Chapter 2
Nepal and the "Urban Resilience Utopia"

Johannes Anhorn

Abstract The normative concept of a resilient city is afflicted by the technocratic thinking that a desired—hence resilient—state of an urban area might be a) explicitly identifiable and b) uncertainties around it are controllable. Western principles of projectable future(s) and orderly reality, as well as (pre-) defined cause and effect chains, contribute to this overestimation. Based on the "vulnerable" status quo, resilience measures are suggested which often focus on one sector of the urban multi-cosmos and are trying to fix symptoms of said vulnerable state. This is particularly true for cities and urban areas in the global south. Oversimplified implementation strategies on "how to become resilient" fall short on the complexity of the urban risk landscape and leave those at risk in limbo. This 'Urban Resilience Utopia' poses a threat to the core of the resilience agenda as a transformative power. This chapter reaches out to the social resilience "capacities" concept and translates it into guiding questions for planning DRR development interventions. Key characteristics of the adaptive governance concept are used to evaluate the practicability of those questions using examples from Nepal. This chapter might be considered a plea for a thorough "rewind" of expectations once we try to practically operationalize resilience and for a critical self-assessment and thoroughgoing process of developing a common language among those involved in building resilience.

Keywords Institutional Transformation · Nepal · Resilience · Utopia
Urban Risk · Development

2.1 The 'Urban Resilience Utopia'

The normative concept of a resilient city is afflicted by the technocratic thinking that a desired—hence resilient—state of an urban area might be (a) explicitly identifiable and (b) uncertainties around it are controllable. Western principles of projectable

J. Anhorn (✉)
South Asia Institute, Heidelberg University, Heidelberg, Germany
e-mail: anhorn@sai.uni-heidelberg.de

future(s) and orderly reality, as well as (pre-) defined cause and effect chains contribute to this overestimation. Based on the "vulnerable" status quo, resilience measures are suggested which often focus on one sector of the urban multi-cosmos and are trying to fix symptoms of said vulnerable state (cf. Carpenter and Gunderson 2001). Often these measures are not embedded into a broader integrative institutional learning mechanism. Many urban areas at risk of disasters are left alone with an externally defined terminology around "urban resilience" and respective external intervention mechanisms are dominating the local development agenda. This is particularly true for cities and urban areas in the global south where today's dependencies on and interpretative authority of the so-called "developed world" are expressed in terms of unequal financial transfer mechanisms, development aid, and emergency funds. Oversimplified implementation strategies on "how to become resilient" fall short on the complexity of the urban risk landscape and leave those at risk in limbo. I term this, the "Urban Resilience Utopia," to express the short-sightedness of those working on a day-to-day basis with the term resilience, without having made sure their counterparts share a common understanding and to express the difficulties in a complex urban environment, to find such a common understanding. Both pose a threat to the core of the resilience agenda as a transformative power. It is also contradictious to the unpredictable nature and unknown cascading effects of some of the events those areas are aiming to become resilient for.

As the aim of this book is to narrow down resilience from an all-encompassing concept to applied ways of disaster resilience operationalization, which impairs the credibility of the multifaceted resilience concept, this chapter reaches out to the social resilience "capacities" concept of Keck and Sakdapolrak (2013) and translates it into guiding questions for planning DRR development interventions. Secondly, key characteristics of the adaptive governance concept (e.g. Djalante et al. 2011; Folke et al. 2005) are used to evaluate the practicability of those questions using examples from Nepal.

This chapter might be considered a plea for a thorough "rewind" of expectations once we try to practically operationalize resilience. Often decision-makers but also scientists go like a bull at the gate, missing the opportunity to call for people where they (under)stand. Paving the way for joint action.

Therefore, this chapter first tries to approach what have become core elements of the resilience understanding and formulating them into practical assessment questions; second, those will be evaluated against the concept of Adaptive Governance (Djalante et al. 2011; Folke et al. 2005; Folke 2006), with its four principles: polycentric and multi-layered institutions, participation and collaboration, self-organization and networks, as well as learning and innovation. Last but not least, the case study of Nepal will be used to identify current challenges for the country processing toward resilience. Finally, closing the chapter with a plea for critical self-assessment and thoroughgoing process of developing a common language among those involved in building resilience.

2.2 Disaster Resilience

From the first introduction of the term resilience in the field of ecology and the prominent writing of Holling (1973) till its multifaceted understanding today the term has undergone several adaptations, changes, and reinterpretations. This happened in almost all academic disciplines, following different scholars. During its adaptation to the field of natural hazard and disaster risk reduction/ management (DRR/DRM), the difficulties of finding a common language among scholars and lately in the communication to practitioners have been a major challenge. The opinions vary on whether we are closer to or even further away from finding a common language among these players than before. The resilience concept is still challenged by what Fekete et al. (2014) call conceptual "haze." A useful discussion and attempt to clarify the meaning of the term in the field of DRR/DRM can be found in Béné et al. (2012) and Alexander (2013).

