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# Urban Poverty and Climate Change

Life in the slums of Asia, Africa and Latin America

Edited by  
Manoj Roy, Sally Cawood,  
Michaela Hordijk and David Hulme





# Urban Poverty and Climate Change

The urban poor face greatly increased levels of vulnerability due to the impacts of climate change. Even small shocks can be damaging, as they have few assets to cushion themselves, and lack access to formal risk-reduction mechanisms. High rates of urbanisation occurring in low- and middle-income countries make such vulnerability a major challenge for global poverty reduction goals.

*Urban Poverty and Climate Change* pulls together the work of leading scholars to offer a policy-relevant narrative that aims to deepen our understanding of the everyday experiences of climate change – both the impacts on and responses of urban poor households and communities in 13 towns and cities in 7 countries across Asia, Africa and Latin America. The book contributes to the evolution of more effective pro-poor climate change policies in urban areas by local, national governments and international organisations. A number of key questions are posed; how do innovative adaptation practices emerge and flourish? How do they vary within, between and across communities and countries? What are the potential enablers, barriers and forms of urban governance that emerge?

This book is a valuable and important contribution to policy makers, students and scholars interested to learn about the lived experiences of urban poverty and climate change.

**Manoj Roy** is Lecturer in Sustainability at Lancaster Environment Centre, Lancaster University, UK.

**Sally Cawood** is a doctoral researcher at the Global Development Institute, University of Manchester, UK.

**Michaela Hordijk** is Assistant Professor of International Development Studies at the University of Amsterdam, the Netherlands and at UNESCO-IHE Institute for Water Education, Delft, the Netherlands.

**David Hulme** is Professor of Development Studies at the Global Development Institute, University of Manchester, UK.

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**Urban Poverty and Climate Change**

Life in the slums of Asia, Africa and  
Latin America

*Edited by Manoj Roy, Sally Cawood,  
Michaela Hordijk and David Hulme*

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# Urban Poverty and Climate Change

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# Editors and contributors

## Editors

**Manoj Roy** is Lecturer in Sustainability at Lancaster Environment Centre, Lancaster University, UK. Working with David Hulme at the Global Development Institute, University of Manchester, Roy led the ClimUrb project. He specialises in urban poverty analysis through multidisciplinary methods combining technical analysis (e.g. architectural and planning, spatial analysis and modelling) with a social (e.g. livelihoods, wellbeing) and political (governance, institutional) analysis. His other research projects include CLUVA and EcoPoor.

**Sally Cawood** is Doctoral researcher at the Global Development Institute (GDI), School of Environment, Education and Development, University of Manchester, UK. Sally's research interests include urban geography, social policy and grassroots initiatives in low-income settlements in the Global South. Sally conducted her PhD fieldwork in Dhaka, Bangladesh on the role of community-based organisations in accessing basic services.

**Michaela Hordijk** is human geographer and assistant professor of International Development Studies at the Governance for Inclusive Development (GID) programme group, University of Amsterdam and at UNESCO-IHE Institute for Water Education, Delft, the Netherlands. Michaela was adjunct scientific coordinator in Chance2sustain. Her expertise lies in urban water governance, the politics of knowledge in urban water governance, participatory urban governance, climate change adaptation and resilience.

**David Hulme** is Professor of Development Studies, Executive Director of the Global Development Institute and CEO of the Effective States and Inclusive Development Research Centre at the University of Manchester. He has worked on rural development, poverty and poverty reduction, microfinance, the role of NGOs in development, environmental management, social protection and the political economy of global poverty for more than 30 years. His recent books include *Global Poverty* (Routledge, 2015), *Governance, Management and Development* (Palgrave, 2015) and *Just Give Money to the Poor* (Kumarian Press, 2010).

## Contributors

**A. F. M. Ashraful Alam**, Faculty of Architecture Discipline in Khulna University and now PhD candidate in the Department of Geography and Planning at Macquarie University. His work falls under the broad umbrella of political ecology in urban built environment in the cities of the Global South. He is interested in the everyday human-nature relations at home in transitional spaces that are constantly in flux due to religious and ethnic conflicts, transnational migration and climate change.

**Rumana Asad**, Faculty of Architecture Discipline in Khulna University, Bangladesh. Her research falls under the fields of climate change, disaster adaptation, urban design and urban informal settlements focusing on water issues to ensure sustainability for developing countries.

