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Urbanisation and Climate Security
Towards Integrated Approaches for Cities

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Urban security is important to overall climate security, given exposure and vulnerability to climate impacts is ever more urbanised. Non-war related violence is a significant security concern in urban areas. Homicide rates due to non-conflict violence are particularly pronounced in Latin American and Caribbean cities, although on the rise worldwide. Beyond mortality statistics alone, 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. These interactions have been poorly considered in both policy and research, but potentially undermine urban adaptation, security and development efforts. Solutions are needed which tackle unmet urban development needs and address security and climate risks together, both through programmatic interventions and urban planning initiatives. We recommend military and diplomatic security advisors, as well as those interested in transnational crime networks, liaise not only with governments in countries of concern, but also work with representatives of cities and local governments to address these underlying issues.

Introduction: Urbanisation, security and climate

Among ongoing debates about climate change as a security concern, urban contexts are an increasing focus. This reflects their global demographic and economic power: by 2050, two-thirds of the world's population will live in urban areas. Cities contribute to more than 80% of world GDP. Climate change poses multiple serious risks to urban citizens, infrastructures and assets through sea-level rise, flooding, heat and water stress and the degradation of ecosystems.[1] While all cities face climate risks, cities of the global South are most challenged by the pace of urban growth combined with a lack of resources, leading to poor planning and highly unequal processes of urbanisation. How these climate risks in cities impact on security is still under-researched. However, non-war-related violence in urban areas is a growing security concern and fatalities

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1 Chu, E., A. Brown, K. Michael, J. Du, S. Lwasa, and A. Mahendra (2019) Unlocking the potential for transformative climate adaptation in cities. Background Paper prepared for the Global Commission on Adaptation, Washington, DC and Rotterdam.

of such violence now outweigh those in war settings, rural or urban.[2] Much of this violence finds expression in cities, where armed violence is part of multiple forms of civic and inter-personal violence, including crime and gang violence, intersecting with gender-based and intersectional violence. Homicide rates from criminal activity remain particularly acute in Latin American and Caribbean cities but the experience of multiple forms of violence by low-income groups is marked across all regions.[3]

A panel at the Planetary Security Conference 2019 aimed to bring together Southern-based researchers and practitioners to explore the interlinkages between urban non-conflict violence and climate security, and the implications for policy responses. This brief reflects their interventions.

Understanding the linkages between urban violence and climate change risks

Non-conflict violence and climate change risks are both increasingly urbanised, but the linkages between them have not yet been well researched. Concepts of 'fragile' and 'resilient' cities capture the reality that different risks are linked and concentrate in cities, but do not themselves provide a grounded evidence base from which to draw conclusions for policy. The most direct work on climate security at the urban scale focusses on testing the role of climate change in driving migration to towns and cities and the resulting influence on conflict.[4] The study finds that the influence of climate change is heavily nuanced by economic and political conditions. However, there is a need to look more closely at the social context in which demographic pressure influences security, which is influenced by migration but also by natural population increase in cities. In addition, we need to recognise other pathways that relate climate change to urban conflict, as well as at the multiple forms of violence that take place in urban spaces. This broader agenda recognises that climate change drives non-linear as well as linear change, and therefore requires multiple forms of investigation beyond quantitative testing alone.

The example of Pakistani cities illustrates how multi-scalar pressures interact within the context of urban livelihoods and land use to shape different forms of violence for the most vulnerable. Migration from provincial villages and towns to the megacities like Karachi, Lahore and others in the context of poor housing and weak infrastructure adds additional stress on individuals amidst scarcity of food and pressure on livelihoods. Poor migrants are particularly hit by lack of community support in urban centres. In addition, expanding high-rise buildings for the sprawling middle class drives up land values and creates exclusion. People are losing their livelihoods due to shrinking usable land, but also face inequality, social exclusion and depleting infrastructures. With 65% of Karachi's population living in informal settlements, vulnerable groups may experience violent tenure insecurity and threat of eviction. These issues are further complicated by citizenship issues for people of different backgrounds such as Afghanis, Rohingya and Bengalis, who then experience more vulnerability and violence.

