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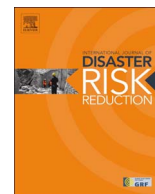
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Meeting the challenge of risk-sensitive and resilient urban development in sub-Saharan Africa: Directions for future research and practice



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A B S T R A C T

At the heart of the papers in this Special Issue is the call for research and practice to move to understand and act on the direct and indirect interlinkages between urban development and risk accumulation processes; a broader conception of risk on a continuum from everyday to extreme events and a critical view of urban risk governance as a project that implicates multiple formal and informal actors at difference scales. Out of this focus emerges a research frontier that demands sustained, detailed studies of the links between multi-faceted and multi-scalar development processes and risk but also the re-thinking of scale and jurisdiction as ordering concepts; a stronger understanding of the linkages between environmental/public health risks and small and extreme disasters, and relative changes in manifestations of these forms of risk and in their social differentiation; and better theorisation of governance innovations. For practice, the issue stresses the over-riding need to move beyond a narrow focus on hazard or disaster events and the immediate actors involved to engage a much wider set of actors in integrated planning processes; to develop data to enable holistic policy-making and to build on the emergence of demand-led planning to re-frame the practices of risk-sensitive and resilient urban development.

1. Introduction

As the Introduction to this Special Issue outlined, the relationship between urbanisation and urban growth, urban governance, poverty and inequality, and ecological degradation in sub-Saharan Africa is transforming in complex ways. The nexus this creates is altering the landscape of urban disaster and climate change risk in the region. At the same time, new external policy agendas, including the Sustainable Development Goals (SDGs), Sendai Framework for Disaster Risk Reduction (SFDRR) and the UNFCCC Paris Agreement, as well as new resilience framings and initiatives, are shifting expectations of what urban risk management and adaptation can and should do, towards more integrative approaches that link policy domains across scale, sector and time. However, the extent and depth of this shift in practice, including the extent to which multiple actors share a common narrative and vision about the concepts and challenges of urban risk, resilience and development, is inevitably contested both in the present and into the future. Building a scientific evidence base that can draw on lived and professional experience to highlight the long-term and indirect linkages and consequences of development decision-making on risk and

its management is needed. This does not override the importance of addressing the pressing needs of human security and inclusive economic growth in sub-Saharan Africa, but does call for a joined-up agenda, a message at the heart of many of the papers presented in this Special Issue.

2. The elements of an emerging research and policy domain

In this context, this Special Issue identifies three (inter-related) elements that open up a new research frontier for future work on sub-Saharan Africa's risk and resilience, building on earlier volumes [2,19]. First, understanding the process of risk accumulation in Africa's urban development, which needs local research that focuses on complex interactions that produce risk and inform how it can be mitigated. Second, understanding the linkages between everyday risks (in particular environmental/public health risks), small disasters and extreme events and relative changes in their nature, scale and distribution. Third, research that can inform reform of the governance of the urbanisation-risk nexus. Across these elements, smaller urban centres are greatly under studied, with local actors lacking capacity to raise the

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visibility of such contexts, despite the demographic growth and risk that will potentially accumulate in the coming decades. This overall recasting of the scope of research work in the region – and beyond – has implications for practice and policy in reducing risk and building resilience to a range of hazards (everyday, small and large) across urban sub-Saharan Africa – though we are cognisant of the profound diversity of African cities and the imperative of avoiding simplification.

2.1. Understanding processes of risk accumulation in urban development

The case for ‘risk-sensitive’ development is now established in the academic literature and international policy frameworks. Within the climate change arena this extends to the interaction of mitigation and adaptation goals as part of urban development strategy and planning [23,18].

The synthetic papers by Dodman et al. [9], Satterthwaite and Douglas [10,21] prompt us to reflect on the multiple and complex ways in which risk and urban development are intertwined in the region, warning of the need for rich and sustained scientific enquiry. 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 specific facets such as the implications of the demographic profile of urbanisation (in particular youth and gender), the linkage between violence and disaster risk, the relationship between household mobility and transport and risk reduction. Satterthwaite points to the striking dearth of specific and systematised knowledge about urban infrastructure and services development and risk, in particular in small and medium-sized urban centres. In turn, the paper by Wisner [27] should be read as a reminder of the context-specific nature of particular urban development trajectories, in the case of Goma pointing to disaster recovery processes as sites of changing urban form and function, and the dysfunctional implications for urban risks of ‘developmental’ responses in the context of conflict and institutional fragility and fragmentation.