**Nicola Banks**, ESRC Future Research Leader (grant reference number ES/K009729/1) at the Global Development Institute, University of Manchester. Her current research explores young people's experiences of urban poverty in Tanzania.

**Eric K. Chu** is Assistant Professor of Urban Studies in the Department of Geography, Planning and International Development Studies at the University of Amsterdam. His teaching and research is at the intersection of climate change adaptation, urban development and environmental justice in the Global South.

**María Evangelina Filippi** is a PhD candidate at the Development Planning Unit, University College London. At the UCL Institute for Global Prosperity she supported London-based projects on the impacts of regeneration and experimenting with co-designed research and the involvement of citizen scientists. In *Chance2Sustain* she worked in the areas of water governance, participatory (spatial) knowledge and climate change adaptation in Arequipa, Peru.

**Arabella Fraser** is a Research Associate at the King's Centre for Integrated Research on Risk and Resilience in the Geography Department, King's College London. Her present research interests are in the governance and politics of environmental risk, in particular in contexts of rapid urbanisation and urban informality.

**Barbara Harriss-White**, FAcSS, is Emeritus Professor of Development Studies at Oxford University where she established the MPhil in Development Studies and the Contemporary South Asian Studies Programme, and directed Queen Elizabeth House. Since 1969, she has researched rural and small-town development through fieldwork in India. Widely published, her book *Rural Commercial Capital* won the Edgar Graham Prize for originality in development studies in 2009.

**Syed Hashemi** has a long career in teaching, research and managing programmes for the poor. He taught Economics at Jahangirnagar University in Bangladesh, directed an anti-poverty research programme at Grameen Trust, and set up a development institute and chaired the Department of Economics and Social Sciences at BRAC University. He spent nine years with CGAP, at the World Bank, focusing on financial inclusion of the poorest. He also headed a multi-country programme to develop new pathways to graduate out of food insecurity. Hashemi continues to be Senior Advisor for the graduation programme at CGAP. He has a PhD in Economics from the University of California at Riverside.

**Kelvin Haule** is an urban geographer with a keen interest in urban ecosystem services. He holds an MA in Development Studies, BA in Geography and Environmental Studies and Postgraduate Diploma in Poverty and Policy Analysis. Haule is an Assistant Lecturer at the University of Dodoma in the Department of Geography and Environmental Studies. He is currently pursuing a PhD on land markets and livelihoods dynamics in peri-urban areas in Tanzania. He has participated in writing two book chapters and published articles on land use dynamics and on water resources in the Serengeti ecosystems.

**Anirudh Krishna** is the Edgar T Thompson Professor of Public Policy in the Sanford School of Public Policy and a professor of political science at Duke University. His research investigates how poor communities and individuals in developing countries cope with the structural and personal constraints that result in poverty and powerlessness.

**Caroline Moser** is an urban social anthropologist / social policy specialist. She is Emeritus Professor at the University of Manchester. Until 2012 she was Director of the Global Urban Research Centre. Previous positions include Lead Specialist Social Development, World Bank, Lecturer at LSE, and at DPU, UCL. She has undertaken research on gender and development, urban violence and insecurity, intergenerational asset accumulation and poverty, and on asset adaptation to climate change.

**Iddi Mwanyoka** is an experienced researcher and consultant who has done a number of research and consultancy assignments and has co-authored and published papers in reputable journals. He holds a Masters in Integrated Water Resource Management. Mwanyoka is a 'hands-on' person with vast practical experience in conservation having worked for prominent conservation and development organisations such as WWF, CARE and UNDP for over seven years in the areas of Environmental Policy, Payments for Ecosystem Services (PES) and Sustainable Land Management. Currently, Mwanyoka is an Assistant Lecturer at the University of Dodoma in the Department of Geography and Environmental Studies, where he teaches on a range of courses.

