and climate change has overwhelmingly focused on their contribution to greenhouse emissions and the need to reduce carbon-based fuel dependency, thereby delaying the debate on the impacts of climate variability on citizens (particularly the urban poor) in the Global South. This has resulted in the emergence of a mitigation agenda which is often dissociated from the essential question of how to support cities and citizens to adapt to climate change.

While it is not helpful to discuss mitigation and adaptation as competing agendas, from the perspective of cities in the Global South the latter does appear to be subordinated to the former in two ways. First, the prevailing attention given to mitigation responses at the expense of adaptation obscures the asymmetry between the actual greenhouse gas contributions produced by most urban centres in the

South, and the risks they experience from the negative effects of climate change. Second, both mitigation and adaptation challenges are closely linked to development challenges in these cities. In contexts where inadequate water, sanitation and drainage infrastructure, poor quality housing and insecure land tenure are the norm rather than the exception, and where sizeable percentages of the urban population live in settlements that are labelled 'illegal', there is little scope for local governments and planning systems to address increased vulnerability to climate change unless the right of the urban poor to the city is reclaimed.

In this context, mitigation responses appear to fit more comfortably with the modernising vision of urban elites and governments in the South and the North alike than the 'inconvenient truth' that high vulnerability to climate change is in fact a predictable condition linked to the structural uneven geography of development, rather than to nature's unpredictability.

The Impacts of Climate Change on Cities and Urban Residents

The International Panel on Climate Change (IPCC) fourth assessment outlines that climate change will result in more severe weather patterns worldwide. For urban areas, with their dense populations and precarious settlement situations, this translates into increased risk of weather-related disasters. Urban areas are expected to have increased exposure to tropical storm surges, increased rainfall leading to flooding and landslides, and increased periods of drought leading to decreasing agriculture production, less water availability, and settlement fires and wildfires. Cities that are located in low elevation coastal zones are the most exposed to climate change impacts. Regionally, cities in Asia are going to be most affected by climate change, as a result of increased exposed population from urbanization, and exposure to extreme climate-related events.

While some cities as a whole may be affected by climate change, if we look deeper, we see that not all urban residents are impacted equally. It is the poor that bear the brunt of the problems and who are the most vulnerable to extreme weather events. Even if large portions of a city are flooded, middle-class and wealthy settlements are less affected due to their safe location within the city. The urban poor are more likely to live on precarious sites, on un-developable parcels of land such as those highly exposed to flooding and landslides. The urban poor are also more likely to live in settlements that are lacking infrastructure, such as basic sanitation, flood barriers, storm-water drains or good roads for accessibility during emergencies. When food prices rise, the well off are still able to purchase basic foods, while the poor may not be able to, without foregoing other necessities. The urban poor are also the least likely to be able to recover when assets are lost in a disaster, since they may lose everything and usually have little or no insurance cover.

Everyday Urbanism in a Changing Climate

As urban planners engage with the climate change challenge, global branded ecological mega-projects, low carbon transition plans and recipes for new utopian sustainable designs are promoted as new ways of championing the sustainability agenda,



Left: Rental rooms in Mohammadpur, Dhaka are built-up over the water and the central walkways are made of bamboo (Huraera Jabeen, 2009)



Above: Informal houses for tenants in Mohammadpur, Dhaka, are built on precarious sites and flood several times every year posing extreme hardships on people (Huraera Jabeen, 2009)



Far left: Adriana Allen speaks at the workshop ‘Supporting Local Coping Strategies through Adaptation Planning’ on August 25, 2009, in Dhaka put on by BRAC University and DPU.

Left to right: Camillo Boano and Cassidy Johnson

accommodating climate change within the existing matrices of power, knowledge and governance. Acceptance of global warming, and the ecological rationality to which it gives rise, generate micro-strategies of power relations that constitute subjects in new ways, perhaps unwittingly increasing the risk of reproducing vulnerabilities and eroding social resilience.

As most urbanisation in the next few decades will take place in the Global South and outside official plans, rules and regulations, the challenge ahead for urban planners is understanding and supporting the ‘everyday urbanism’ (Chase et al, 2008) of the urban poor. This challenge questions the possibility (and value) of simply focusing on designing resilient built environments, calling instead for planning inputs that build on informal daily practices of bottom up urbanism. This requires reconceptualising planning solutions and citizenship rights so that they recognize the vulnerabilities and adaptive capacities of the various actors. Valuing and reconsidering informal everyday urbanism would require grounded, locally-based efforts to strengthen individual and collective adaptive capacities.

This reconceptualisation could benefit from Lefebvre’s concept of the ‘right to the city’ as a claim for the recognition of the urban as the (re)producer of social relations of power, and the right of all citizens to participate in the process of production in the city they desire, aspire and imagine. As Harvey (2003:939) notes: “the right to the city is not merely a right of access to what already exists, but a right to change it as our heart’s desire, and remake ourselves by creating a qualitatively different kind of urban sociality.” Thus the production of urban space in a changing climate is not only about planning the climate resilient city at the technological level, but rather integrating all aspects of urban life, including the right of appropriation and adaptation.