Despite the ongoing debates about the newest felicitous achievements, a few characteristics often built the core of more specific and complex resilience definitions (see e.g. Brand and Jax 2007; Folke et al. 2010, 2014; Lorenz 2013; Manyena 2006): a multilevel-system-based approach which is dynamic in nature encompassing resistivity, absorption, and recovery; and which acts "as an integrating narrative or discourse" (Béné et al. 2012, p. 12).

Certainly, there are challenges to the all integrating aspect of resilience: First, there are pitfalls to attempts to bridge the natural versus social scientist gorge. The contributions from Cannon and Müller-Mahn (2010) as well as Pelling and Manuel-Navarrete (2011) highlight one of the essential risks in oversimplified bridging attempts: to neglect power relations and therefore depoliticize social structures which are indeed important to be considered.

A second pitfall is best seen once the concept is transferred from an academic discursive exercise to practical implementation, where controversial measures are abundant. Davoudi (2012) calls it a "slippery concept" in order to express the difficulties to subsume different practical utilizations of the concept. For example, development projects leading to improved resilience on the one level, while reducing it on the next higher level or solving short-term vulnerable states, but opposing long-term resilience goals. Or as Walker and Salt put it "(o)ptimizing for one form of resilience can reduce other forms of resilience" (2012, p. 121).

Keck and Sakdapolrak (2013) put together three main capacities in order to understand social resilience comprehensively, namely coping-, adaptive-, and transformative capacities. The criteria to give explicit meaning to these terms are on the one hand "temporal scope" and "degree of change," and on the other hand "response to risks" and "outcomes." They use these four criteria as a matrix to categorize the three capacities' nature and distinguish various existing concepts.

If this is translated to a more practical-oriented approach, the criteria might be understood as a guiding system of building resilience measures and useful in order to develop and implement resilience interventions. If done so, the *temporal scope* defines the anticipated operating range from very short-term interventions to

long-term social transformation programs and will most likely be defined by the budged timeline. The *degree of change* denotes the profoundness of the required measures and can be expressed as the distance of the intervention mechanism to current practice (actual performance to target performance), while the *response to risk* criteria defines whether measures are mainly aiming to "fix deficits" (ex-post) or if a certain change is anticipated by "necessity" (ex-ante). Finally yet importantly, the *outcome criteria* reflect the vision of what is desired to be achieved with the respective resilience intervention. As the authors already pointed out in their explanations, elements of social relation and networks structures, institutions and power relations, and knowledge and discourses determine "under what conditions […] the three dimensions of social resilience mutually enforce each other [..] And in what case might one capacity undermine another [..]" (Keck and Sakdapolrak 2013, p. 13).

The commonly used and widely accepted definition of resilience from the United Nations International Strategy for Disaster Risk Reduction reads "the ability of a system, community, or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions" (UNISDR 2009) and does not include the transformational aspect. Yet, there have been missed opportunities to adopt or change the widely quoted definition. For example, the post-2015 Sendai Framework for DRR (United Nations 2015) includes references to the concept of resilience, but still uses the old definition. This is considered a critical shortcoming by the author as the transformational character embraces the future beyond "building back better." An older concept that resurfaced in the Sendai Framework but does not include the proactive forward thinking necessary before building back is even necessary.

Another line of thought descends from various concepts (cf. adaptive management, comanagement, collaborative governance of environmental problems) subsumed as "adaptive governance" by Dietz et al. (2003) and Folke et al. (2005). Djalante et al. (2011), identifies four common principles of adaptive governance theories useful to discuss preconditions for managing resilience to natural hazards. Namely "polycentric and multilayered institutions, participation and collaboration, self-organization and networks, and learning and innovation" (2011, p. 1). The authors establish the links in-between the academic debates on environmental and natural resource governance in order to "highlight potential similarities and differences between Adaptive Governance (AG) and DRR and their discussion of designing adaptive governance systems that build resilience" (2011, p. 1). As resilience is used in various contexts (cf. Djalante and Thomalla 2011), it might be the appropriate choice to bridge the interdisciplinary gaps. The four principles will later serve to measure existing challenges of Nepal's resilience efforts together with the previously identified capacity criteria.

