Violence-climate change interactions in cities: A Resource Guide

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Introduction to the guide

Studies show how war and (internal) armed conflict are no longer the greatest risk of lethal violence faced by people in lower-income countries (Schultze-Kraft, 2014). Instead, there has been a rise in other types of 'non-conflict' violence which manifest directly and explicitly in numerous forms. These include:

- Land grabbing and de-peasantisation;

- Evictions and forced displacements;

- Daily forms of violence that become routine, particularly in the urban life of gendered and racialized groups such as such as gang violence, gender-based violence, robberies and armed muggings;

- Indirect, structural, cultural and symbolic forms of violence, "slow" violence stemming from the spatially uneven weight of pollution and environmental degradation;

- Infrastructural violence, i.e. the impacts that infrastructural systems have on sociopolitical systems;

- Forms of conflict that emerge as response or resistance to state violence, the interaction between state-sanctioned and "bottom-up" forms of violence, and the criminalization of the latter;[3]

These forms of non-conflict violence are manifest and rising in cities, forming an increasingly large share of the burden of violence globally. Capturing this shift, Moser and McIlwaine (2014) describe the move from *"fragile states" to "fragile cities" (*Moser and McIlwaine, 2014, P2). Advances in the scholarship on urban violence now extends a view of overlapped categories, where violence is simultaneously understood as political, social and economic (Gupte, 2016; Beall et al. 2013) and embedded in structural, legal, social, and political norms and practices (de Boer et al., 2015).

These trends in non-conflict violence are occurring concurrently with increases in the felt impacts of climate change in cities. Both phenomena negatively affect livelihoods, mobility and well-being, with the direct impacts of both most severe in low-income communities. The nature of vulnerability to risks is increasingly captured in separate fields of climate change and violence scholarship, but this rarely, if ever, addresses how the two risks inter-relate in everyday life and under changing climatic conditions. Where this nexus has been examined, to date, the majority of scholarly attention is given to the rural or national level, whereas cities receive limited coverage (Planitz, 2019).

This resource guide therefore aims to draw together key urban research and policy documents as they exist at the inter-section of violence and climate change in order to understand the multiple inter-connections between these two fields. The aim is to provide an easy-to-use overview of what already exists in the literature and in doing so highlight gaps where further research and evidence is needed. The guide is structured around literature types which broadly (but not exactly) group around: attempts to understand a direct relationship between climate change impacts and urban violence, occurring within spaces defined as 'urban'; and those that focus on the interaction between climate change impacts and processes of urbanisation and urban development occuring through migration, food, water, energy provision systems that often function beyond the boundaries of the 'urban'. Within literature that explores the direct relationship, we draw distinction between modelling work that attempts to derive a linear cause and effect relationship between the two phenomena, and literature that uses a broader methodological base to examine the influence of social context and contingency

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[3] These violence types have been adapted from those listed by Allaverdian, C. (2021) *Violence and the production of space in and beyond the urban*. Available at https://www.jssj.org/contribution-call/violence-et-production-de-lespace-dans-et-au-dela-de-lurbain/ (Accessed:12th July 2021)

of the interaction. We then draw on the relevant violence types set out above to group literature concerned with the state violence of climate change initiatives, climate vulnerability and the structural violence of contemporary urbanisation, and urban fragility and the violence of hybrid authorities. In a final section, we start to tease out from both academic and grey literature examples of both articles and programmatic case studies that suggest potential approaches that lead towards integrated solutions, with examples of positive initiatives. A brief conclusion then highlights research and policy gaps.

Method

The academic literature in this guide has been sourced from Scopus, the largest abstract and citation database of peer-reviewed literature. This database was interrogated using a set of pre-selected keywords – urban, climate change, adaptation, disasters – in combination with different violence types e.g. everyday violence, gender-based violence, evictions, structural violence, protest, state violence, security, fragility etc. Finally, the articles presented here have been selected as the most contemporary references for each of the stated areas; however, it is possible that searches may not have returned all relevant examples and we see this guide as a live document that can be added to.

1.   Direct relationships between urban non-conflict violence and climate change

This section considers literature that examines the direct convergence of impacts from non-conflict violence and impacts from climate change occurring within urban jurisdictions.

Deriving linear relationships between climate change and violence in urban areas
The central thrust for research at the urban climate change-violence nexus has been studies that seek to find direct causal relationships between climate change and violence. A significant emphasis has been placed on examining models of linear relationships between the two, with a focus, in particular, on the relationship between temperature and violence in cities. Direct casual links are investigated by a number of studies in criminology and psychology, where the relationship between temperature and violence has long been a topic of research (Yeeles, 2015). Other research provides a more nuanced view of heat-violence relationships, with consensus that other factors (particularly gender and socio-economic elements) have just as much importance, if not more, in influencing violent outcomes.

#Xu et al, 2021 - *Association between ambient temperature and sex offense: A case-crossover study in seven large US cities, 2007–2017*
This study illustrates how in seven large US cities, every 5 ◦C rise in daily mean temperature was associated with a 4.5 % increase in sex offenses in the following 0–8 days. The associations were stronger in hot and cold seasons compared to moderate seasons and were only significant for sodomy, fondling and rape, and for sex offenses occurring in certain locations (open space, education, street but not residence). The findings highlight the potential rising sexual crime along with climate change and provide useful information for targeted preventions.

#Xu et al., 2020 - *Ambient temperature and intentional homicide: A multi-city case-crossover study in the US*
Based on 19,523 intentional homicide cases, the study found a linear temperature-homicide association. Every 5 °C increase in daily mean temperature was associated with a 9.5% and 8.8% increase in intentional homicide over a lag of 0–7 days in Chicago and New York, respectively. During the study period, 8.7% and 7.1% intentional homicide cases could be attributed to temperatures above city-specific median temperatures, suggesting that interpersonal violence might increase with temperature in some US cities.

#Harp and Karnauskas, 2020 - *Global warming to increase violent crime in the United States*
This study combines empirical models from previous studies with 42 state-of-the-art global climate models to project correlations between seasonal climate and violent crime rates, while accounting for key factors like regionality and seasonality, and appropriately combining multiple of sources of uncertainty. Results indicate that the United States should expect an additional 3.2 or 2.3 million violent crimes between 2020 and 2099, depending on greenhouse gas emissions scenarios.

#Anjum, G, 2019 - *Impact of heat perception on psychological well-being: Interaction of physical environment with gender & socioeconomic class. Unpublished manuscript, IBA Pakistan.*
Anjum et al. conducted a household survey to determine if wellbeing, aggression levels and despair were associated with climate changes such as heat stress in the cities of Karachi and Islamabad. On all parameters' females reported higher prevalence of aggression levels, despair, violence against women and lower levels of wellbeing during heat waves. However, the social context of the city is vital to understanding the significance of these findings for citizens' security. They found that outcomes are shaped by pre-existing vulnerabilities, in the context of unequal access to urban resources by women and low-income groups.