Though the ‘right-to-the-city’ concept has recently been co-opted by neoliberal and populist slogans, rethinking this notion for adapting cities to climate change could help to stress the transformative social ends of this enterprise. What strategies, then, are most effective to claim true bottom-up rights to the city? As Roy (2009:176) asks: “will demanding rights through ‘rebellious citizenship’ ensure the right

to the production of space for the urban poor, or will it leave them without access to the infrastructure of populist mediation and its regulated entitlements?” It is clear that socially and politically sensitive tactics are needed to address the tensions of spatial adaptation and urban activism in the move towards greater equity and justice for the urban poor, which in turn, leads us to consider the relationship between citizenship, resilience and resistance.

Citizenship, Resilience and Resistance

As disaster risk reduction and climate change adaptation perspectives become more integrated, it becomes clear that reducing socio-economic vulnerabilities to hazards and effects from climate change encompass many common elements. In this context, a resilience perspective is increasingly used as an approach for understanding the dynamics of social-ecological systems in a way which is more appropriate for a reconfiguration of critical urban alternatives.

Resilience can be described as “the persistence of relationships within a



Above: Young boy is responsible for rationing water to nearby households (Korail, Dhaka, Huraera Jabeen, 2008)

system and is a measure of the ability of these systems to absorb changes of state variables and driving variables and still persist” (Holling, 1973:12). What appears to be gaining ground in the current debate is the perception of resilience as the capacity of a system to absorb disturbance and reorganize, while undergoing change, so as to still retain essentially the same functions, structure, identity and feedbacks. Therefore, in a resilient system, change has the potential to create opportunity for development, novelty and innovation. In this sense, resilience provides adaptive capacity that allows for continuous development, triggering a dynamic interplay between sustaining and developing with change and - as Davis and Izadkhah (2006:19) argue - requires strategies that include “robustness, redundancy, resourcefulness and rapidity”.

Surprisingly, the many coping strategies adopted by the urban poor and their daily practices in building resilient cities continue to be at best ignored and at worst obstructed. While significant attention has been given to exploring and unpacking grassroots coping strategies for climate change in the rural context – with a focus on agricultural responses and livelihoods diversification - far less work has gone to deepening our understanding of the ways urban poor are affected by and responding to the ‘double vulnerability’ of climate change and poverty. There are exceptions

however. For example, the Built-in-Resilience project, conducted by BRAC University Bangladesh and DPU looks at how people in informal settlements in Dhaka are coping with extreme events such as flooding and heat. Findings from this research showed that people use physical strategies, such as adaptation of housing, and non-physical coping strategies, such as savings groups, income diversification and accumulation of assets, to get through tough times.

As obvious as it might sound, adapting cities to climate change involves, above all, learning from and actively supporting these grassroots coping strategies and the agency of the urban poor. Local adaptation plans are likely to be meaningless unless community organisations of the poor are systematically engaged, and their short and long term responses to climate change are understood, valued and supported. Thus, the most overarching change required for effective pro-poor adaptation to climate change in urban areas concerns the promotion of democratic and accountable governance structures that actively challenge anti-poor attitudes among government bodies and engage in building up their citizenship.

An area where local planning can play a crucial role in adaptation is by ensuring that land-use planning and the development of buildings and infrastructure take account of climate change risks. This poses several challenges as it requires planning and regulatory frameworks that not only prevent further developments in high-risk areas and support mitigation efforts, but also reduce the vulnerability of the urban poor and of collective infrastructure without imposing additional costs on the poor or obstructing their right to the city. Furthermore, infrastructure adaptation in the context of the developing world is compounded by the very large deficits suffered in urban areas and the poor quality and lack of maintenance of existing infrastructure. This implies that local adaptation to climate change cannot be divorced from a wider development perspective which focuses on tackling risk through lifeline infrastructure in areas where such risk has historically accumulated, whilst also planning to reduce disaster risk in future urban development.

Last but not least, a fundamental problem persists in the architecture of aid, rarely set up to understand and support local adaptation plans. There is a clear mismatch between the areas where increased local capacity and competence in climate adaptation is urgently needed and the flow of development cooperation resources supporting adaptation. Consideration of climate change related risks should play a central role in financing both general development goals and local adaptation responses, and this reinforces the need to mainstream climate risk in the overall flows of development aid as a cross-cutting concern, rather than as a ‘new’ sector. Unless this message is seriously taken on board by the international community, climate change is likely to become another agenda that subordinates cities and development to global managerialism claims, deepening the environmental injustice that denies the poor the right to the city.

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