Polycentric and multilayered institutions in the AG comprehension provide the setup for redundant but accountable organizational units, which are able to continue their public service even if disrupted by a major disaster event. The challenge remaining is to balance the power relation between different level agencies and

governments while providing reciprocal access to their resources (2011, p. 4). Meanwhile, *Participation and collaboration* allows to pool knowledge and favorably influences the capacity to deal with external shocks and conflicts (cf. Heikkila and Gerlak 2005; Holley 2010; Margerum 2008; Pahl-Wostl 2009). However, there are manifold challenges during this balancing act of getting relevant stakeholders to the table, maintaining participation, and coming up with agreed upon shared solutions, e.g., organizational, cultural, or procedural. Some studies also highlight the positive effect of external institutions "to opening a way to successful collaboration by creating the necessary incentives" (in Djalante et al. 2011, p. 6; cf. Raymond 2006; Roux et al. 2007; Tompkins et al. 2008). *Self-organization and networks* are to some extent providing the fertile soil for sharing experiences, learning, and mutual understanding. It is important to acknowledge, however, that networks often evolve spontaneous during or after disasters. Again, especially when it comes to sharing of supposedly limited or critical resources, coordination beyond formal mandates are rare (read e.g., Freeman and Farber (2005) on the "Modularity" concept). They mention as main obstacles: obstructing institutional cultures together with limited human and financial resources. Proposing "programmatic funding across issues and agencies" as one solution (2005, p. 901f). *Learning and innovation* embodies the binding element between the three previous mentioned principles, as a general positive inclination toward new approaches and the will to modify current behavior is required to successfully collaborate in multilayered, interconnected institutions. While organizational learning allows for enhancing resilience (Berkes and Folke 2002; Folke et al. 2005), it also provides the flexibility to "keep up with change and uncertainty in complex adaptive systems" (Djalante et al. 2011, p. 8; cf. Carpenter and Gunderson 2001).

Individually, those principles of AG seem easy to understand and to modify in order to enhance those preconditions of resilience. From a practical point of view, the challenge is to balance their characteristics and quality: All of them have individual "tipping points," where from a managerial point of view, better/more becomes worse and vice versa. As each of those principles follows certain cost-benefit paths, their interrelations need to be carefully monitored. For example, polycentric and multilayered institutions lead to higher transaction costs for decision-making processes and hence are challenged by time constraints during rapid-onset hazards. The broader the decision-making base is, the higher the complexities associated and hence solutions might fall short and doomed to become the lowest common denominator, contradicting the innovation principle by not taking the risk of something new. Likewise, learning and innovation require a strong culture of (self-) reflexive behavior embedded in norms and values which might personally and/or societally/politically not been aided in the respective context.

The AG principles might serve as an explanation why certain resilience measures fall short once they are maturing and are implemented. Hence, they provide hints to the processes and factors behind the resilience criteria. The logic would be that limited participation and little inter-institutional cooperation result in short-sighted outcome criteria with restricted chances to be implemented.

2.3 The Case of Nepal's Growing Cities

The former "Mountain Kingdom" of Nepal has often been mystified due to its long secluded history and the magnificent mountain ranges. The capital Kathmandu has long been praised as a culturally vibrant city with thousands of sacred places, temples, and people entangled into their day-to-day religious ceremonial lifestyle. This might from each individuals perspective still be true. However, most recent travel guides nowadays recommend to leave the capital quickly after seeing the main attractions like the *Hanuman Dhoka* with its ancient wooden temples and the ancient city of Bhaktapur, otherwise risking serious health threats, especially to the travelers respiratory and digestive systems. Since the Gorkha Earthquake in 2015, more and more foreigners also seem to be concerned about a potential "big one" happening (and this time right in Kathmandu), while enjoying their holiday in densely build-up *Thamel*.

The apparent necessity of Nepal's cities to become resilient toward natural hazards is mainly based on three interconnected facts: first, the countries location in one of the most active tectonic areas (*exposure and structural fragility*); second, the very high population growth (*urban-rural disparities and social vulnerability*); third, the decade's history of failed long-term planning and development efforts despite enormous investments from foreign governments and other donors (*development trajectory*). "Many people also think that the right time might just have come." "Making use of the slowly commencing political stability, after decades of political unrest, insurgency, and the so-called "People's War," which resulted in the removal of the monarchy and the establishing of a multiparty parliamentary democratic system in 2006 (Einsiedel et al. 2012; Gersony 2003)".

As part of the tectonically active Himalayan range, Nepal has one of the highest levels of earthquake potential (Mosquera-Machado and Dilley 2009). Till today in western Nepal, the absence of major earthquakes over a long time period has led to a high rate of stress accumulation and contributed to high-risk exposure (Bilham et al. 1995; Bilham 2004; Chamlagain and Gautam 2015; Fort 2011; Mukhopadhyay et al. 2011). The 2015 Gorkha Earthquake did not release enough of that stress, and scientists do agree that the potential for the next big one is still immanent (e.g. Bilham 2015). While enough evidence has been collected that a major earthquake would have devastating effects on the capital Kathmandu (EMI 2010; JICA and MoHA 2002), efforts to countermeasure fall short once the implementation stage is reached.