**Aftab Opel** is a social anthropologist currently working at WaterAid in Bangladesh. He has over two decades of research experience in different

South and East Asian countries on a range of development issues. His current research focus includes issues related to water, sanitation and hygiene leading to programme development and policy influence. Opel's career also includes research and programme development in the areas of climate change, poverty and vulnerability, migration, alternative livelihoods, education and early childhood development. Most recently, he completed several projects in Bangladesh on impacts of climate change on water, water privatisation and its impacts on the poor, issues of faecal sludge management, and hygiene behaviour change. He developed and advised several WASH programmes for WaterAid Bangladesh. He led a team of experts at BRAC University Institute of Educational Development on early childhood programme and curriculum development, and an Afghanistan Research and Evaluation Unit in Afghanistan on several multi-country projects on livelihoods, vulnerability and cross-border population movements, and has worked with the Royal Foundation in Thailand on alternative livelihoods, and with Plan Bangladesh on education projects.

**Afroza Parvin** is Professor of Architecture at Khulna University, Bangladesh. She got her Bachelor of Architecture degree from Khulna University, and an MSc in Urban Planning and PhD in Urban Design from The University of Hong Kong. Afroza has been a Commonwealth Academic Fellow at the Development Planning Unit, University College London. She is the recipient of a Fulbright Visiting Research Scholarship hosted by the School of Architecture, The University of Texas at Austin. Afroza's research interests include urban and rural settlement planning, resilient built environment, building process in informal settlements, and space syntax study.

**Mamun Ur Rashid** is the Executive Director of Development Research Initiative (dRi) since October 2015. Before that, he was a senior research associate at the BRAC Development Institute (BDI), BRAC University. He was a core team member of the DFID-ESRC funded BDI, BRAC University and BWPI, Manchester University joint research project on 'impact of climate change on urban poverty'. Trained as an anthropologist at Jahangirnagar University of Bangladesh, Mr Rashid started his research career at BRAC's Research and Evaluation Division (RED) in 2003.

**Noara Razzak** completed her undergraduate in Physics and Comparative Literature in Bryn Mawr College, Pennsylvania, US. She then worked in the BRAC Development Institute (BDI), BRAC University under the supervision of Syed M Hashemi as a Junior Research Associate for two years. Now she is in a PhD programme in Economics at Penn State University, State College, USA.

**Gilbert Rodrigo**, a legally trained activist/researcher with involvement in half a dozen studies and over three decades of field experience in Tamil Nadu, works particularly on the rights, development and education of Fisher folk and Dalits, hence his commitment to the current research on social relations of waste.



**Dianne Scott** is a human geographer, who is an Honorary Research Fellow at the University of KwaZulu-Natal, Durban, South Africa. Her expertise lies in urban development in the Global South, environmental social science, and the co-production of knowledge for sustainability. Her current research focus is climate change governance and smart cities.

**Riziki Shemdoo** is Senior Research Fellow at the Institute of Human Settlements Studies, Ardhi University, Dar es Salaam, Tanzania. His research interests include climate change mitigation and adaptation, traditional knowledge in managing natural resources, ecosystem health, biodiversity and sustainable development.

**M. S. Sriram** is a Visiting Faculty researcher at the Indian Institute of Management, Bangalore and a Distinguished Fellow of the Institute for Development of Research in Banking Technology. He was formerly ICICI Bank – Lalitha Gupte Chair professor of Microfinance at the Indian Institute of Management, Ahmedabad. He researches urban poverty and financial inclusion.

**Alfredo Stein** is an urban development specialist with 35 years of experience in the design, management and evaluation of low-income housing, post-emergency reconstruction, and poverty reduction policies and projects. He is currently a lecturer in urban development planning at the University of Manchester, with research focusing on climate change adaptation.

**Catherine Sutherland** is a geographer who focuses on urban environmental governance and sustainability. She is a lecturer in the School of Built Environment and Development Studies at the University of KwaZulu-Natal, Durban, South Africa. Her current research includes the water and climate governance interface, community adaptation in informal and peri-urban settlements and resilience.

**Francine van den Brandeler** is a PhD student at the University of Amsterdam, researching the metropolitan water governance regimes in São Paulo (Brazil) and Mexico City (Mexico). She was a junior researcher in the Chance2sustain project based at the Centro Brasileiro de Análise e Planejamento (CEBRAP) in São Paulo, Brazil.