#Chersich et al, 2019 - *Violence in hot weather: Will climate change exacerbate rates of violence in South Africa?*
This editorial examines evidence on the connections between temperature and interpersonal violence and considers the implications of these connections for South Africa. It finds that associations between temperature and violence are not necessarily linear, and correlations are often curvilinear or an inverted U-shape, where rates of violence increase in a linear fashion once temperatures rise above moderately high levels, then plateau at a certain threshold, and decline as temperatures become unbearable and people prefer 'flight' or 'escape' rather than conflict. Importantly, physical environmental triggers of violence, such as heat, are set against the backdrop of complex social processes, poor governance and historical circumstances that influence violence in SA.

#Yeeles, 2015 - *Weathering unrest: The ecology of urban social disturbances in Africa and Asia*
This article utilizes a case crossover time-series design to explore the relationship between meteorological factors derived from high resolution spatial data of temperature and precipitation and social disturbances occurring in 50 major cities in Africa and Asia between 1960 and 2006. It draws the conclusion that heat is associated with urban social conflict, but generally does not trigger episodes or supersede other factors influencing the timing and intensity of unrest**.** Hot weather instead acts to supplement aggression while other factors govern the primary timing of social unrest.

#Ide et al., 2021 – *First comes the river, then comes the conflict? A qualitative comparative analysis of flood-related political unrest*
This study emphasises how existing research has paid little attention to the links between climate change, disasters, and small-scale conflicts, such as protests or riots. The authors argue that floods are particularly relevant in this context as they are the most frequent and most costly contemporary disasters, but they remain understudied compared to other disasters, specifically, droughts and storms. The study addresses these gaps by focusing on flood-related political unrest between 2015 and 2018 in Africa, Asia, and the Middle East by drawing on data from the Dartmouth Flood Observatory (DFO) and Armed Conflict Location and Event Dataset (ACLED). It finds that the simultaneous presence of a large population, a democratic regime, and either the exclusion of ethnic groups from political power or a heavy impact of the flood is an important scope condition for the onset of flood-related political unrest. This indicates that disaster–conflict links are by no means deterministic. Rather, they are contingent on complex interactions between multiple contextual factors.

Plänitz, 2019 - *Neglecting the urban? Exploring rural-urban disparities in the climate change–conflict literature on Sub-Sahara Africa*

This study examines climate change–urban conflict dynamics, in order to propose a conceptual framework which combines existing streams of literature into a single model. This model presents five mechanisms that could translate climate change into urban violence: migration or urbanization, a youth bulge, poverty, inequality, and social and political marginalization. Plänitz predicts that these mechanisms would result in the three risks of social, economic, and political instability. Finally, the paper argues for more research on multi-causal pathways leading from adverse climate conditions to urban political violence.

Plänitz, 2020 - *Natural Disasters and Political Disorder: Why Urban Flooding Turns Violent. Applying a Fuzzy-set Qualitative Comparative Analysis*

This paper sheds light on the question: Why do some cities in Sub-Saharan Africa experience post-flood disorder while others do not? Given the expected urban population growth across Africa, its implications for the local infrastructure and climate-related changes in precipitation, the paper assumes that patterns of urban political disorder respond to those conditions in times of disasters. This contribution makes the argument that it is the socio-economic and political context that matters in the development of post-flood-related disorder. A conceptual framework is introduced that includes the role of contextual factors on the pathway from disasters to post-flood disorder. Drawing on that model, a Qualitative Comparative Analysis of 26 cases in Sub-Saharan Africa is used to test three scenarios. It suggests that a prompt post-flood response does not prevent the onset of disorder, but indeed proves to be a condition linked to the development of hostilities. The analysis found evidence that disorder occurred in cases that were marked by rapid political response to the flood. The study also unveiled the significant role of the areas that were flooded. If the flood predominantly hit marginalized neighbourhoods, the likelihood of disorder increased. In contrast, the mere existence of a youth bulge or rapid urbanization per se seems to have a negligible impact on the development of unrest.

Livelihoods and political ecology approaches

In line with a more nuanced, non-linear view of relationships between climate change and non-conflict violence (see Le Billon and Duffy 2018 for this approach in the context of debates about relationships between climate and conflict more broadly), the following literature presents the contingent, entangled relationship between the two phenomena. Using livelihoods and/or political ecology approaches, this scholarship investigates compound vulnerabilities among marginalised urban populations, with a particular focus on how people experience multiple stressors in 'everyday' processes of risk accumulation at the local scale, and within the context of broader issues of the political ecology or structural violence in the city – and how they exercise agency in response.

#Fraser et al., 2020 - *Urbanisation and Climate Security Policy Brief: Towards Integrated Approaches for Cities*

In a policy brief for the Planetary Security Initiative, Fraser et al. bring together the findings from Southern-based researchers and practitioners exploring how a broad spectrum of civic, interpersonal and everyday urban violence potentially overlaps with the impacts of climate change to create mutually constituted vulnerabilities at the individual, household and community scales - whilst also looking at the implications of this for policy responses. It cites examples from recent empirical research in Kenya, Pakistan, Honduras and Sudan to illustrate how a broader agenda is required which tackles unmet urban development needs and addresses security and climate risks together, both through programmatic interventions and urban planning initiatives.

[#Anwar et al 2020](#) *- Without Water, There Is No Life: Negotiating Everyday Risks and Gendered Insecurities in Karachi's Informal Settlements*
This paper provides new insights into the politics of water provisioning in Karachi's informal settlements, where water shortages and contaminations combined with climate change-related heat waves, have pushed ordinary citizens to live on the knife edge of water scarcity. The paper argues that risk has a very gendered nature, and it is women who experience it both in the home – by embodying water scarcity and absorbing male frustrations – and outside – by risking their public reputation and physical security.

[#Anwar et al, 2020](#) *- Climate Change and Security in Urban Pakistan: A Gender Perspective*
This article explores the nexus of climate change and security in urban Pakistan from a gender perspective. The authors use a comprehensive notion of security, which considers how state security, environmental security and human security overlap to foster violent outcomes, at multiple scales. Issues of governance and security are commanded by male, state, actors with insufficient concern for the views and experiences of women, non-hegemonic males and the transgender community. These groups often experience greater vulnerability and marginalisation in the face of state responses to climate change (or lack, thereof). Women defined flood hazards as a form of psychological violence since they seriously exacerbate poor sanitation in the streets where they already face restricted mobilities compared to men. Shocks and stresses are increasingly difficult to overcome and create challenges to gender traditional norms. The frustrations around this can have knock-on, violent, effects. Males explained how their anxieties and frustrations over poor sanitation, during or after floods, would lead to fights between men, sometimes accompanied by weapons.