Responding to this research agenda requires detailed analysis that can capture the underlying drivers of risk across spaces, sites and networks that are rural and urban, formal and informal, biophysical and institutional and local, national, regional and global. As Pharoah and Zweig exemplify in this issue, risk is both ‘de-localised’ in its causes and intrinsically ‘local’ in its manifestations. In its abstract form resilience and systems thinking embodies aspects of these socio-ecological and multi-level systems interlinkages [4], but understanding causative effects and feed-backs across systems and scales is challenging to analytic practice. Issues of scale and jurisdiction must also be nuanced – for, as Pharoah and Zweig remind us in this issue, risks cascade across rural-urban spaces in often hidden ways.

This Special Issue tests conceptual approaches that can elicit new explorations of these integrated relationships. Frick-Trzebitzky et al. [11], draw on a scholarly history of landscape approaches to the political ecology of environmental problems as a way to explore both their biophysical and social construction [20]. They apply the adapted lens of a riskscape to the context of rapidly-urbanising spaces to allow the inter-play between multiple institutional processes and risk creation to come to the fore [11]. This layered understanding not only creates an integrative picture of risk and vulnerability that reflects resilience and systems dynamics, but for policy makers it points to the imperative of action on multiple fronts. Safeguarding and strengthening locally appropriate urban risk management practices supports global development frameworks which have placed the imperative of a stronger focus on risk as central to collective progress.

Learning and analysis about such dynamic relationships are, however, often weakly owned by those practicing risk and urban development for sub-Saharan Africa, as many papers in this volume illustrate. A systematic and extensive empirical agenda for each place must be linked to capacity building that will ensure the necessary rebalancing of

development policy and practice based on the locally relevant risk related evidence. The question of the relationship between urban development and future risk accumulation or reduction also begs questions about the practical entry points for addressing underlying root causes. Analytically, adopting a risk and resilience framing for urbanism in sub-Saharan Africa opens scope for a reconsideration of development structures, practices and underlying priorities including those related to persistent poverty, public health, urban growth and climate change. Further, as reflected by Dodman et al. [9], risk and resilience practice can change the underlying political relationships between urban actors and development pathways of urban areas, while conversely interventions to address unmet urban development challenges can also reduce risk [9,23]. There is, however, greater scope for learning from a wider variety of urban interventions about this two-way relationship as it plays out in sub-Saharan African contexts, in an institutional landscape which includes a heavy international donor dominance, the importance of traditional authorities and new forms of private capital and investment. Key questions include:

- What is the evidence base of successful (and failed) attempts at integrated planning and practice? In such initiatives, how do different actors negotiate the co-benefits and trade-offs between priorities and interventions, over short and long-term time horizons?
- What methods and approaches allow for city actors to take ownership of learning processes in support of integrated, risk-sensitive development pathways?

2.2. Understanding linkages between everyday risks (especially environmental/public health risks), small disasters and extreme events

The second inimically-related frontier for research is the development of thinking about so-called everyday risks – chronic risks related to poor urban planning and management and inadequate infrastructure and services – and their relationship to disaster events in urban contexts. As highlighted in the Introduction and papers in this volume, not only are such risks the most immediately relevant manifestation of vulnerability in peoples’ lives, but they are strongly inter-linked with small-scale, extensive disaster events and have cumulative effects for larger-scale disaster events. Articles by Songsore [25], Pharoah and Zweig [17] and Wanda et al. [26] exemplify the two-way interplay between everyday and more extreme disaster risks in different urban contexts in the region, the compounding effects of one on the other and differentiated social landscape of risk that they present. Echoing the previous section, a focus on everyday risks opens up opportunities to explore integrated approaches to risk reduction involving urban planning and public health – against the backdrop of critical and growing debates about the perceived failure and role of planning in African cities and importance of urban public health in Africa [1,15]. Planning and public health were professions that were co-established to address the relationship between health and the urban environment [7]. However, existing knowledge on this relationship is based overwhelmingly on North America and Europe, highlighting the need for research that is grounded in the reality of diverse, rapidly changing and risk-prone Southern urban contexts.

A dedicated set of papers in this volume seek to further ground perspectives on everyday and disaster risk in an African reality, but at the same time derive new conceptual treatments that can advance global research and policy agendas in this area. The paper by Pharoah and Zweig most pointedly challenges the term everyday risk as potentially masking the complexity, severity, diversity and changing nature of chronic risks, and its association with local realities, rather than the relationship between the ‘local’ and multi-scale causation processes. These are points echoed by Songsore who draws on two decades of research in Ghana to show the scalar trajectories of environmental burdens and differentiated vulnerabilities created in the intersection between everyday risks and disasters. Further research that rethinks

conceptualisations of the everyday, the linkage between everyday risk and larger-scale risk and the ways in which this relationship is reshaped by new socio-economic and political processes at different scales is undoubtedly necessary if the full spectrum of risk faced by Africa's urban citizens is to be understood and addressed. The papers in this volume underscore the need for such research to be fully embedded in peoples' own understandings and experiences of the risks they face.

