

Article

Climate Shocks and Local Urban Conflicts: An Evolutionary Perspective on Risk Governance in Bhubaneswar

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Abstract: In this paper, we explore the complex entanglements between ongoing land conflicts and climate shocks, and their implications for risk governance paths and evolution. We focus on ways in which concepts of shock and conflict can be incorporated into social–ecological systems thinking and applied to risk governance practice in a southern cities context. Through a qualitative inquiry of two slum redevelopment projects in Bhubaneswar city in India, we trace the origin and evolution of conflict around land tenure and eviction in informal settlements, as well as its interaction with local manifestations of climate shocks. Climate policies, as responses to climate shock and intended to mitigate climate risk, are observed as constructed, interpreted, framed, and used strategically by formal actors to further urban development objectives, while the local knowledge systems, risk perceptions, and adaptations are ignored in practice. This study helps to re-think the complexities of climate risk governance in southern urban spaces where multiple risks overlap and interact within the diverse realities of informality and vulnerability. A singular focus on one type of risk, on the formal order to manage that risk, is likely to overlook other risks and opportunities. Hence, shocks are likely to produce more unanticipated effects, conflicts function as the unobserved middle term, and the formal policies and plans to mitigate climate risk contribute to the creation of new risk.

Keywords: social–ecological systems; shock; conflict; southern urbanism; local climate governance; urban planning



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1. Introduction

In recent decades, climate change in the face of fast urbanization has provoked new forms of interventions and risk governance within southern cities as a key imperative action. Scholarly studies continue to stress the importance of examining resilience and adaptation policies beyond their performativity toward developing a combined understanding of complex riskscapes and associated vulnerabilities [1–4]. Other scholars have called for different frameworks to understand the external hazards or systemic shocks as well as scrutinize governance strategies and tools that engender internal social conflict [5–8].

The idea of shocks can be traced to ecology, and later to social–ecological systems and resilience thinking, wherein systems (such as urban systems) are assumed to be stable, and expected to cope, bounce back, or bounce forward after a shock event to maintain equilibrium, or end up collapsing in events of disruption emanating from its environment. In this study, we begin with the assumption that social–ecological systems never collapse completely when they experience shocks [8]. We refer to shocks in this study as specific events attributed to climate change that disrupt the city system when a coordinated governance response is not possible. These events can have a significant impact on already existing disturbances within, and provide opportunities for the emergence of conflicts. Studies within the planning and governance scholarship continue to frame conflict through a negative bias, as a phenomenon to be avoided in practice [9–12]. Most policy attention thus goes into determining the cause of conflict to resolve it [10,12–15]. In the

context of many southern cities, the conflict is predominant between formal and informal systems, and consequently, plans and policies operate through conscious forgetting [16,17], or a system of deregulations and maintenance of power relations through territorialized flexibility by state institutions [18].

In this paper, we offer theoretical and empirical insights into the role of climate shocks and social conflicts in climate risk governance. We focus our attention on southern cities to understand how climate shocks and social conflicts around eviction dynamics influence climate risk governance paths. The sites of inquiry are two slum settlements in the city of Bhubaneswar in India, where there are ongoing tensions between state-led development goals on one hand, and increasing climate risk on the other. The aim of the paper is to understand the combined effects of climate shocks and urban conflicts in risk governance in southern cities. In the context of Bhubaneswar, we conduct this study with the following research question: how do existing urban conflicts in informal settlements interact with climate shock events to influence climate risk governance? Specifically, we examine the decisions and implementation of recent Smart City initiatives as well as the State Climate Action Plans in Bhubaneswar which tend to employ slum redevelopment as an urban land rejuvenation and climate adaptation strategy, its manifestation within existing local urban practices, as well as its entanglements with climate shocks. We investigate two slum redevelopment projects in which there are ongoing tensions between continuous eviction attempts of formal state authorities and self-organization strategies of local slum residents to achieve land tenure.

We employ a qualitative lens, undertaking an in-depth ethnographic inquiry of two slum redevelopment projects in the study area to provide insights into an alternate understanding of risk including its governance and management within informal settlements at the local scale. Through this study, we argue that the combined effects of climate shocks and existing formal/informal conflicts manifest in multiple overlapping risks that become easily observable and clear, while also limiting climate action to more ad hoc, spontaneous, and short-term adaptation practices. The existing planning and governance decisions around risk have a tendency to contribute to naturalized social conflicts that reduce the chances of long-term adaptive capacity and perpetuate vulnerabilities of slum residents. This study contributes to the discussion on risk governance and southern urbanism, highlighting the presence of modernist planning legacies manifesting through fantasy visions for urban spaces, and cautions toward the unintended effects of not integrating formal/informal tensions within governance frameworks.