Over the last six decades, the population of Nepal has increased more than three times, from 8.3 million to 26.5 million people (CBS 2003, 2012). Most of that growth is visible in the intermontane basin of Kathmandu as well as in some expanding cities in the *Tarai* lowlands toward Indian. Nepal is the fastest urbanizing nation in the region (1970s–2010s increase of about 6% annually), but only 17% of the population live in urban areas (Muzzini and Aparicio 2013). Nepal's

urban areas are defined as units of local self-government, based on the Local Self-Governance Act (HMG 1999) and demarcated according to the number of people administered by Village Development Committees (VDCs), formerly called *Panchayats*. For hilly and mountain areas, this administrative unit of a municipality is defined as "a population of at least ten thousand and annual source of income of minimum five hundred thousand rupees […] even if there is no road facility" (HMG 1999, p. 29). While in the *Tarai* and the Kathmandu Valley "semi-urban area[s] with a population of at least twenty thousand, and annual source of income of minimum five million rupees and with electricity, roads, drinking water, communications, and similar other minimum urban facilities" (HMG 1999, p. 29) are considered municipalities. Administrative functions are not necessarily decisive criteria. According to Sharma "political ad hocism" in the nomination process of these municipalities is apparent (2003, p. 377). Today there are 217 municipalities, most of them established after 2014 (CBS 2016). Based on the latest national census in of 2011 a total of 26.5 million inhabitants live in 5.4 million households (CBS 2012). The urban areas of Nepal comprise of the agglomeration in the Kathmandu Valley with the capital Kathmandu (Kathmandu Metropolitan City and Kirtipur Municipality), Patan (Lalitpur Sub-Metropolitan City), and Bhaktapur (Bhaktapur Sub-Metropolitan City and Madhyapur Thimi Municipality), which account for 5.38% of the total population. As there is no strict implementation of citizen registration, the number of inhabitants in Kathmandu and Lalitpur alone might be triple that number. Weak or often non-existing infrastructure for water and electricity supply as well as wastewater and solid waste treatment are among the greatest challenges for the densely populated areas of the Kathmandu valley (CHREOD 2012; Muzzini and Aparicio 2013). Groundwater depletion aggravates the critical water supply situation during the hot dry season, while long-planned water supply schemes face huge backslashes and/or are unlikely to meet the increased demand on the long run (The Himalayan Times 2016). Despite the challenging quality of infrastructure and life in the main capital, mid-size towns develop even more quickly into hazardous places due to uncontrolled expansion, influx of modern building material without the necessary knowledge base, and no stringent implementation of existing regulatory frameworks (Anhorn et al. 2015).

Those challenges are not new to experts, planners, and government officials in Nepal (e.g. ADPC and MoHA 2011a, b; Basnet et al. 1999; Blaikie 1980; CHREOD 2012; Dahal 2012; EMI 2010; JICA and MoHA 2002; Muzzini and Aparicio 2013; Skerry et al. 1991). Nevertheless, despite many well-thought consultancy reports, the big leap forward did not happen (e.g., Bell 2015). Nepal is still considered one of the poorest countries in the world, actually still ranking among the least developed countries in the world (The World Bank 2017).

It is not the aim of this chapter to provide an all-encompassing way of addressing these challenges, but to use the previous resilience capacity criteria differentiating coping, adapting, and transformation, as well as the principles of AG, to analyze the case of urban Nepal.

2.4   From Theory to Practice

The following table associates each of the four criteria proposed by Keck and
Sakdapolrak (2013) with a key question. This will allow evaluating development
intervention towards the chances to enable and foster resilience. The table also
provides additional questions, which might help identifying potential constraints.

Temporal scope	When do interventions become effective? • Do project results foster policy change beyond the decision-makers' formal responsibility? • Do long-term development targets support those interventions?
Degree of change	How much does the current performance derive from the target performance? • Are there certain groups more/exclusively challenged with implementation?
Response to risk	How proactive are the intended development measures if it comes to risk reduction? • Does the project aim at fixing earlier disastrous outcomes, or at enhancing mitigation capacities?
Outcome criteria	What is the common vision and strategy? • Does everybody agree on that vision? • Who will be winners/losers of the strategic interventions?

The following section seeks to shed light on how the urban areas and the country
of Nepal "perform" in terms of resilience efforts using these assessment questions.
The AG principles, on the other hand, might help explaining processes and factors
behind the findings.

This is not a detailed scientific full-scale evaluation exercise, but rather an
attempt to use a specific theoretical lens on personal observations. Likewise, the
author does not claim to be able to see all gradual developments in Nepal, but rather
reflects on five years of (restricted) observations applying a specific frame of
thoughts.