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# Abbreviations

|                |   |
|----------------|---|
| AAS            | Association for the Advancement of Society  |
| ACCCRN         | Asian Cities Climate Change Resilience Network  |
| ACHR           | Asian Coalition for Housing Rights  |
| ADB            | Asian Development Bank  |
| APCA           | Asset Planning for Climate Change Adaptation  |
| APW            | Asset Adaptation Planning Workshop  |
| AR5            | IPCC Fifth Assessment Report  |
| BBMP           | <i>Bruhat Bengaluru Mahanagara Palike</i> (Bengaluru Municipal Authority)                       |
| BBS            | Bangladesh Bureau of Statistics   |
| BWDB           | Bangladesh Water Development Board  |
| CBA            | Community-Based Adaptation  |
| CBO            | Community-Based Organisation  |
| CDC            | Community Development Committee   |
| CEBA           | Community Ecosystem-Based Adaptation  |
| Chance2Sustain | Urban Chances-City growth and the sustainability challenge (Research Project)                   |
| ClimUrb        | Poverty and Climate Change in Urban Bangladesh (Research Project)                               |
| CLIMWAYS       | Climate change and urban water governance: pathways to social transformation (Research Project) |
| CLUVA          | Climate Change and Urban Vulnerability in Africa (Research Project)                             |
| COP            | Conference of the Parties   |
| CSO            | Civil Society Organisation  |
| DFID           | UK Department for International Development   |
| DPAE           | Directorate for the Prevention of and Attention to Emergencies                                  |
| DRR            | Disaster Risk Reduction   |
| DSK            | <i>Dushtha Shasthya Kendra</i> (an NGO)   |
| DWASA          | Dhaka Water and Sewerage Authority  |
| EBA            | Ecosystem-Based Adaptation  |

|         |   |
|---------|---|
| EcoPoor | Institutions for the urban poor's access to ecosystem services (Research Project) |
| EPCPD   | Environmental Planning and Climate Protection Department                          |
| ESPA    | Ecosystem Services for Poverty Alleviation  |
| ESRC    | Economic and Social Research Council  |
| EWS     | eThekwin Water and Sanitation Unit  |
| FAO     | Food and Agriculture Organisation   |
| FBW     | Free Basic Water  |
| FGD     | Focus Group Discussion  |
| GDI     | Global Development Institute  |
| GDP     | Gross Domestic Product  |
| GNP     | Gross National Product  |
| GOB     | Government of Bangladesh  |
| GOI     | Government of India   |
| GURC    | Global Urban Research Centre  |
| HAT     | Human African Trypanosomiasis   |
| ICDP    | Indore City Development Plan  |
| ICRS    | Indore City Resilience Strategy   |
| IDS     | Institute of Development Studies  |
| IGA     | Income-Generating Activity  |
| IIED    | International Institute for Environment and Development                           |
| IPCC    | Intergovernmental Panel on Climate Change   |
| IWRM    | Integrated Water Resource Management  |
| JMP     | Joint Monitoring Programme  |
| JNNURM  | Jawaharlal Nehru National Urban Renewal Mission                                   |
| KCC     | Khulna City Corporation   |
| KDA     | Khulna Development Authority  |
| KSDB    | Karnataka Slum Development Board  |
| MDGs    | Millennium Development Goals  |
| MGNREGA | Mahatma Gandhi Rural Employment Guarantee Act                                     |
| MHUPA   | Indian Ministry of Housing and Urban Poverty Alleviation                          |
| MOEF    | Ministry of Environment and Forests   |
| MPI     | Global Multidimensional Poverty Index   |
| NGO     | Non-Governmental Organisation   |
| NSSO    | National Sample Survey Organisation   |
| OPHI    | Oxford Poverty and Human Development Initiative                                   |
| PCAA    | Participatory Climate Change Asset Adaptation Appraisal                           |
| PCR     | Polymerase Chain Reaction   |
| PRODEL  | Promotion of Local Development  |
| RDP     | Reconstruction and Development Programme  |
| RIA     | Rapid Institutional Appraisal   |



|         |  |
|---------|--|
| SANCOOP | South Africa–Norway Research Cooperation on Climate Change |
| SDF     | Spatial Development Framework                              |
| SDGs    | Sustainable Development Goals                              |
| SDI     | Slum/Shack Dwellers International                          |
| SSI     | Semi-Structured Interview                                  |
| TTC     | Total Thermotolerant Choliform                             |
| UDL     | Urban Development Line                                     |
| UEIP    | Umgeni Ecological Infrastructure Partnership               |
| UN      | United Nations   |
| UN DESA | United Nations Department of Economic and Social Affairs   |
| UNDP    | United Nations Development Programme                       |
| UNICEF  | United Nations Children’s Fund                             |
| UPPRP   | Urban Partnerships for Poverty Reduction Project           |
| WAPDA   | Water and Power Development Authority                      |
| WHO     | World Health Organisation                                  |