[#Anwar, 2020 -](#) *Climate change, urban futures, and the gendering of cities in South Asia*
This article provides evidence of how each aspect of climate change – whether extreme heat, floods, erosion or air pollution – disproportionately affect the livelihoods, health and wellbeing of the poor, especially women; how they entrench displacement and precarity and undermine claims to essential services such as access to water, housing and clean air. Exposing the deadly consequences of structural flaws in urban Pakistan, where a combination of a high-density population and a heavily built environment, the authors describe how an extensive use of asphalt and concrete in construction and the lack of green space can add as much as 12°C to average recorded temperatures, leading to increased mortality. Women and men have reported that the anxieties and frustrations associated with this lack of fulfilment of their socialised responsibilities could lead to domestic violence. Women have further reported that they continue to face increased structural oppression as a result of certain aspects of climate change, such as extreme water shortages. The authors argue that the complexities of the impacts of a changing climate cannot be understood without looking at how gender is articulated in urban ecology.

[#Choudary et al. 2020](#) *- Sub-optimal household water access is associated with greater risk of intimate partner violence against women: evidence from Nepal*
Also based on data from Nepal, this study suggests that household water insecurity could increase women's exposure to emotional and physical forms of intimate partner violence (IPV), as punishments for failures to complete socially expected household tasks that rely on water (like cooking and cleaning) and the generally elevated emotional state of household members dealing with resource scarcity elevates women's exposures to all forms of IPV.

[#Shrestha et al. 2019](#) *- Flows of change: dynamic water rights and water access in peri-urban Kathmandu*
This paper demonstrates how urbanization and the changing climate are increasingly influencing people's access to land and water, particularly in peri-urban areas. Water-related changes cause contestations and conflicts between peri-urban water users but also point to cooperation in face of

resource scarcity. Self-restraint is seen in practices of claiming or accessing water, while avoidance of conflicts derives from an awareness of unequal power relations between user groups, past experiences of violence used against protesters, and lack of active intervention to regulate increasing exploitation of peri-urban land and water resources.

#Zweig and Pharoah, 2017 - *Unique in their complexity: Conceptualising everyday risk in urban communities in the Western Cape, South Africa*

Zweig and Pharoah look at two case studies from urban areas in the Western Cape, South Africa, revealing the complexity and interconnectedness of risk at the local scale. They suggest a simultaneous need for both a stronger focus on 'localism' and sensitivity to the complex multi-scalar processes underlying everyday risk. The authors stress the importance of a broader conceptualisation of hazards - to include those prioritised by research participants/communities, such as crime and violence - as well as greater complexity with respect to how we differentiate between the chronic kinds of risks that people live with (e.g. flooding, informal settlement fires, traffic and other accidents) and those 'experts' label 'disaster risks'.

#Dodman et al, 2017 - *African Urbanisation and Urbanism: Implications for risk accumulation and reduction*

Dodman et al identify core gaps in understanding the distinctive characteristics of the relationship between risk and vulnerability trends and other dimensions of human development and well-being in African urban contexts, including the linkage between violence and disaster risk. While they find there is little empirical evidence examining the link between these two, violence may act as a factor limiting the locations in which low-income households choose to live – and perhaps encouraging settlement in hazardous locations. They also argue that the direct effects of inter-personal violence are also likely to reduce the adaptive capacity of individuals and households.

#Gwatirisa and Manderson, 2012 – *"Living from Day to Day": Food Insecurity, Complexity, and Coping in Mutare, Zimbabwe*

This article illustrates an interplay of environmental and social factors with the example of Zimbabwe in the 2000s, when climate change, drought, food insecurity, political instability and structural and direct violence converged in Operation Murambatsvina – a large-scale Zimbabwean government campaign to forcibly clear slum areas across the country. The destruction of urban gardens stripped town residents of any resilience and exacerbated the vulnerabilities of urban and rural dwellers who were already suffering from food shortages. The article demonstrates how food insecurity is always complex, but more so when its multiple layers are compounded by political instability, structural and direct violence, and an economy in collapse.

#Falhberg 2020 - *Confronting chronic shocks: Social resilience in Rio de Janeiro's poor neighborhoods*

This article examines how concentrated poverty, violence and disasters affect residents' well-being and survival strategies. It finds that residents in these areas address chronic shocks (e.g. floods, severe illness, gang and police violence) along varying levels of: (1) 'formality,' or engagement with the state apparatus or formal economy; (2) contentious politics; and (3) collectivity, from addressing the needs of the individual or kinship network to the neighbourhood. The study finds that strategies of social resilience among those most excluded from the formal urban landscape span multiple levels of contention and struggles to fight against the system (e.g. "make a ruckus" to get care at the local health clinic, when they participate in a social movement, or when they call a politician to demand improvements to the neighbourhood). In other words, favelas and other sites of urban poverty are not characterized by solely complacent acceptance of marginality or collective efforts to challenge the state, but rather by the constant negotiation of multiple scales of contentious action. Deciding which battles to fight is often based on what resources they are likely to obtain from public programs or the market and which threats they face if they challenge these institutions. The researchers conclude that

the variability in strategies reflects residents' ability to adapt to an uneven and unjust urban environment.

2. Understanding the indirect effects of climate change on urban systems and violent responses

This section draws together articles that examine how climate change can indirectly lead to violent outcomes in urban areas due to factors such as rural water scarcity, food price changes and climate stress triggering rural to urban migration.

#Adger et al 2021 *- Human security of urban migrant populations affected by length of residence and environmental hazard*

This study examines the extent and nature of human security in urban migration destinations and tests whether insecurity is affected by length of residence and environmental hazards. It develops an index measure of human security at the individual level to include environmental and climate-related hazards as well as sources of well-being, fear of crime and violence, and mental health outcomes. It finds that there appear to be only marginal and indirect causal links between migration and organised violence in urban centres in expanding cities in the global South and makes a case for expanding the conceptual focus of research on climate change and its human impacts to include holistic experiences of insecurity to include everyday social exclusion and precarity.

#Koren et al, 2021 –*– Food and water insecurity as causes of social unrest: Evidence from geolocated Twitter data*

This study uses Twitter-based indicators measuring food and water insecurity, respectively against high resolution urban data on social unrest to assess how real-time food and water stress impacts its prevalence. The authors found that, together, food insecurity and water insecurity greatly reinforce the other's impact on social unrest, with high degrees of both insecurities increasing the expected counts of unrest events. The article calls for those concerned with climate change's impact on conflict to endeavour to jointly account for both forms of insecurity, and their interactive effects. The study's findings also imply that such shocks are more likely to generate nonviolent rather than violent responses e.g. violent riots.