Starting in 2013, a team of scientists including the author conducted
semi-structured interviews with key personnel from NGOs, local government
representatives, and international development organizations in Nepal. The focus
was on effectiveness of development interventions in the field of DRM/DRR as well
as understanding resilience concepts. A self-evaluation scorecard tool was devel-
oped and used to assess risk and resilience based on qualitatively derived infor-
mation at multiple levels (Anhorn et al. 2015). In 2013 and 2015, the same group of
LGU representatives from Lalitpur Sub-Metropolitan District was interviewed to
uncover changes in resilience thinking prior to and after the Gorkha Earthquake.
Above-mentioned questions served as guiding questions. The results presented in
the next sections are conclusions and findings based on the statements made by
these sources.

The process of interviewing and discussing resilience concepts with various
stakeholders in Nepal for this research itself can be understood as an (initial) step to
increased participation and collaboration. This becomes clear by the fact that during

the first scorecard session in 2013 with representatives from minority groups, city/district planners, and emergency response teams they had to admit that they never discussed risk reduction targets and implementation challenges among each others before. Despite such encouraging effects, simple organizational difficulties (getting the decision-makers attention and time), as well as more complex issues had to be dealt with: e.g. having women's representatives and male decision-makers at the same table in patriarchic systems. Also, procedural difficulties which include decision-making and voting mode, representation of minority opinions, etc. There are no catch-it-all solutions to these challenges, but one important factor to achieve an open and constructive dialogue was the facilitation by a local NGO which had managed to be a trustworthy partner for all participating groups for many years already.

Going back to the first criteria of coping-, adaptation-, and transformational capacity (*temporal scope*), looking at the various and long engagements of international development programs in Nepal, it might be appropriate to say that the country has long been (mis-)used as a playing field of western development interventions (cf. Skerry et al. 1991, p. 365). Talking about the four decades of USAID work in Nepal between 1950s and 1990s Skerry et al. conclude that "Politicians and government officials were more concerned with the control elements of Panchayats; they wanted to continue centralized decision-making and control. […] There have been problems with inconsistent government policies. In some cases, this was because government adopted a policy because of donor insistence, not because Nepali officials were convinced of its efficacy. […] The lack of consistent policies that were implemented reduced the chance of success of many activities and their sustainability after donor resources ended" (1991, p. 368). Translating this to the more recent discussions on urban resilience, it is evident that fluctuant governmental structures do not allow for long-term planning and commitment. To ask for resilience measures beyond the timeframe of a decision-makers' legislative/jurisdictive period, embracing the idea of sustainability, might be a first step. Now this is particularly difficult, where like in the urban periphery of Nepal, the whole decision-making process is highly centralised and political power is outside of Kathmandu almost nonexistent. The connection to polycentric and multilayered institutions is easily made, incorporating element of (democratic) participatory and self-organization. All of them being based on a culture of shared responsibility.

Most resilience interventions propose very incremental *degrees of change*, simply because they are embedded into existing structures, use the umbrella of prevailing socio-cultural institutions and are in general negotiated with the counterparts on "eye-level." Fundamental changes are not enforceable without altering present structures, hence asking to what extent the actual performance derives from the target performance (here: a more resilient condition) helps to understand who are the beneficiaries and possible victims. By keeping the urbanizing hinterland of

Nepal effectively cutoff from resources, the exchange of different perspectives and other forms of participation and collaboration do not happen. In general, resentments against the central government remain an issue and with corruption being a serious problem, a big transformational leap forward seems to be illusory.

With the onset of the earthquakes of 25 April and 12 May 2015, some reflective discourses on disaster resilience in Nepal among governmental officials, the public, scientist, and other patrons came to an abrupt end and were immediately overtaken by the international aid-delivery mechanisms. The *response to risk* criteria for Nepal and the question which phase of the "DRM cycle" should be focused on, was finally concluded: everything moved to fixing the disastrous outcomes (GoN 2015a). This clearly goes along with a relative short-term perspective and does not leave room for any more fundamental proposition for institutional change. A Post-Disaster Needs Assessment was quickly conducted with ambitious expectations in terms of implementation speed (GoN 2015a, b). According to the Prime Ministers, after generous pledges for recovery and reconstruction were made, unfortunately "an extended period of economic, social and political challenges [followed], which directly impacted on the effectiveness of the earthquake response. With the formal establishment of the National Reconstruction Authority on 25th December 2015, I signaled the intent of my administration to recover the momentum of post-earthquake reconstruction" (GoN 2016, p. III).