We refer to fantasy visions of urban space in the sense that what is projected into the future is not informed (enough) by knowledge of local problems and potential, but structured by desires. The structure of the visions enables us to discern the nature and the source of such desires. These are not merely imaginaries, which always exist, and which are needed for future-oriented governance, providing narratives enabling coordination around particular futures [19]. In order to speak of fantasy visions, we need to discern a disjuncture between vision and current reality, a blindness for aspects of the present which ought to inform visions for the future [20,21].

In the rest of the paper, we elaborate on the various aspects of the paper. We begin with a short introduction of the concepts of shock and conflict in Section 2, along with a brief on the study framing within an evolutionary perspective in the environmental governance literature. This will be followed by the methodological aspects of this study in Section 3. In Section 4, we introduce the main findings and observations from the two cases, followed by a brief discussion in Section 5 in light of possibilities and theories around the vulnerability and adaptation of urban communities. We provide some reflections on our study in the concluding thoughts in Section 6, also highlighting some limitations and future explorations based on our findings.

2. Climate Shocks and Social Conflict

We frame this study broadly building on the perspectives provided by social–ecological theory and resilience-based approaches in planning that aim to understand cities as social–ecological systems. Systems constantly try to be resilient and adapt to their changing environment, while undergoing a transformation in the process [22–29]. Adaptation in this sense is broadly finding ways and means to find a ‘fit’ between the city and its environment, while a lack of adaptation can create disruptions to the internal functions within the system [30–33].

We use an evolutionary perspective on environmental governance, specifically, an EGT lens (Evolutionary Governance Theory), which argues for continuous observation, strategizing, and coordination to identify limited options available at a particular time for achieving governance goals [7,34–37]. Governance here refers to a form of coordination among actors and institutions in taking collectively binding decisions within a community and place. We make a clear differentiation between government and governance, which means that governance is never the domain of just the formal governments, but a combination of decisions by formal and informal actors and institutions [35]. There is no perfect procedure or design for governance, since it is heavily dependent on the time and context where it is observed.

EGT sees governance as constantly evolving, within which its various elements, i.e., actors, institutions, discourses, power, and knowledge are co-evolving with each other. Using this perspective, shocks and conflicts are seen as related and influencing each other, and both in turn can combine to influence governance contexts. This paper uses these perspectives to observe Bhubaneswar city and identify how specific shock events induced by climate change, particularly cyclone events, combined with existing social conflicts (between slum resident groups and formal planning institutions) to influence planning and governance.

The specific events of systemic disruption when a system fails to find a coordinated governance response are referred to as shocks [8]. We do not use other conceptualizations of shocks within SES literature such as tipping points, equilibrium and collapse, and critical transitions [25,27,38–42] that are rooted within ecological studies and assume that phenomena within natural systems can be mirrored for observations within the social systems. The shocks can emanate from inside or outside the social–ecological system (in this study, the city of Bhubaneswar), such as political coups and wars (internal origins) and climate-induced events and stresses (external origins) [43,44]. As described earlier, we focus our attention on the latter, and more specifically on climate shocks that often manifest in the form of crystallized disaster events that cause temporary or threaten to make permanent changes within the city governance system, and are easily observable [45,46]. At the same time, we recognize that shocks are socially constructed events, meaning they do not occur in isolation from their social and ecological context, and often have far-reaching impacts on other social systems such as economic and political systems [47,48]. Shocks can further influence future risk interpretations and ways to observe and cope with them from within the system, through the creation of new meanings, risk and governance objects, and power/knowledge configurations [49–55].

We refer to conflict in this study broadly as prolonged disagreements, incompatibilities, and struggles between different actors and organizations within a social system concerning the use of resources, organization and development of spaces, or processes of response to shocks [56]. Unlike shocks that emanate from the environment (of an SES), conflicts always have discursive origins within the social system. Conflicts are ongoing processes (not episodic events) that can be observed, resolved, and managed through governance and planning. Conflicts can exist between formal and informal actors and organizations and are dependent upon history, governance context, and degree of trust between actors [8]. Conflicts can be also between different stories and imaginaries about the past, present, and future of communities and their shared spaces. Stories and imaginaries in our governance perspective cf [57,58] are necessary for governance to function, as part of the power/knowledge configurations that drive governance. They can enter governance

from the community, from elite actors, and they can be produced in governance and used to persuade residents of a particular policy or a particular future.