#Gizelis, 2021 - *Conflict on the urban fringe: Urbanization, environmental stress, and urban unrest in Africa*

This article contributes insights relevant to the broader debates about possible security implications of hyper-urbanization and climate change. It argues that high urban population growth may strain the provision of public services in urban areas, heighten competition over scarce urban land, and increase the chances of urban social unrest. It investigates whether environmental push factors, operationalized as droughts happening in rural areas proximate to the urban centres, could be driving any effect of urban population growth on social disorder, possibly supporting concerns over climate change-induced social unrest. The study uses a sample of similarly sized urban and peri-urban 'grid cells' covering the whole of the African continent for the 1997–2010 period, using geo-coded social unrest data. Findings show that urban population growth is associated with increased unrest in the peri-urban areas only. The authors find no evidence, however, that this relationship is driven by environmental push factors in the form of nearby droughts.

#Smith, 2014 - *Feeding unrest: Disentangling the causal relationship between food price shocks and sociopolitical conflict in urban Africa*

To understand whether food price shocks are a contributing causal factor, or catalyst, of any type of sociopolitical unrest, including spontaneous and organized demonstrations and riots, this research employs an instrumental variable analysis to address the endogenous relationship between food

prices and social unrest and further isolate the direction of causality. The main finding is that a sudden increase in domestic food prices in a given month significantly increases the probability of urban unrest, especially spontaneous events and riots, in that month. The author makes the case that the findings provide evidence that sociopolitical unrest of different types is driven, or at least triggered, by a consumer response to economic pressure from increasing food prices regardless of the cause of the increase.

#Buhaug & Urdal 2013 - *An Urbanization Bomb? Population Growth and Social Disorder in Cities*

This study explores the empirical impact of high population growth on political violence in cities, including how climate-induced and temporary rural-urban distress migration are likely to add to these challenges. A key contribution of this article is a quantitative analysis that places focus squarely on cities and their unique demographic features, as opposed to relying on overly aggregated country data. The researchers found that the data failed to support the proposed association between rapid city population growth and a higher risk or frequency of urban violence, and believe that this is because population growth in cities and urban disorder are at best causally unrelated, with some models even indicating a reverse connection. This is explained in that cities offer unsurpassed economic opportunities and public goods and that jobs are more plentiful and living standards are often much higher in urban centres. They also speculate as to whether rural-urban migration (as well as other forms of mobility) under certain conditions may function as a societal safety valve, relieving the pressure on vulnerable lands in the countryside.

#Buhaug & Urdal 2009 - *Will Climate Change Lead to More Urban Violence? Urbanization, Urban Environmental Problems, and Social Disorder in Cities*

In the environmental security literature, great rural resource scarcity, causing rural to urban migration, is seen as an important source of violent conflict. This study investigates how population growth and environmental conditions affect patterns of public unrest in urban centres in the context of crucial intervening factors like democracy, poverty, economic shocks, and ongoing armed conflict. It utilizes a newly collected event dataset of urban social disturbance covering 55 major cities in Asia and Sub-Saharan Africa since 1960. The empirical analysis provides little support for the notion that environmental scarcity leads to a higher risk or frequency of social disorder (where the dataset covers different forms of both violent and non-violent politically motivated disorder, including demonstrations, rioting, terrorism and armed conflict). Instead, it finds that urban disorder is primarily associated with a lack of consistent political institutions, economic shocks, and armed intrastate conflict.

#Raleigh, 2008 *Assessing the Impact of Climate Change on Migration and Conflict*

This report for the World Bank is a stocktaking piece on the social consequences of climate change, with a specific focus on the relationship between environmental hazards and migration. The paper surveys the available literature on disaster migration to offer projections on future migration patterns in response to the direct and indirect changes due to climate change. Further, it assesses the propensity for increased social conflict as a consequence of intensified migration patterns. It finds that while resources and resource distribution do heavily influence the risk and patterns of conflict, the direct and indirect effects of climate change do not appear to.

3. State violence and climate change responses in urban areas

The following articles examine the violence of new climate initiatives in cities, looking at how new adaptation and/or mitigation projects can also create violence through displacement.

#Buhaug and Uexkull, 2021 [blog] *– Climate-conflict research: a decade of scientific progress*

This blog provides a brief overview of a report (listed below), which highlights the lack of systematic research on the extent to which policy responses to climate change (adaptation, mitigation) affect

conflict risk. It emphasises how this knowledge gap is especially concerning for policymakers seeking to develop climate policies to assist the most fragile and vulnerable societies in the Global South.

#Buhaug and Uexkull, 2021 *– Security implications of climate change: A decade of scientific progress*
This review article - introducing a new special issue of the *Journal of Peace Research* on the security implications of climate change - takes stock of the nature and extent of scientific progress in climate-conflict research over the past decade. On the basis of this evaluation, it finds that the research community has made important strides in specifying and evaluating plausible indirect causal pathways between climatic conditions and conflict related outcomes; they point to the complexity of the climate–migration–unrest link but find that the long-term implications of gradual climate change and conflict potential of policy responses are important remaining research gaps that should guide future research.

#Anwar and Anjum, 2021 *- Land, governance and the gendered politics of displacement in urban Pakistan*
This report documents how land is acquired for infrastructure and urban development projects, with findings that emerge from a 24-month project covering 16 sites in Karachi, Pakistan. It discusses how dense informal settlements located along infrastructure installations such as storm-water drains (nullahs), have become targets for new climate change, disaster risk management and infrastructure initiatives to forcibly clear 'encroachments' in preparation for minimising the risk of urban flooding. Population densities were often misrepresented in official discourse, with a strong likelihood of far more people being displaced than officially imagined. The report emphasises the intensely traumatic and violent nature of forced displacement, with differentiated impacts on men and women.

#Ranganathan, 2021 *- Caste, racialization, and the making of environmental unfreedoms in urban India*
Drawing on archival and ethnographic research in Bangalore/Bengaluru in southern India, this article demonstrates how ecological narratives have provided legal grounds for caste-based slum evictions. The criminalizing language of "encroachment", rooted in colonial urban planning lexicon and used to justify the spatial disciplining, containment, and eviction of labouring Dalits today, has dire consequences for the making of environmental unfreedoms (where this term is used to signify the fundamentally humanity- and dignity-robbing traits of socio-ecological harms). The article concludes that a framework that weaves together analyses of caste, racialization, and environmental unfreedoms in the urban context can identify opportunities towards transnational solidarities across anticaste and antiracist struggles.