Despite the (almost historically) ill-fated reasons for the delay of earthquake response, the consecutive Post-Disaster Recovery Framework (PDRF) launched in May 2016, contains several connections to resilience. Interestingly there is a whole chapter on "Recovery Vision and Strategic Objectives". Hence addressing the *outcome criteria* of Keck and Sakdapolrak (2013). The vision is defined along the five themes: safe structures, social cohesion, access to services, livelihood support, and capacity building (GoN 2016, p. 4ff). The ambitious objectives stretch the whole range of resilience measures from short-term restoration interventions to long-term enhanced governmental services; from investing in participation of the public to innovative ways of recovery financing. Now the crux is not what is written in the document itself, but if the Nepalese Government together with all the donor organizations, NGOs and the civil society succeeds to implement it (and hence make the National Reconstruction Authority (NRA) obsolete again). It is too early to judge the implementation performance of the NRA, but learning from the past means also to acknowledge that such magniloquent broad-scale agendas (written with the help of 'tireless friends from the international community' (2016, p. V)) require all efforts to become reality. For now, the first beneficiaries of this new PDRF have the mandate to "leading and managing the earthquake recovery and reconstruction programme in a sustainable and planned manner for a safer and more resilient Nepal" (2016, p. 21). With that stated, the *outcome criteria* is at least clearly defined, spanning from restoration to enhancement of future well-being. The competence of improving governmental accountability during this development intervention and equally distributing the envisioned benefits among the society is still questionable and to be demonstrated.

2.5 Plea for a Performance-Based Self-Assessment Understanding of Resilience

There are various links between the highly relevant principles of resilience in the AG literature and the resilience-capacities' promoting criteria. Asking the right questions to analyze development interventions aiming for increasing urban resilience in regard to their transformative capacity is crucial. This chapter provides a limited selection of suggestions how to address this. After all, the most important question to be asked starts right at the beginning of the resilience process: What is our vision of resilience?

As the aim of this book is to narrow down resilience from an all-encompassing concept to applied ways of disaster resilience operationalization, which impairs the credibility of the multi-facetted resilience concept, I suggest to start measuring resilience by asking this question over and over again—as academics, intervention managers, donors, and local stakeholders. As written earlier, oversimplified implementation strategies on "how to become resilient" fall short on the complexity of the urban risk landscape. This 'Urban Resilience Utopia' poses a threat to the core of the resilience agenda as a transformative power. It seems that practitioners are more interested in doing something, instead of doing the right thing due to the perceived complexity. Without asking all those responsible and (!) those affected by any resilience/development intervention what they want to achieve, the decision-making will fall short on people's needs. Hence, the chapter ends with a plea to use people's collaborative knowledge and vision as the *ultima ratio* for resilience measures as it encompasses the multilayered richness of people's ambitions, which is particularly true for the urban sphere.

The continuous process of self-assessing the current resilience performance and the future envisioned resilience performance along individual values allows us hopefully to foster the development of institutions and processes along the principles of AG and shift from restoring on a short temporal scope to fundamentally enhancing long-term well-being.

References

ADPC, MoHA (2011a) Nepal Hazard Risk Assessment (No. Part 2: Exposure, Vulnerability and Risk Assessment). Asian Disaster Preparedness Centre and Ministry of Home Affairs, Kathmandu

ADPC, MoHA (2011b) Nepal Hazard Risk Assessment (No. Part 1: Hazard Assessment). Asian Disaster Preparedness Centre and Ministry of Home Affairs, Kathmandu

Alexander DE (2013) Resilience and disaster risk reduction: an etymological journey. Nat Hazards Earth Syst Sci 13:2707–2716. https://doi.org/10.5194/nhess-13-2707-2013

Anhorn J, Burton C G, & Khazai B (2014) A monitoring & evaluation tool to engage local stakeholders. ICLEI, Bonn. https://doi.org/10.13140/2.1.4717.6967

Basnet SS, Dixit AM, Dwelley-Samant L, Nakarmi M, Pradhanang SB, Tucker B (1999) Kathmandu Valley's Earthquake Scenario. National Society for Earthquake Technology Nepal, Kathmandu

Bell T (2015) Nepal's failed development. Al Jazeera, Doha, Qatar

Béné C, Wood RG, Newsham A, Davies, M (2012) Resilience: new utopia or new tyranny? Reflection about the potentials and limits of the concept of resilience in relation to vulnerability reduction programmes. IDS Working Papers 2012, 1–61

Berkes F, Folke C (2002) Back to the future: ecosystem dynamics and local knowledge. In: Gunderson LH, Holling CS (eds) Panarchy: understanding transformations in human and natural systems. Island Press, Washington, DC, pp 121–146

Bilham R (2004) Earthquakes in India and the Himalaya: tectonics, geodesy and history. Ann Geophys 47:839–858

Bilham R (2015) Seismology: raising Kathmandu. Nat Geosci 8:582–584. https://doi.org/10.1038/ngeo2498

Bilham R, Bodin P, Jackson M (1995) Entertaining a great earthquake in Western Nepal: historic inactivity and geodetic tests for the present state of strain. J Nepal Geol Soc 11:73–78

Blaikie PM (1980) Nepal in crisis: growth and stagnation at the periphery. Clarendon Press, Oxford, New York