Cities and towns – and not just their rural hinterlands – are directly experiencing a wide range of climate shocks and stresses. As Box 1 from Pakistan shows, climate changes such as heat stress interact with a range of forms of violence. The outcomes are shaped by pre-existing vulnerabilities, in the context of unequal access to urban resources by women and low-income groups. Research from Kibera, the largest informal settlement in Nairobi, shows how women are more often at home during flood events, and therefore also more likely to be affected by associated crime and insecurity.

2 Gupte, J. (2016) 'Creating safe and inclusive cities that leave no one behind'. Policy Brief 128, December 2016. IDS, Brighton.

3 Salahub, J. (2018) *Social Theories of Urban Violence in the Global South*. Routledge.

4 Bahgat, K., H. Buhaug & H. Urdal (2018) Urban social disorder: an update. Peace Research Institute Oslo (PRIO), Oslo.

Box 1: The impact of heat stress on violence in urban Pakistan

An increasing number of heatwaves in Pakistan, exacerbated by high urban densities without green space planning, is a major risk for the urban population. In a recent study conducted by Anjum (2019), cities like Karachi and Islamabad experienced sustained higher temperatures and fewer colder days around the year. Both seasons were much hotter during summers and much colder during winters. Through multiple online monitoring studies, the study showed reported incidents of violence rising during the hotter days. Participants reported higher road rage, higher levels of reported stress, and higher aggression/tendency to aggress on the hotter days compared with their monitoring scores on the colder days. The participants also expressed lower reported agency, efficacy, hope, and empathy. However, the social context of the city is vital to understanding the significance of these findings for citizens' security. More nuanced analysis of the data indicates two important interaction effects. Firstly, the effect of gender. Women experienced more stress than men in the urban context, especially in dense urban zones that are water and land stressed. Women were also subject to more perceived violence on the hotter days when men were not able to provide water. Secondly, the level of stress, aggression and violence interacts strongly with the socioeconomic status of the participants. Participants of lower socioeconomic status experienced more stress, aggression and violence compared to people of middle and higher socioeconomic status.[5]

As well as understanding the role of climate impacts in exacerbating insecurities, it is important to understand the role of climate change programmes in social contexts where violence is present. Programmes for adaptation are increasingly being undertaken by municipal governments, covering a variety of measures from the installation of new physical infrastructure to land use planning and water management. Where such programmes are blind to the realities of urban violence, they may not reach the most vulnerable groups or, at worst, create new forms of violence through eviction or unequal resource management.[6] In turn, insecurity influences responses to climatic conditions and events: the most cited example being the failure of individuals and households to evacuate before, during or after disasters due to fear of looting and theft and the lack of trust in state institutions to uphold security.

The potential of integrated approaches to achieve safe and sustainable cities

There is a danger that security-led responses to climate risk ignore the underlying development issues that give rise to vulnerability. In urban areas, this relates to access to multiple forms of infrastructure and services such as housing and transport as well as access to employment. Initiatives dedicated to tackling crime and violence (e.g. through policing) or adapting to climate change (e.g. through the provision of information about risks) will continue to be vital, but may need to be adapted to the context of both security and climate risk. Interventions that work on the social and environmental determinants of risks and vulnerability to both violence and climate change together – which we refer to as 'integrated' approaches – might include changes to urban infrastructure, planning and design (for example, through the

5 Anjum, G. (2019). Impact of heat perception on psychological well-being: Interaction of physical environment with gender & socioeconomic class. Unpublished manuscript.

6 Mirumachi, N., A. Sawas & M. Workman (2019) Unveiling the security concerns of low carbon development: climate security analysis of the undesirable and unintended effects of mitigation and adaptation. *Climate and Development*. May 2019.

Box 2: Supporting urban resilience in violent contexts: learning from Honduras

In 2014, Christian Aid partnered with Honduran national NGO partner, Mennonite Commission for Social Action (CASM in Spanish) to pilot the roll-out of a Participatory Vulnerability and Capacities Assessment (PVCA) in vulnerable, riverside communities impacted by urban violence. Through implementing PVCAs, better understanding of risks was aimed to both galvanize community participation and planning and, to a lesser degree, influence largely inactive government authorities. The multi-year pilot experience was implemented in 9 *Bordos* within San Pedro Sula, starting in mid-2014 through 2017 – though the achievements underpin CASM's ongoing interventions in the *Bordos*. All communities are characterised by high levels of gang activity and lack of legal recognition by the state. As a result, residents are stigmatised and have limited access to formal employment opportunities or government services.