#Alexandrescu, 2021 *- On the path of evictions and invisibilization: Poor Roma facing climate vulnerability*
This paper focuses on the subtle processes of invisibilization that render displaced Roma vulnerable and rob them of the "right to the city" in terms of climate change adaptation. It finds that evicted Roma experience innumerable, "routine" weather-related impacts, such as floods, storms or cold. By exploring Roma's heightened exposure, sensitivity and reduced adaptive capacity, this study shows how these impacts increase their vulnerability to future extreme weather events.

#Widyaningsih, 2020 *- Social innovation in times of flood and eviction crisis: The making and unmaking of homes in the Ciliwung riverbank, Jakarta*
This study considers displacement occurring around the Jakarta flood mitigation projects between 2015–17 and explores the emergence of social innovation by affected kampung communities along the Ciliwung River. A framework combining theories on domicide and social innovation is developed to scrutinize two main case studies, Bukit Duri and Kampung Tongkol, revealing their connection to the city's urban development trajectory as well as the continuous struggle over adequate housing for

low-income groups. The study questions official plans, policies and responses towards flood-induced displacement and resettlement planning. It also brings social innovation into the debate to unpack how displacement became a key moment for transformative change. The paper argues that, although urban eviction is related to globalization, outcomes are not foreclosed.

#Day 2019 – *Eviction is not a disaster*
This article illustrates how disaster risk reduction discourses have served to obscure a neoliberal agenda of slum clearance, whereby violence in the form of destruction of informal settlements is carried out in order to thwart a perceived or actual threat of climate change. Basing its argument on empirical evidence from community responses in Vanuatu to the framing of eviction as a disaster, this article concludes that urban forced evictions should not be treated as "disasters" in policy on forced displacement.

#Alvaraz and Cadernas, 2019 – *Evicting slums, 'building back better': Resiliency Revanchism and Disaster Risk Management in Manila*
Through the lens of aesthetic governmentality, this paper analyses how elite and expert knowledge produced a narrative of the slum as the source of urban flood risk via the territorial stigmatization of slums as blockages in Manila. It introduces the concept of resiliency revanchism: a 'politics of revenge' predicated on the currency of disaster risk management and 'resiliency', animated by historically entrenched prejudicial attitudes toward urban underclasses, and enabled by the selective interpretation, circulation and use of expertise.

#Ajibade, 2019 - *Planned retreat in Global South megacities: disentangling policy, practice, and environmental justice*
This paper examines the policy and practice of managed retreat and its environmental justice dimensions in Manila (Philippines) and Lagos (Nigeria) from 2010 to 2018. Findings reveal a complex picture of contradictions. In Lagos, retreat was stated in climate change policy but in practice only the urban poor were forcibly removed from waterfront areas and in their place new urban development projects are being constructed. In Manila, retreat was not mentioned in policy but evidence indicates informal settlers and national government offices were the target of planned retreat. This study further discusses how climatic uncertainties, property values, government distrust, utopian imaginaries, and environmental injustices served as barriers to managed retreat in both cities. The paper concludes with a call for an environmentally and socially just approach to retreat. It argues that the rights of the urban poor to the city must be taken into consideration even under complex climatic and socio-ecological disruptions.

#Silver, 2017 - *The climate crisis, carbon capital and urbanisation: An urban political ecology of low-carbon restructuring in Mbale*
This paper examines the low-carbon restructuring of the waste system in Mbale, Uganda, a town struggling to address its socio-ecological futures. The paper shows how global actors are increasingly involved in low carbon transformation, use places such as Mbale as spaces of experimentation, whilst risk of failure, whether operational or financial, is assigned and concentrated at the local scale. The case of Mbale shows that the violence of climate change will not just unfold through the multiple and unequal socio-environmental disasters – droughts, floods, famines, mudslides – but by creating or reinforcing precarious conditions for the poor, resulting in lost jobs, exclusion, threats of violence and subsequent contestation and strikes.

#Ajibade, 2017 - *Can a future city enhance urban resilience and sustainability? A political ecology analysis of Eko Atlantic city, Nigeria*
In this paper, Ajibade highlights the underlying politics of urban resilience-building and the power and knowledge relationships that continue to shape the emergence of urban risk management and

adaptation strategies. The paper uses the example of the Eko Atlantic City construction project in Lagos, Nigeria – the largest ecoengineering project of its kind in West Africa – which been shaped and legitimized by powerful economic interests in the name of resilience and adaptation, but how the promise of short-term storm mitigation masks the long-term implications for the physical, economic, political, and socio-cultural 'riskscape' of Lagos with particular implications for marginalized communities and future generations.

#Drivdal (2016) - *Flooding in Cape Town's informal settlements: conditions for community leaders to work towards adaptation*

This paper draws on insights from three flood-prone informal settlements in Cape Town, illustrating how even simple interventions that could improve adaptation prospects can escalate into serious conflicts, such as the handing out of flooding aid such as plastic sheets in Egoli. This underlines the fact that internal consolidation is always fragile and is affected by external intervention, which also restricts leaders' opportunities to act. With the fluidity and fragmentation of organizing in this urban environment, transparency is low and opportunities for corruption prevail, hence suspicion towards leaders is high and can escalate into conflicts.

4. Climate vulnerability and the structural violence of contemporary urbanisation

In this section we identify articles that link structural violence, slow violence or infrastructural violence of urbanisation processes to climate change impacts, vulnerabilities and adaptation.

#Silver, 2018 - *Suffocating Cities*

In this book chapter the author introduces urban political ecology with Frantz Fanon's analysis of the violence of colonization as "suffocation" when identity, ways of knowing, and ability to live was imprinted in the relation of colonizer and colonized. The author examines the ways climate change and global policy operate as suffocation in three cities of Africa: sea-level rise in the coastal city of Saint-Louis, Senegal; disrupted electricity infrastructures in Accra, Ghana; and a waste management programme in Mbale, Uganda. This shows how climate change and global policy operate as "social-ecological violence," which sustains coloniality in that it excludes local knowledge and voices, and deepens racialized capitalism

#Shepherd, 2021 - *Cape Town's "Day Zero" Drought: Notes on a Future History of Urban Dwelling*

Taking the events of Cape Town's "Day Zero" drought as a case study, this article examines the politics and poetics of water in the Anthropocene and the implications of Anthropogenic climate change for urban life. It argues that rather than being understood as an inert resource, fresh drinking water is a complex object constructed at the intersection between natural systems; cultural imaginaries; and social, political, and economic interests. The extraordinary events of Day Zero raised the specter of Mad Max–style water wars. They also led to the development of new forms of solidarity, with water acting as a social leveler. The article argues that events in Cape Town open a window onto the future, to the extent that they tell us something about what happens when the added stresses of climate change are mapped onto already-contested social and political situations. They also underline the precarious nature of many of our urban arrangements.