Moving from theory to practice, Osuteye et al. [16] point to the need for methodological innovation in research and practice to develop data distinguished between everyday, small-scale and large-scale disasters in urban areas, and to disaggregate such data to account for differences in the social and spatial distribution of urban risk and loss drivers both within and between urban centres of different sizes (small, medium and large) and geographic locations. They emphasise the potential to combine different data sources (e.g. Demographic and Health Surveys, census data, hospital records, police reports, newspaper archives, etc.) to provide a more detailed and comprehensive picture of urban risk – but more work is needed to establish what systematic data collection services exist and might be built to capture this disaggregated view of risk, and how such data can be owned and used by relevant policy actors.

Key questions include:

- What changes are occurring in the relative nature, scale and distribution of risk between everyday, small and extreme events, how is relative change mediated by policy and practice and what are the implications for equity?
- Which organisations, and what legislation and policy agendas, dictate and mediate institutional boundaries between environmental/public health risks and everyday disasters, and between everyday and extreme events? What opportunities are there for transition and transformation at these interfaces?

2.3. The governance of the urbanisation-risk nexus

At the centre of the issues raised by this Special Issue lie questions about the governance of urbanisation and risk that demand continued attention from both researchers and practitioners. Urban risk governance is understood in its broadest and most meaningful sense, as the institutions that affect the occurrence of risk, and not just formal administering of disaster risk management. The over-riding picture of the urban risk governance landscape presented in this volume is one of fragmentation, localised agendas and unchecked risk accumulation, sometimes exacerbated by the involvement of external actors (exemplified in the papers by Mwanda et al. and by Wisner [27]), yet tempered by a rising demand-led orientation in policy and practice (as Dobson attests). As many of the papers recognise, holism and partnership are necessary to bring risk and development together in ways that address multiple everyday risks and the linkages across levels and scale that define urban risks for people. This is an ambitious agenda that moves beyond a narrow focus on hazard or disaster event and the immediate actors involved to one that implies a much wider set of actors, including urban planners and public health officials but also officials at different levels of government and non-state actors, who must work together to engage with the politics of urban risk and development.

In research terms, the papers in the Special Issue draw in a novel breadth of social theory to move us to the conceptual forefront of understanding this governance landscape in sub-Saharan Africa (a project already set out in Lawhon et al. [12], and pursued in different directions here) as well as beyond. Previous volumes concerned with risk in African cities have explored the importance and policy relevance of conceptual approaches such as urban political ecology, human security and livelihoods and 'teleconnectedness' as well as approaches to governance systems such as multi-level governance as a way of unpacking the dynamic scalar dimensions of risk and resilience governance [22,24]. The papers in this volume inject a new suite of critical

approaches that are perhaps more revealing of the power and knowledge dynamics underpinning contemporary struggles over the nature of urban resilience and inclusive urban futures in the region. Deploying concepts such as bricolage to explore the relationship between formal and informal institutions and approaches such as actor-network theory to understand narrative constructions underpinning contests over risk management solutions in the new context of an informal, urbanising landscape, Frick-Trzebitzky et al. [11] and Leclercq [13] reveal the complex institutional interactions and power structures that shape risk for people in the present, and structure their options into the future. Ajibade [3] in turn brings an Urban Political Ecology lens to focus on processes of capital accumulation in relation to resilience projects and to highlight the interests promoted and forged through modernist adaptation and urban development schemes – and those left out. The final paper by Wisner [27] also points to the need for wider research at the intersection of violence, conflict and disaster risk in the region, the institutional dynamics in such fragile urban contexts where states have ceded or lost authority to non-state actors and the spatial complexity of life in such contexts. These are core themes underpinning the overall Urban ARK Programme but also take us to the frontier of global research into urban resilience, as a field grappling with the normative implications of resilience thinking, and the expression of subjective and political dynamics in resilience concepts and frameworks.