The main objective of the project was to explore the possibilities of working in such contexts using Christian Aid's organizational vulnerability assessment tools. These included the PVCA and the Integrated Conflict Prevention and Resilience [ICPR] tool, through which the concept of resilience is used to bring together a holistic view of risks and vulnerabilities. The methodology was limited by the situation of violence. People cannot express themselves on the subject of insecurity without fear of reprisal. Confidentiality was critical, and using the terms conflict prevention and violence could make people frightened and defensive. Getting the participants out of their environments through using these tools worked very well and was recommended so they could express themselves freely. Power analysis was essential, mapping not only the role and influence of armed groups but charting all forms of violence experienced in the communities. Local committees were formed by the community, and one of the major achievements of the project was considered to be the generation of a link between local organisations, including youth and adult groups, and between local organisations and the municipality in providing flood reduction infrastructure for the area. The lack of a governing body made it extremely hard to locate funds for this. Continued institutional presence by the project was needed to make gains, beyond short-term project cycles.[7]

creation of safe public spaces or better provision of basic amenities) or social and cultural activities that foster community cohesion. Evaluations of such interventions are complex, however, and even for crime and violence prevention alone there is a lack of evidence from low and middle-income countries about the impacts of improving urban infrastructure and services on crime rates.[8] This is a critical area for further research.

Community-led initiatives have enormous potential to address local risks from both violence and climate change in an integrated fashion. The example from Honduras (see Box 2) shows how a disaster risk reduction programme was able to develop in vulnerable neighbourhoods despite high levels of insecurity. The project adapted traditional toolkits for disaster response to a violent urban context, finding concepts that allowed participants to discuss the multiple risks they faced and methods for doing this confidentially. The project worked through a partner with long-standing presence and trust in the communities involved. The experience raises the question of whether disasters and climate may be an effective entry point for tackling broader security risks, but also points up the long-term nature of the work

7 Christian Aid UK and CASM Honduras.

8 Cassidy, T et al (2015) Evaluation of a Cape Town Safety Intervention as a Model for Good Practice: A Partnership between Researchers, Community and Implementing Agency. *Stability: International Journal of Security & Development*, 4 (1): 27, pp. 1-12.

Box 3: Building Productive Public Spaces in Kibera, Nairobi

Kounkuey Design Initiative, KDI, tackles multiple risks to urban livelihoods through working in partnership with under-resourced communities to build "Productive Public Spaces". KDI started its first Productive Public Space with residents in Kibera, Nairobi, an informal settlement with poor access to sanitation and water, no formal waste collection system, high housing density and precarious land tenure. Kibera is seen as a 'hotspot' of non-conflict violence in Nairobi, with post-election violence, protests, petty crime and gang violence associated with the settlement. Working alongside communities to transform waste or unused land that is prone to environmental risk such as flooding into a space for local empowerment, such spaces become welcoming public spaces that provide basic amenities like clean water, toilets, schools and playgrounds; offer income-generating assets like community gardens and kiosks; and deliver educational and social development opportunities for residents. The process both reduces climate risk and improves the protection of property. This has a particular impact on women and girls, which has led to public space design undertaken by, with and for women and girls.[9]

that is needed in such complex institutional contexts.

Another initiative working on constructing new public spaces in Nairobi, also in an informal settlement, illustrates how to work on conflict and climate security together. The Kounkuey Design Initiative works alongside communities to transform waste or unused land into public space, reducing flood risk, improving the protection of property and empowering marginalised groups, especially women and girls (see Box 3).

Alongside community-based initiatives, municipal-scale responses are vital to achieve scale and equity. City assessment exercises are a key starting point to guide responses, although previous efforts to devise resilience 'metrics' for cities of the global South have suffered from lack of data.[10] Framing assessments around integrated concepts such as resilience can help highlight the interlinkages between violence and climate change and institutional deficits that contribute to mutual vulnerabilities. The following example from the Arab region shows that despite data deficiencies, assessments can still be conducted in ways that highlight gaps in practice. The use of a resilience assessment in Sudan highlighted the multiple forms of violence and climate risk experienced by the city's internally displaced people. Further work aims to use resilience assessments as a conflict resolution tool, formalising dialogue between different partners.