#Lambert, 2021 - *The violence of planning law and the production of risk in Lima*

This paper argues that planning law and legal texts regulate the spatial layouts of human settlements in ways that produce concrete abstraction and exacerbate unintended outcomes. Using extensive case study research and ethnographic methods, the author unpacks three perverse spatial configurations on the peripheral slopes of Lima: the grid layout resulting in excessively steep access ways, electricity poles in the middle of staircases and dangerous evacuation routes. The study demonstrates how manoeuvres of fragmentation, homogenisation, and hierarchical ordering, active in planning

processes and legal texts, lead to material and corporeal violence that maintain dwellers in perpetual landscapes of risk.

#Hawken et al, 2021 *- Urban megaprojects and water justice in Southeast Asia: Between global economies and community transitions*

This paper addresses a key knowledge gap on the impacts of urban megaprojects on water security and water-related human rights in Southeast Asia through a literature review, field observations and digital earth observation. Three case studies in Cambodia, Vietnam and Myanmar were used to develop a picture of urban megaproject impacts, including the violent expropriation of space with established urban systems catering to a narrow economic segment of society. The paper also discusses the severe implications for environmental processes, including interruption of urban water flows and waste removal, biodiversity degradation, loss of arable landscapes, increased pollution and changes in flood regimes.

#Rush et al., 2020 - *Fire risk reduction on the margins of an urbanizing world*

This paper examines fire risks in informal settlements in New Delhi and Cape Town, and tented informal settlements in Lebanon, highlighting how, within informal settlements, the risk of fire resulting in injury or death is particularly high. With analysis based on primary sources, secondary literature, statistical data and qualitative interviews, the study finds that the distribution of fire risk across urban societies is a fundamentally political issue. Residential fire risk can be tackled by accessible, affordable, safety-compliant housing. That said, important interim measures can be taken to mitigate fire risk. Some of the risks requiring attention are driven by high population densities; flammable housing materials; unreliable or inaccessible access to safe power sources; and – in the case of Cape Town and New Delhi particularly – the inability of fire services to reach sites of fire. However, these common risks are embedded in distinct social, economic and political contexts that must be placed at the centre of any intervention. Interventions must also be aware that the risk of fire is not spread evenly within informal settlements, intersecting as it does with factors like gender, age, health and disability.

#Patel et al, 2020 - *Gendered Impacts of Environmental Degradation in Informal Settlements: A Comparative Analysis and Policy Implications for India, Bangladesh, and Pakistan*

This study argues that degraded urban environments disproportionately affect marginalized populations, and especially impoverished women in South Asia's informal settlements, where climate change vulnerabilities (e.g. to heat waves, torrential rains and urban flooding) and gender inequalities are extreme. The authors conducted a comparative analysis of three neighbouring countries, India, Bangladesh, and Pakistan, where urban environments, climate risks, and gender relations exhibit significant variances. It was found that women experienced lower levels of empowerment in informal settlements as compared to men. The analysis reveals that the supply of clean drinking water, proper sanitation, and safe toilets are strongly related to women's empowerment and those conditions could only improve with formal status, recognition, and legitimacy of informal settlements in cities, which often act as pre-requisites for environmental upgrading.

#Ayeb-Karlsson et al., 2020 - *Trapped in the prison of the mind: Notions of climate-induced (im)mobility decision-making and wellbeing from an urban informal settlement in Bangladesh*

This empirical study demonstrates the need to widen an understanding of immobility and 'trapped' populations from simply being financial, practical and functional towards a more complex subjective and psychosocial process. For example, people who have experienced traumatic events, such as violence, abuse, or dealing with depressive thoughts, strongly aligned their compromised wellbeing with their immobility status. The analysis incorporates the emotional and psychosocial aspects of the diverse immobility states, finding that the mind and emotion are vital to better understand people's (im)mobility decision-making and wellbeing status.

#Adelekan, 2019 - *Urban dynamics, everyday hazards and disaster risks in Ibadan, Nigeria*
This paper discusses how the social, economic and political structures at the national, city and locality levels contribute to the most serious urban risks, as well as how these drive the process of risk accumulation, especially for vulnerable groups. Excluding public health risks for which data are scarce and incomplete, road traffic accidents, crime, violence and flooding constitute the most serious hazards in the city of Ibadan.

#Parry et al., 2018 - Social vulnerability to floods is influenced by urban accessibility
This study shows how floods pose a greater disease risk in less accessible urban centres because inadequate sanitation in these places exposes inhabitants to environmental pollution and contaminated water, exacerbated by poverty and governance failures. Exploring the root causes of these spatial inequalities, the authors highlight how remote and roadless cities in Amazonia have been historically marginalized and their citizens exposed to structural violence and economic disadvantage. Findings reveal how indigenous people are more populous in the marginalized, less accessible urban centres and that social vulnerability predisposes the citizens of relatively inaccessible urban centres to harm from extreme events, through violence that is structural and "silent".

#Collyer et al., 2017- *The Right to Adequate Housing Following Forced Evictions in Post Conflict Colombo, Sri Lanka*
This chapter reports on a large-scale survey conducted of resettled populations in Colombo to consider the impact of evictions on the adequacy of housing as compensation in forced evictions, takings place within the context of a militarisation of urban redevelopment and the eviction process. Risks such as flooding and poor sanitation were very common in underserved settlements across the city but despite these poor material conditions, very few people were interested in moving anywhere else. Any enthusiasm expressed was almost entirely for in situ improvements. The eviction process was traumatic for many and resulted in the loss of important networks, trust and organisation. The actual evictions took place under very substantial coercion and some involved direct physical violence, including the army dismantling people's houses while they and their very young children were in them. The research confirms that material improvements in housing conditions have occurred, but the nature of community relations have been seriously disrupted. The chapter argues for a much broader sense of compensation that guarantees a defined standard of adequate housing; it concludes that it is vital to consider all the ways in which forced evictions have affected people's lives in preparing a compensation package to properly alleviate forced evictions.

5. Urban fragility and the violence of hybrid authorities

In this section we explore how fragile cities rather than fragile states are now considered primary sites of violence, often home to a hybrid constellation of authorities negotiating power and playing key roles in risk and disaster management. We also see how researchers, humanitarian and developments actors are applying the concept of resilience to urban disasters and violence to address issues of urban fragility.