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Part I

# Urban poverty and climate change

An overview

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# 1 Introduction

*Michaela Hordijk, Manoj Roy, David Hulme  
and Sally Cawood*

No one should experience poverty, yet in this affluent world up to a third of humanity experiences poverty in the form of multiple deprivations, including limited access to basic services, food, potable water and sanitation, clothing and shelter (Hulme 2015). Whilst poverty incidence is in decline, with the proportion of extreme poor in the Global South down from over one half of the population (living on less than US\$1.25 per day) in 1990 to 14 percent in 2015, 1.9 billion to 836 million people respectively (UN 2015), poverty in urban areas is rising sharply. Such high levels of poverty in such a wealthy world should be a concern for anyone interested in social justice. Whilst poverty estimates are notoriously unreliable, predictions consistently show an upward trend of poverty in towns and cities across the Global South, with a jump from 17 to 28 percent in the past ten years (Haddad 2012). In East Asia, nearly half of all poverty is now in urban areas, whilst in Sub-Saharan Africa the urban share of poverty is 25 percent (Haddad 2012). Arguably, there are many pitfalls in our understanding of, and efforts to reduce, urban poverty. Two concerns stand out to justify this book.

First, that understanding multifaceted urban poverty requires a conscious consideration of climate change as a global process with local impacts. Critically, climate change is identified as one of the contributing factors to rising numbers of urban poor, as the relative decline of rural poverty is partly due to migration of the rural poor to urban areas as a result of or in reaction to climate related shocks and stressors (DePaul 2012). Second, there is a lack of meaningful action to incorporate and understand climate change impacts on the urban poor. UN Habitat suggests that urbanisation (as a process) should adhere to human rights principles while the city (as an outcome) should meet specific human rights standards (UN Habitat 2012). With the tripling of urban land cover (UN Habitat 2015), and an expected three billion people living in slums by 2030 (UN Habitat 2012a), fulfilling this vision is an enormous challenge.

Whilst there is a growing political momentum to tackle urban poverty, this is largely at the level of policy formulation, and has not yet been converted into policy implementation. In September 2015 the UN General Assembly adopted the Sustainable Development Goals (SDGs), committing *inter alia* to ‘end poverty in all its forms everywhere’ (SDG1), ‘to make cities and human settlements inclusive, safe, resilient and sustainable’ (SDG11) and ‘to take urgent action to

combat climate change and its impacts' (SDG13; UN 2015a). 'Cities and Regions' was also one of the key themes on the 'Lima to Paris Action Agenda' in preparation for the 21st Conference of the Parties (COP 21) to the UN Framework on Climate Change in December 2015. Furthermore, whilst climate change was mentioned only once in the Habitat Agenda (resulting from the Istanbul City Summit in 1996), and only in reference to the need to reduce energy use (hence mitigation), climate change is one of the key themes of the Habitat III conference to be held in Quito in October 2016.

Despite this apparent momentum, the research and policy community have only recently begun to explore climate change impacts in cities, thanks to a flurry of publications and initiatives. These publications include: the World Bank 2008 report on 'Climate Resilient Cities' (Prasad et al. 2009), the Red Cross 2010 World Disaster Report on 'Focus on Urban Risks' (IFRC 2010) and the World Wildlife Fund (who rarely focus on 'urban') release of the 'Mega-Risks in Mega-Cities' report in 2009 (WWF 2009). Initiatives include: the Rockefeller Foundation support for the Asian Cities Climate Change Resilience Network (ACCCRN) since 2008 (Rockefeller Foundation 2015) and the Local Governments for Sustainability (ICLEI) yearly gathering for local government representatives, civil society and private sector actors and academia under the banner 'Resilient Cities' since 2010, with a strong focus on climate change. Finally, in 2014 ESRC-DFID has funded a three-year programme on 'Urban Africa: Risk and Capacity' (Urban ARC; Adelekan et al. 2015).