Gaps in knowledge and practice

A stronger, cross-regional evidence base is needed for policy and practice that focusses on the specific dynamics of non-conflict violence and climate change risks in the context of urban livelihoods and governance. This will be particularly important for growing secondary and tertiary cities of the global South, as they plan future investments in planning and infrastructure. Significant gaps in knowledge exist about the potential of different approaches to urban climate security, how better disaggregated data and accessible technologies can support vulnerability reduction efforts (especially given the sensitivities of reporting violence) and how to overcome governance challenges at the urban scale to integrated planning and practice, both within state institutions and

9 KDI.

10 Rademaker, M., K. Jans, P. Verhagen, A. Boeschoten, H. Roos & S. Slingerland (2019) Making cities in conflict areas more resilient. Netherlands Institute of International Relations 'Clingendael' and Center for Climate and Security. May 2018.

Box 4: Supporting security at the municipal level using resilience indices

The MENA region experiences high levels of intersecting vulnerability from displacement and climate change. Core risk drivers include rapid urbanisation and poor urban planning. As part of UNISDR's Making Cities Resilient campaign, 25 cities participated in assessment consultations using a disaster resilience scorecard. Through the workshops, the concept of human security was integrated across multiple dimensions of resilience, to develop the capacities of local institutions to support the most vulnerable urban communities. An important finding of the assessments was that local experience and community knowledge have been used to fill in the gaps in coping with disasters and managing risks, especially in the fragile contexts of conflict and displacement. With the frequency and severity of disasters increasing, this is often not enough to predict, model, and control and sustain disaster resilience actions, against the uncertainty of climate change and weak urban governance.

Further work in Sudan explored how to measure and monitor city disaster resilience for internally displaced persons (IDPs) in urban settings of protracted displacement. The process of undertaking resilience assessment showcased the gap in building resilience for IDPs and for the overall city. In the capital of Greater Khartoum, many of those displaced following decades of conflict-induced displacement as well as flood-related displacement stay with host families from the same ethnic background, leaving IDP camps on the city periphery to seek better access for social services, livelihoods and employment opportunities. Millions end up in fast-growing slum areas and, as a result, face acute urban poverty and higher exposure to flood risk. The Khartoum planning authority's relocation plans and forced evictions may further increase the risk of communal violence in resettlement areas between local communities and those newly displaced. The aim is that urban resilience assessments act as conflict resolution tools, by assessing institutional capacities for resilience, pursuing resilient urban development and designing solutions for IDP settlements to provide sustainable access to landownership, critical infrastructure and security of tenure.[11]

with non-state actors. As the examples used here from Karachi and Nairobi show, the implications of insecurity and climate risks are highly gendered. In order to support reduced vulnerability, gendered analysis is vital, and needs to take into account male and female perspectives.

Initial recommendations

- Both local and international security actors need to consider urban scale responses and dynamics alongside national and regional responses, recognising that cities have dedicated governance structures and particular social and environmental dynamics. Close work with urban development actors, such as local mayors and ministries, and city-to-city networks is needed to address vulnerabilities and ensure marginalised groups are not left behind.
- Guidelines developed by international development agencies for operationalising the 2030 goals in cities and the New Urban Agenda should consider potential win-win investments in improving public safety and reducing risks to climate change, and fostering learning about such investments with the city and local governments. The potential to apply 'do no harm' principles for new climate infrastructure investments should be explored to ensure these do not exacerbate security risks.

11 Arab Urban Development Institute.

- Local governments will need to work with national governments to develop adequately financed strategies to tackle climate insecurity, overcoming silo-ed working, as well as working with community-based organisations to reach the most vulnerable and support the scale-up of successful initiatives and necessary infrastructures.
- For NGOs and community-based organisations, vulnerability and capacity assessments used for local-level programming may need to be adapted for contexts of urban insecurity, by using concepts and methods to assess the multiple risks that people face, by being grounded in a strong power analysis and through recognising the need for anonymity and confidentiality in insecure environments. Building local institutions such as community groups can be difficult, and potentially relies on building trust over the long-term, which requires longer-term finance than conventional project cycles.

About the Planetary Security Initiative
The Planetary Security Initiative sets out best practice, strategic entry points and new approaches to reducing climate-related risks to conflict and stability, thus promoting sustainable peace in a changing climate. The PSI is operated by the Clingendael Institute in partnership with Free Press Unlimited and The Hague Center for Strategic Studies.

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