#Clark-Ginserg et al., 2020 - *Hybrid Governance of Disaster Management in Freetown, Monrovia, and Dar es Salaam*
This article introduces a hybrid governance perspective to disaster management. Hybrid governance refers to situations where state and non-state actors collectively provide key services. The authors argue that hybridity is often the norm rather than exception for disaster management, particularly in developing countries where the state is often weak and may be unable or unwilling to provide essential services. In these instances, risks are addressed by the state and non-state entities—from citizens and NGOs to customary authorities. Because of their important role in risk reduction, disrupting hybrid processes by attempting to bring them under the remit of the state may create

rather than reduce risk. To make this argument, we first outline the key tenants of hybridity and their applicability to disasters before illustrating hybridity through three case studies of hybrid risk management in three cities in Africa, Freetown, Sierra Leone, Dar es Salaam, Tanzania, and Monrovia, Liberia.

#Bosseti et al, 2016 - Fragility, Risk, and Resilience: A Review of Existing Frameworks

This background paper presents the findings of a review of 35 frameworks that are increasingly being used by the international community to assess fragility, risk, and resilience. It finds that fragility assessment tools, frameworks, and indices are biased toward political, social, and economic risks and less sensitive to disaster or climate related risks. Similarly to most risk assessment tools, resilience frameworks tend to overlook the risk of conflict and violence and are biased towards assessing exposure to natural hazards. In addition, fragility continues to be analyzed predominantly from a state-centric perspective, with a focus on state institutions, while resilience is largely viewed through the prism of disaster risk reduction with little emphasis on the political and institutional dimensions of risk. This suggests the need for frameworks that re-conceptualize resilience and fragility in an integrated way to help policymakers better assess political, economic, social and environmental risks at the city level.

#de Boer, 2015 - *Resilience and the Fragile City*

This paper describes how the populations of the poorest, most violent, most disaster-prone and most fragile countries in the world are aggregating in cities at a breakneck pace, pushing the capacity of their governments to deliver services, respond to disasters, provide security, and govern effectively, to the brink. In some cities, systems of law and order, ranging from the police, judiciary, penal systems, and other forms of legal enforcement, are dysfunctional and considered illegitimate by the citizens they are intended to serve. There is also often a serious capacity gap in providing basic and accountable security and other services that would otherwise reduce the city's vulnerability to extreme poverty, violence, and disaster. The paper highlights how in order to help societies prepare for the looming challenges of a fragile city, there is a need for more research to better understand the recurrent risks that actually exacerbate fragility in cities. Researchers, policymakers, and practitioners need to determine what factors and investments serve to maximize the resilience of communities and cities, whilst acknowledging that the resilience concept used in relation to disasters and violence is relatively recent and how best it can help to catalyse more effective responses remains an open question.

#Muggah, 2014 - *Deconstructing the fragile city: exploring insecurity, violence and resilience*

This article explains the structural factors that appear to be playing a central role in hastening city fragility in certain parts of the world. Drawing from emerging theoretical and policy literatures, it finds that urban fragility is neither inevitable nor irreversible. To the contrary: it is the very resilience of cities, their neighbourhoods and institutions that is often overlooked in efforts to promote stability and development. The paper argues that future stability efforts will need to involve local people to address problems that neither outsiders nor locals alone can solve. This will require harnessing the insights only neighbourhood residents can bring, together with outsider knowledge from fields such as urban planning, systems engineering, renewable energy, conflict resolution and mediation.

#Schultze-Kraft and Hinkle, 2014 *- Toward Effective Violence Mitigation: Transforming Political Settlements*

Acknowledging the weakness of formal institutions and the strength of hybrid political orders in most violence-affected settings in the developing world, this IDS Evidence report adopts a political settlements approach to understand the political factors that underpin and drive 'non-conflict' violence and develop policy responses that tackle the roots of the problem, not just its symptoms. Using case studies of Nigeria, Sierra Leone, Egypt and Kenya, the authors argue that violence

mitigation should be understood as a long-term process involving both formal (state) and informal institutions and affected communities and citizens. Long-term and essentially indigenous processes of transforming political settlements in violence-affected countries and societies have to grapple with the (strategic) use of violence – or its condoning – by both state and non-state actors at the macro (state) and micro (citizen) level. The effectiveness of violence mitigation efforts hinges on the degree to which they are successful at taking violence out of the exercise of public authority and the social struggle over the distribution of resources and wealth.

6. Towards integrated solutions: examples of positive initiatives

In this section we start to explore articles, reports and initiatives which offer positive examples seeking to find solutions to address the compound vulnerabilities linked to both climate change, disaster risk and violence in urban areas.

#Rademaker et al., 2018 – *Making cities in conflict areas more resilient*

This paper serves as a conceptual iteration with a first suggestion on the operationalization of bringing urban climate change resilience and data monitoring together. It aims to use data to monitor the role of cities in conflict and climate change, and to identify possible steps for city planners and municipal decision makers in constructing their policy, through the use of data analysis in order to take action on the ground. The authors came to the conclusion that data availability constitutes a fundamental challenge. Analysis also suggested that city resilience cannot be developed without addressing the root causes of conflict in the entire area, since city-level resilience in conflict areas is closely related to the national level. Whilst the authors advocate for an expansion of data coverage to cities and countries that might not have the data infrastructure available, the monitor is still able to provide an overview that identifies more precisely which aspects of resilience are currently lacking in data and further enables network-based city initiatives to identify partners for collaboration and the exchange of lessons learned and practices.

#Pelling, 2011 - *Urban governance and disaster risk reduction in the Caribbean: the experiences of Oxfam GB*

This paper provides a cross-cultural analysis of the experiences of Oxfam GB in supporting urban community-based disaster risk reduction in Haiti, Guyana and the Dominican Republic. The paper focuses on the efforts of Oxfam GB and its local partners to overcome the determining influence of local governance on who benefits from interventions, and the longevity of positive outcomes. Findings included how young people were an important beneficiary group that benefited from greater interaction within and between neighbourhoods, with some respondents describing reduced inter-neighbourhood tensions and gang violence as an important and unexpected outcome of projects. These were impacts that went beyond, reinforced and added value to urban DRR.

The most successful projects built on strong pre-existing partnerships with buy-in from local and municipal government, promoted longevity in physical and social infrastructure through dual use investments that had an everyday as well as a disaster risk reduction purpose, and integrated technological and lay focus exercises to generate local participation as well as provide baselines for project planning. Overall, however, disaster risk reduction was constrained by a lack of vision and funding constraints, which prevented root causes in the wider urban and regional environment or political economy to be tackled.