While deeply illuminating of real-world dynamics, these critical views of risk governance often appear intractable when applied to real-world decision-making, where it asks 'what should we do, or do differently?' The Special Issue has also sought out practitioner experiences and examples that highlight innovation and opportunity in urbanising sub-Saharan African regions: the innovative practices of those citizens living under the new normality of informal settlement, the experience of innovative partnerships between slum dwellers' organisations and local governments and research innovations to support better data collection on multiple forms of risk. The ongoing challenge is both how to theorise these African innovations as well as build on them in practice [5]. There is little written about these different forms of innovative and experimental governance in the urban climate change adaptation or disaster risk field, and how they might be considered (Castán Broto and Bulkeley, 2015). African experiences and good practices and approaches in reducing risk are notably absent from the international literature on everyday urban risk. Questions include:

- Can community partnerships open up sustainable arrangements for multi-stakeholder governance or are they fragile arrangements dependent on particular constellations of leadership and external support? How can such responses to risk be replicated and be made to operate at scale?
- Given the weak capacities, entrenched politics and divergent ideals of different urban actors highlighted in many of the papers, when innovation and partnership do emerge, what politics sustains it?
- Can new sets of tools and data catalyse new responses and partnerships by critical actors in ways that advance both local risk reduction ambitions and also the new risk-sensitive global agenda for 2030?

Finally, in thinking about implementation, the suite of papers in this volume provoke re-reflection on the pathways and entry points for transformative resilience-building given the reality of local governments unwilling or unable to tackle the vast service and infrastructure deficits currently facing the region's urban areas, reinforcing risk exposure and accumulation. We suggest that acknowledging and building on the multiplicity of actors involved in urban riskscapes appears to offer the most promise. A flexible, context-sensitive approach that is less wedded to institutional blueprints and best practices and more pragmatic to finding institutional best fit [14] also seems appropriate. Perhaps most central to this emerging agenda is the observation that demand led urban planning – planning that brings decision-making

power back to the city (from international donors and consultants) and from the city to the local – offers a distinctive reorganising of power, accountability flows and priorities for the city. Surely given the trajectories of urban demographic growth and risk faced by cities and towns in sub-Saharan Africa (and elsewhere) it is this kind of core shift in the framing and doing of development that requires careful consideration and supported experimentation. The potential to build from the bottom and learn from small-scale experiments [6,28] also needs to be married with the imperative to align with interventions and systems with similar objectives. Here, strengthening the role of local government to absorb and enable multiple interventions is key.

3. Conclusion

The Special Issue presented here speaks not only to regional agendas for tackling risk and building resilience, but also to global agendas. As the global development and disaster risk community moves to the implementation of the Paris Agreement, the Sendai Agreement and the Sustainable Development Goals, embodied in part in the New Urban Agenda, it is clear that coherence between these endeavours is essential if the gains to one agendas are not to be undermined by the co-occurring losses on another. The SDGs offer a framing narrative for this coherence, albeit one that is complex to localise and, if reductive in practice, risks marginalising our understanding of causal relationships and processes in the search for targets and metrics. Urban development that drives up risks will further undermine development, just as disaster risk interventions that do not factor in underlying processes of development will be undermined. Moving forward to ensure that this does not happen will necessarily entail examining all spectrum of risks and their accumulation, in the context of the urban and economic development pathways of urban areas and their respective governance.