'Cities are where the battle for sustainable development will be won or lost', noted the High Level Panel on the Post 2015 Development Agenda (UN 2013: 17). However, both the High Level Panel report and UN Resolution A/70/L.1 (by which the SDGs were adopted) are notoriously vague on concrete actions to be taken. As one commentator noted, 'the SDGs may have a lot about what needs to be achieved but not about how, by whom and with what funding and support' (Satterthwaite 2015: unpagged). Comparison of resolution A/70/L.1, the Urban Chapter of the IPCC Fifth Assessment Report (AR5) and issue papers released in preparation for Habitat III in 2016 (UN Habitat 2015; 2015a; 2015b) reveals the repetition of certain core concepts and principles, namely: participation, adaptation, co-creation, resilience and transformation, explored below.

Participation is embedded in resolution A/70/L.1, which seeks 'the participation of all countries, all stakeholders and all people' (UN 2015b: 2). However, fostering genuine participation of vulnerable groups is a difficult task, and participation as a panacea to smoothen exclusion has been heavily criticised (Cooke and Kothari 2001; Hickey and Mohan 2005; Hordijk et al. 2015). Rather, attempts to enable community participation in climate adaptation programmes should learn from decades of 'trial and error' in participatory development (Dodman and Mitlin 2013). Indeed, community-based adaptation (CBA) intends to strengthen local capacities at neighbourhood, community or village level to adapt to climate change through participatory local development initiatives (Dodman and Mitlin 2013). However, despite emphasis on the importance of partnerships with local actors, CBA has been criticised for being too localised, too small scale and

isolated, and running the risk of making the poor responsible for their own adaptation (Dodman and Mitlin 2013; Forsyth 2013). Sharply focused questions of *who* participates, *how* and *why* remain critically important.

Adaptation can be defined as ‘the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities’ (IPCC 2014: 1132). Adaptation to climate change impacts seeks to respond to both increased stresses (gradual negative changes that reduce the quality of life and/or impact on livelihoods, e.g. more frequent waterlogging) and to increases in the frequency or severity of disasters. Where climate change adaptation and disaster risk reduction (DRR) converge with development planning and intervention, significant synergies can emerge (UN Habitat 2015: 7). To ensure such interventions benefit the urban poor does, however, require that risk perceptions and existing experiences of climate change impacts are integrated, meaningfully, into formal DRR and adaptation strategies (Fraser Chapter 13, this volume; Hordijk et al. Chapter 8, this volume; Sutherland et al. Chapter 4, this volume).

Such integration requires the co-creation of knowledge, an idea which often underpins CBA. Co-creation of knowledge takes place when a range of actors develop a shared understanding of complex problems and explore possible solutions. It is often assumed that social learning can shift power relations through including the voices and knowledge of the poor (Ensor and Harvey 2015), and build networks across sectors at different scales (Reed et al. 2013), strengthening linkages on which actors can draw when swift action is needed in times of crises. Co-creation of knowledge is arguably one of the building blocks of resilience (Hordijk et al. Chapter 8, this volume), and underpins the work on networks from ACCCRN (Reed et al. 2013; Rockefeller Foundation 2015). Co-creation of knowledge is also undertaken on the premise that the new shared ways of knowing will lead to changes in practice (Ensor and Harvey 2015). However, while ideas such as CBA (Dodman and Mitlin 2013), adaptive development (Agrawal and Lemos 2015) and rights-based perspectives on adaptive capacity (Ensor et al. 2015) emerge, the urban poor are yet to benefit in practice. A major gap therefore remains in translating this knowledge into local planning practice (Turner et al. 2015; UN Habitat 2015: 4).

Interestingly, the concept of ‘resilience’ can be found in all three (resolution A/70/L.1, AR5 and Habitat III) documents, demonstrating the popularity of the term in policy circles, despite widespread critique (Fainstein 2015; Peyroux 2015). However, in the SDGs the term remains undefined, as if common understanding is assumed. In the formulation of the 17 SDGs the term refers to resilient infrastructure (SDG 9) and ‘inclusive, safe, resilient and sustainable cities’ (SDG 13). According to UN Habitat, resilience is both ‘aspirational and operational’, it ‘concentrates on how individuals, communities and business not only cope in the face of multiple shocks and stressors, but also realise opportunities for transformational development’ (UN Habitat 2015a: 1). The UN Habitat definition moves beyond the traditional definition of the ‘capacity to bounce back’ after a shock or disturbance, which underlies AR5’s definition of resilience (Revi