#Kounkey Design Initiative (KDI), 2021 - The Kibera Public Space Project (KPSP)

In 2006, KDI began working with residents of the informal settlement of Kibera to design and activate a network of Productive Public Spaces that could meet their physical, social and economic needs. The network continues to grow and build resilience across the settlement today. Home to around 250,000 residents, Kibera is characterized by crowded conditions, a lack of waste disposal and sanitation services, high unemployment and crime rates and severe flooding. Yet despite these economic, social

and environmental challenges, Kibera also has many assets: entrepreneurship, ingenuity, a strong social fabric, and extensive community activism. KDI works with community groups and residents to design the built components of each site through an iterative series of workshops. At the same time, residents learn management skills and develop programs and businesses to bring the site to life. The Kibera Public Space Project sites are hubs of cultural exchange, economic activity, and environmental remediation. They provide water, sanitation, and laundry facilities, and reduce flood risk through green infrastructure and flood protection. Resident-managed programs, many led by women and youth, generate income to maintain the sites while building residents' skills. The KPSP has played a critical role in promoting resident-led upgrading in Kibera, demonstrating that it is more sustainable and effective. Together, the public spaces help remediate the entire watershed while serving tens of thousands of residents and anchoring a network of over 250 community leaders.

#ActionAid, 2016 - *Strengthening urban resilience in African cities: understanding and addressing urban risk*

This report summarises findings from exploratory research comprising a desktop review of the literature on urban risk in Africa and fieldwork in three cities in Senegal, The Gambia and Zimbabwe. It examines hazards, vulnerabilities, local capacities, power imbalances and underlying risk drivers to identify strategies for enhancing resilience to disasters, climate change and conflict in Africa's urban environments. The report highlights the range of hazards poor urban communities in Africa encounter, from floods to epidemics to crime and violence, large-scale disasters and recurrent 'small' events. It then goes on to identify some of the numerous initiatives to support resilience-building that exist throughout the continent at different levels. At the governmental level, these include a growing commitment to, and capacity for, disaster risk reduction and response, as well as social protection mechanisms aimed at supporting vulnerable groups. Examples include the Child Grants Programme in Lesotho, a Social Cash Transfer Programme in Malawi, expansion of Social Welfare Grants in Namibia and a School Bursary Scheme in Swaziland. In terms of community-based initiatives, the report cites the example of Tamale, Ghana where residents form neighbourhood watch committees exchange telephone numbers so they can contact each other easily in times of distress. Community members have also organised communal labour efforts to clean up rubbish and waste in an effort to improve environmental health conditions. In Kampala and other urban areas in Uganda, the National Slum Dwellers Federation of Uganda (an affiliate of Slum/ Shack Dwellers International) has mobilised community resources to upgrade sanitation infrastructure and to leverage funding from other partners, including the government. The authors highlight how individuals and households are also implementing strategies to reduce their vulnerability, particularly to economic shocks and stresses. The report also introduces ActionAid's Safe Cities initiative which is running in 19 countries and aims to hold governments to address violence against women and girls on the streets, in public transport, at school or work, and in markets and other public spaces. Finally, the report sets out key recommendations, which include empowering communities to identify, reduce and manage risk, strengthening governments' capacity to reduce risk, particularly at the local level, strengthening urban planning and regulatory frameworks and working with women and children to identify unsafe areas in their communities where they are most vulnerable, and how public (and private) spaces can be made safer for women. It recommends that these processes be integrated with broader efforts to improve access to basic services such as access to clean water and sanitation, as well as urban planning and management.

#Save the Children - Urban Situation Analysis Guide and Toolkit

The 2015 Urban Program Learning Group meeting in Delhi, India, highlighted the need for an Urban Situation Analysis Guide to help development practitioners around the world navigate the urban context; a need that was reiterated by Save the Children country office staff during an urban mapping survey in 2016. The resulting ready-to-use Urban Situation Analysis Guide has been designed to help Save the Children staff and their partners assess the urban realities and complexities that directly

impact children and their communities. This document is for development practitioners, assessment teams and researchers – across all organisations and agencies – who require a greater understanding of the socio-political urban context, how it shapes child rights, and how urban policies and governance impact those rights (including in the context of disaster risk). A thorough urban situation analysis can contribute to quality, integrated and evidence-based urban programs and approaches, which meet the specific needs of children living in urban environments. The Urban Situation Analysis Guide is supported by the Urban Situation Analysis Toolkit, which includes methods for collecting and analysing urban-specific data. Readers should read the Guide first and refer to the Toolkit for support. Methods and tools included in the Toolkit can be adapted to unique geographical settings, and socio-political and cultural contexts in different cities, towns and other urban environments.

Conclusion

At this point in time, as we establish with this guide, there is no single synthesis to bring work from different disciplines and sub-fields of enquiry into conversation with each other to understand the intersections between urbanisation, violence and climate change risks. **The body of work that exists is relatively small, but growing and diversifying in both scope and theoretical and disciplinary orientation.**

The focus of attention – as for broader scholarship on climate change and conflict – remains on the influence of climate change on the occurrence of violence, with far less detailed interrogation of the influence of violence on vulnerability and capacity. However, it is important to note that the majority of work, quantitative and qualitative, on the direct and indirect influences of climate change on urban violence is immediately nuanced, recognising that the nature of the hazard and social and governance context is a vital mediator of outcomes. Heat, flood and water scarcity are considered, with a range of violence including violent crime, social and political unrest and gender based violence. However, the interactions between hazards and multiple forms of violence are little studied.

Research on state violence in relation to climate change initiatives has overwhelmingly focused on urban eviction. Work emerging foregrounds our understanding of evictions – and resistance to eviction – in racialized and ethnic terms, and in the context of broader political and social narratives that buttress unequal urban political economies. The influence of broader sets of state policies and measures that make up adaptation and disaster risk management, such as zoning, infrastructure upgrading (including through nature-based solutions) and social recovery programmes, are little acknowledged to date. The flagging of agency, and the need to understand the multiple ways agency functions in response in insecure contexts, also raises the issue of co-operation (highlighted for Nepal), and how research on conflict may overlook overlapping or parallel relations of co-operation.

While a number of papers exemplify how structural and infrastructural violence(s) give rise to urban climate and environmental risks, there is little connection made with the occurrence, nature and influence of inter-personal violence. Although this guide focuses on climate impacts, vulnerabilities and adaptation, we note work in this area around urban climate mitigation, but also the lack of work that considers the two together, either in conjoined projects or in their systemic interactions.

Our understanding of urban violence in the context of institutionally hybrid arrangements for climate change adaptation and disaster risk reduction is also highly limited, despite recent acknowledgements about the importance of hybridity to urban risk governance. Although hybridity does not automatically denote violence, the role of violent, non-state actors in risk governance appears as a particular gap.

We also find a significant dearth of academic and practitioner literature on initiatives that directly or indirectly support both improved urban security and sustainability, whether through DRR, youth

initiatives, livelihoods support, public space improvement or community building. This includes how data and metrics can support our understanding of urban resilience to both forms of risk.

Finally, we find a significant gap in the English-language literature of **examples from Latin America and the Caribbean**.

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