Brand FS, Jax K (2007) Focusing the meaning (s) of resilience: resilience as a descriptive concept and a boundary object. Ecol Soc 12:23

Cannon T, Müller-Mahn D (2010) Vulnerability, resilience and development discourses in context of climate change. Nat Hazards 55:621–635. https://doi.org/10.1007/s11069-010-9499-4

Carpenter SR, Gunderson LH (2001) Coping with collapse: ecological and social dynamics in ecosystem management. Bioscience 51:451–457. https://doi.org/10.1641/0006-3568(2001)051[0451:CWCEAS]2.0.CO;2

CBS (ed) (2003) Population Monograph 2001. Government of Nepal, National Planning Commission Secretariat, Central Bureau of Statistics (CBS), Kathmandu

CBS (ed) (2012) National Population and Housing Census 2011: National Report. Government of Nepal, National Planning Commission Secretariat, Central Bureau of Statistics (CBS), Kathmandu

CBS (ed) (2016) Nepal in Figures 2015. Government of Nepal, National Planning Commission Secretariat, Central Bureau of Statistics (CBS), Kathmandu

Chamlagain D, Gautam D (2015) Seismic hazard in the Himalayan intermontane basins: an example from Kathmandu Valley, Nepal. In: Shaw R, Nibanupudi HK (eds) Mountain hazards and disaster risk reduction, disaster risk reduction. Springer, Japan, Tokyo, pp 73–103

CHREOD (2012) Metropolitan Trends and Issues in the Kathmandu Valley (Final Report), Kathmandu Valley Competitiveness Assessment Study. World Bank, Kathmandu

Dahal DR (2012) Nepal's problem of order and political culture. In: Rijal M, Pradhan SG (eds) Readings on governance and development, readings on governance and development. Institute of Governance and Development, Kathmandu

Davoudi S (2012) Resilience: a bridging concept or a dead end? Plann Theor Pract 13:299–307. https://doi.org/10.1080/14649357.2012.677124

Dietz T, Ostrom E, Stern PC (2003) The struggle to govern the commons. Science 302:1907–1912. https://doi.org/10.1126/science.1091015

Djalante R, Thomalla F (2011) Community resilience to natural hazards and climate change: a review of definitions and operational frameworks. Asian J Environ Disaster Manage 3:339–355. https://doi.org/10.3850/S1793924011000952

Djalante R, Holley C, Thomalla F (2011) Adaptive governance and managing resilience to natural hazards. Int J Disaster Risk Sci 2:1–14. https://doi.org/10.1007/s13753-011-0015-6

EMI (2010) Risk-Sensitive Land Use Plan: Kathmandu Metropolitan City, Nepal (No. 2), Mainstreaming Disaster Risk Reduction in Megacities: A Pilot Application in Metro Manila and Kathmandu. Earthquakes and Megacity Initiative (EMI), Manila

Fekete A, Hufschmidt G, Kruse S (2014) Benefits and challenges of resilience and vulnerability for disaster risk management. Int J Disaster Risk Sci 5:3–20. https://doi.org/10.1007/s13753-014-0008-3

Folke C (2006) Resilience: the emergence of a perspective for social–ecological systems analyses. Glob Environ Change 16:253–267. https://doi.org/10.1016/j.gloenvcha.2006.04.002

Folke C, Hahn T, Olsson P, Norberg J (2005) Adaptive governance of social-ecological systems. Annu Rev Environ Resour 30:441–473. https://doi.org/10.1146/annurev.energy.30.050504.144511

Folke C, Carpenter S, Walker B, Scheffer M, Chapin T, Rockström J (2010) Resilience thinking: integrating resilience adaptability and transformability. Ecol and Society 15. https://doi.org/10.5751/ES-03610-150420

Fort M (2011) The Himalayas: from mountain building to landform evolution in a changing world. Geographia Polonica 84:15–37. https://doi.org/10.7163/GPol.2011.S2.2

Freeman J, Farber DA (2005) Modular environmental regulation. Duke Law J 54:795–912

Gersony R (2003) Sowing the wind: history and dynamics of the Maoist revolt in Nepal's Rapti Hills. Portland

GoN (2015a) Post Disaster Needs Assessment (Vol. B: Sector Reports). Government of Nepal (GoN), National Planning Commission, Kathmandu

GoN (2015b) Post Disaster Needs Assessment (Vol. A: Key Findings). Government of Nepal (GoN), National Planning Commission, Kathmandu

GoN (2016) Post Disaster Recovery Framework (PDRF). Government of Nepal (GoN), Nepal Reconstruction Authority, Kathmandu

Heikkila T, Gerlak AK (2005) The formation of large-scale collaborative resource management institutions: clarifying the roles of stakeholders, science, and institutions. Policy Stud J 33:583–612. https://doi.org/10.1111/j.1541-0072.2005.00134.x