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References

- [1] ACC, Urbanization Imperatives for Africa: Transcending Policy Inertia, African Centre for Cities (ACC), Cape Town, 2010.
- [2] I. Adelekan, C. Johnson, M. Manda, D. Matyas, B.U. Mberu, S. Parnell, M. Pelling, D. Satterthwaite, J. Vivekananda, Disaster risk and its reduction: an agenda for urban Africa, *Int. Dev. Plan. Rev.* 37 (1) (2015) 33–43.
- [3] I. Ajbade, Can a future city enhance urban resilience and sustainability? A political ecology analysis of Eko Atlantic city, Nigeria, *Int. J. Disaster Risk Reduct.* (2017).
- [4] X. Bai, A. Surveyer, T. Elmqvist, F. Gatzweiler, B. Gunerald, S. Parnell, A. Prieur-Richard, P. Shrivastava, J. Siri, M. Stafford-Smith, M. Toussaint, R. Webb, Defining and advancing a systems approach in cities, *Curr. Opin. Environ. Sustain.* 23 (2016) 69–78.
- [5] V. Castán Broto, Viewpoint: planning for climate change in the African city, *IDPR* 36 (2014) 3.
- [6] V. Castán Broto, H. Bulkeley, A survey of urban climate change experiments in 100 cities, *Glob. Environ. Change* 23 (2013) 92–102.
- [7] J. Corburn, *Toward the Healthy City: People, Places, and the Politics of Urban Planning*, MIT Press, Cambridge, 2009.
- [8] S. Dobson, Community-driven pathways for implementation of global urban resilience goals in Africa, *Int. J. Disaster Risk Reduct.* (2017).
- [9] D. Dodman, H. Leck, M. Rusca, S. Colenbrander, African urbanisation and urbanism: Implications for risk accumulation and reduction, *Int. J. Disaster Risk Reduct.* (2017), <https://doi.org/10.1016/j.ijdrr.2017.06.029>.
- [10] I. Douglas, Flooding in African cities, scales of causes, teleconnections, risks, vulnerability and impacts, *Int. J. Disaster Risk Reduct.* (2017).
- [11] F. Frick-Trzebitzky, R. Baghel, A. Bruns, Institutional bricolage and the production of vulnerability to floods in an urbanising delta in Accra, *Int. J. Disaster Risk Reduct.* (2017), <http://dx.doi.org/10.1016/j.ijdrr.2017.09.030>.
- [12] M. Lawhon, H. Ernstson, J. Silver, Provincializing urban political ecology: towards a situated UPE through African Urbanism, *Antipode* 46 (2) (2014) 497–516.
- [13] R. Leclercq, The politics of risk policies in Dakar, Senegal, *Int. J. Disaster Risk Reduct.* (2017).
- [14] M. Lockwood, What can climate adaptation policy in sub-Saharan Africa learn from research on governance and politics? *Dev. Policy Rev.* 31 (6) (2013) 647–676.
- [15] T. Oni, W. Smit, R. Matzopoulos, J.H. Adams, M. Pentecost, H.A. Rother, Z. Albertyn, F. Behrooz, O. Alaba, M. Kaba, C. van der Westhuizen, Urban health research in Africa: themes and priority research questions, *J. Urban Health* 93 (4) (2016) 722–730.
- [16] E. Osuteye, C. Johnson, D. Brown, The data gap: An analysis of data availability on disaster losses in sub-Saharan Africa cities, *Int. J. Disaster Risk Reduct.* (2017), <http://dx.doi.org/10.1016/j.ijdrr.2017.09.026>.
- [17] R. Pharoah, P. Zweig, Unique in their complexity: Conceptualising everyday risk in urban communities in the Western Cape, South Africa, *Int. J. Disaster Risk Reduct.* (2017).
- [18] S. Parnell, Fostering transformative climate adaptation and mitigation in the African city: opportunities and constraints of urban planning, in: S. Paulet, et al. (Ed.), *Urban Vulnerability and Climate Change in Africa – A Multidisciplinary Approach*, Springer, London, 2015, http://dx.doi.org/10.1007/978-3-319-03982-4_11.
- [19] M. Pelling, B. Wisner (Eds.), *Disaster Risk Reduction: Cases from Urban Africa*, Earthscan, London, 2009, p. 224.
- [20] J. Reed, J. Van Vianen, E.L. Deakin, J. Barlow, T. Sunderland, Integrated landscape approaches to managing social and environmental issues in the tropics: learning from the past to guide the future, *Glob. Change Biol.* 22 (2016) 2540–2554, <http://dx.doi.org/10.1111/gcb.13284>.
- [21] D. Satterthwaite, The impact of urban development on risk in sub-Saharan Africa's cities with a focus on small and intermediate urban centres, *Int. J. Disaster Risk Reduct.* (2017).
- [22] D. Simon, H. Leck, Fostering multiscale collaboration and cooperation for effective governance of climate change adaptation, *Urban Stud.* 50 (6) (2013) 1221–1238.
- [23] D. Simon, Viewpoint, new evidence and thinking on urban environmental challenges, *Int. Dev. Plan. Rev.* 36 (2) (2014) 5–11.
- [24] D. Simon, H. Leck, Understanding climate adaptation and transformation challenges in Africa cities, *Curr. Opin. Environ. Sustain.* 13 (2015) 109–116.
- [25] J. Songsore, The complex interplay between everyday risks and disaster risks: The case of the 2014 cholera pandemic and the 2015 flood disaster in Accra, Ghana, *Int. J. Disaster Risk Reduct.* (2017).
- [26] E. Wanda, M. Manda, D. Kamlomo, J. Kushe, C. Mphande, J. Kaunda, O. Msiska, Governing WASH for disaster risk reduction in Karonga Town, Malawi, *Int. J. Disaster Risk Reduct.* (2017).
- [27] B. Wisner, “Build back better?” The challenge of Goma and beyond, *Int. J. Disaster Risk Reduct.* (2017).
- [28] G. Ziervogel, M. Pelling, A. Cartwright, E. Chu, T. Deshpande, L. Harris, K. Hyams, J. Kaunda, B. Klaus, K. Michael, L. Pasquini, R. Pharoah, L. Rodina, D. Scott, P. Zweig, Inserting rights and justice into urban resilience: a focus on everyday risk, *Environ. Urban.* 29 (1) (2017).