HMG (1999) Local Self-Governance Act 2055. Her Majesty's Government of Nepal (HMG), Kathmandu

Holley C (2010) Removing the Thorn from New Governance's Side: Examining the Emergence of Collaboration in Practice & the Roles for Law, Nested Institutions & Trust (SSRN Scholarly Paper No. ID 1589779). Social Science Research Network, Rochester, NY

Holling CS (1973) Resilience and stability of ecological systems. Annu Rev Ecol Syst 4:1–23

JICA, MoHA (2002) The study on earthquake disaster mitigation in the Kathmandu Valley, Kingdom of Nepal (Final Report No. vol 1: Summary). Japan International Cooperation Agency and Ministry of Home Affairs, Kathmandu

Keck M, Sakdapolrak P (2013) What is social resilience? Lessons learned and ways forward. Erdkunde 67:5–19. https://doi.org/10.3112/erdkunde.2013.01.02

Lorenz DF (2013) The diversity of resilience: contributions from a social science perspective. Nat Hazards 67:7–24. https://doi.org/10.1007/s11069-010-9654-y

Manyena SB (2006) The concept of resilience revisited. Disasters 30:434–450. https://doi.org/10.1111/j.0361-3666.2006.00331.x

Margerum RD (2008) A typology of collaboration efforts in environmental management. Environ Manage 41:487–500. https://doi.org/10.1007/s00267-008-9067-9

Mosquera-Machado S, Dilley M (2009) A comparison of selected global disaster risk assessment results. Nat Hazards 48:439–456. https://doi.org/10.1007/s11069-008-9272-0

Mukhopadhyay B, Acharyya A, Dasgupta S (2011) Potential source zones for Himalayan earthquakes: constraints from spatial–temporal clusters. Nat Hazards 57:369–383. https://doi.org/10.1007/s11069-010-9618-2

Muzzini E, Aparicio G (2013) Urban growth and spatial transition in Nepal: an initial assessment. World Bank Publications, Washington D.C

Pahl-Wostl C (2009) A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. Glob Environ Change 19:354–365. https://doi.org/10.1016/j.gloenvcha.2009.06.001

Pelling M, Manuel-Navarrete D (2011) From resilience to transformation: the adaptive cycle in two Mexican urban centers. Ecol Society 16

Raymond L (2006) Cooperation without trust: overcoming collective action barriers to endangered species protection. Policy Stud J 34:37–57. https://doi.org/10.1111/j.1541-0072.2006.00144.x

Roux DJ, Murray K, van Wyk E (2007) Governance as a trialogue: government-society-science in transition, water resources development and management. In: Turton DAR, Hattingh MHJ, Maree MGA, Roux DDJ, Claassen DM, Strydom MWF (eds) Principles enabling learning environments for good ecosystem governance. Springer, Heidelberg, pp 253–280. https://doi.org/10.1007/978-3-540-46266-8_13

Sharma P (2003) Urbanization and development. Population monograph of Nepal. Central Bureau of Statistics, Kathmandu, pp 375–412

Skerry CA, Moran K, Calavan KM (1991) Four decades of development: the history of U.S. assistance to Nepal 1951–1991. USAID, Kathmandu, Nepal

The Himalayan Times (2016) Melamchi project unlikely to meet increasing water demand in Valley. The Himalayan Times

The World Bank (2017) World Bank Group [WWW Document]. URL www.worldbank.org (Accessed 2.1.17)

Tompkins EL, Few R, Brown K (2008) Scenario-based stakeholder engagement: incorporating stakeholders preferences into coastal planning for climate change. J Environ Manage 88:1580–1592. https://doi.org/10.1016/j.jenvman.2007.07.025

UNISDR (2009) UNISDR terminology on disaster risk reduction. United Nations International Strategy for Disaster Reduction

UN (2015) Sendai framework for disaster risk reduction 2015–2030 (No. A /CONF.224/CRP.1). United Nations, Sendai

von Einsiedel S, Malone DM, Pradhan S (eds) (2012) Nepal in transition: from people's war to fragile peace. Cambridge University Press, Cambridge, New York

Walker B, Salt D (2012) Resilience thinking: sustaining ecosystems and people in a changing world. Island Press, Washington

Author Biography

Johannes Anhorn is a geographer and Ph.D. student at the Department of Geography of South Asia Institute, Heidelberg University. He is working on human–environmental interactions, focusing on pre- and post-disaster resilience and development in (remote) urban areas of Nepal. Currently, he is working in the "Mitigation of Georisks" development cooperation project for the German Federal Institute for Geosciences and Mineral Resources (BGR) in Bandung, Indonesia.

Urban Disaster Resilience and Security
Addressing Risks in Societies
Fekete, A.; Fiedrich, F. (Eds.)
2018, XV, 518 p. 77 illus., 62 illus. in color., Hardcover