In the context of the climate change literature, conflict is conceptualized within the cause–outcome approach in multiple ways, ranging from the focus on direct influences (of changing climate) in the form of security threats at international and national levels [59–64]; to ecological threats [37,65,66]; and to indirect influences such as climate shocks creating space for conflict [67,68]. Other scholars however argued that these linkages are rather over-simplistic and positivist, and conflict needs better understanding through alternate interpretive lenses [6,69,70]. Our orientation in this study is towards the latter proposition, hence the search for new ways of understanding and interpreting shocks and conflicts.

Both shocks and conflict can be productive as well as destructive. In their theoretical paper, Van Assche et al. [8] highlight how shocks and conflict can be useful in the creation of new narratives within communities, new institutions, new landscapes, and reflective governance insights. Their combinations can potentially spur innovation in governance and sometimes result in fast evolution. Yet, shocks and conflicts, when combined, have negative effects if they force decision making that forgets particular identities and discourses around previous shocks. Within governance, scholars have highlighted how the adoption of short-term coping responses to climate shocks can be potentially maladaptive in the long term [52,71–73].

Despite the theoretical advancement of shocks and conflict in social–ecological systems and resilience theories, their application in southern cities, particularly in informal settlements (such as slums) remains scant. The links between informality and climate change are complex, yet understudied in cities worldwide. Informality in planning practice in general has largely remained outside the scope of formal plans/policies, and this legacy has continued in the formal climate plans [18,74]. Informal settlements are usually seen from an order/disorder lens, thus conceptualized as chaotic, illegal, and unwanted spaces within a city that need revival for meaningful development in cities [75–78]. Due to the ongoing struggle for a city’s spaces, its resources, legitimacy (both in practice as well as in formal plans and policies), as well as access to socio-political networks, the informal settlements within cities are naturally prone to conflicts with the formal planning system [79].

Recent emergent scholarship has however critiqued the above approach, highlighting that existing plans and policies on climate change fail to capture the various drivers of vulnerability in informal settlements [78,80–82]. Studies advocate focusing on the existing realities that exist within the informal settlements, including local risk knowledge, self-organization, and transformative potential of the residing communities, as well as the possibilities around creating seemingly formal institutions and adaptations to multiple overlapping risks emanating from climate change and non-climatic issues. We study the informal settlements in Bhubaneswar through the latter lens on informal settlements—that they are always in flux, always self-organizing in relation to multiple risks (livelihood, political, social, and climate change risks), and in constant interaction with the formal system of actors and institutions. The interactions between the informal and formal systems are never ending, and may result in collaboration and increased participation in some cases and projects, and it may result in conflicts and mistrust in other cases due to disagreements over the organization of urban space. We apply an EGT lens to understand the emerging conflicts in informal settlements in the study area, while also mapping the effects of how the nature of conflict changes when it overlaps with acute climate shocks.

3. Cases, Data, and Method

3.1. Background and Study Area

This study was carried out in Bhubaneswar city, the capital of Odisha state in India. Bhubaneswar has a history that goes back over two thousand years; the city was a religious center, and gradually turned into the administrative capital of Odisha in 1948 after India’s independence. The city grew sharply in the late 1990s and 2000s, with the rapid growth of public and private corporations and infrastructure projects [83,84]. This growth has been

complemented by a rapid in-migration of population groups and a rapid growth in the local economy in the last two decades. At present, the city has a population of 840,834 ¹, with 163,983 persons (19.5 %) in 436 slum settlements [85,86]. The two relevant formal planning actors in Bhubaneswar are the Bhubaneswar Municipal Corporation (BMC), which is the elected urban local body responsible for the implementation of planning initiatives, and the Bhubaneswar Development Authority (BDA), which is the parastatal body responsible for planning activities. Other state organizations such as the State Climate Change Cell, Odisha State Disaster Management Authority (OSDMA), and State Pollution Board (SPCB), along with local and international organizations (World Bank and United Nations Development Program), also coordinate on matters of risk management, adaptation, and resilience along with other general urban development goals.

Bhubaneswar city (and Odisha state in general) has a history of experiencing disaster events; thus, disaster risk reduction thinking has been deeply entrenched in public and institutional memory for decades. Throughout the 2000s, there was a sharp growth in the city, with multiple development projects emerging. During this time, the frequency and intensity of rainfall, as well as disaster events such as cyclones, floods, and heatwaves have increased, as noted in the State Action Plan for Climate Change (SAPCC) that was formulated in 2010, and subsequently revised in 2015 and 2018 [87]. The SAPCC identifies multiple responses through a combination of mitigation and adaptation actions to balance the economic developmental interests with the climate goals of the state. These actions range from industrial pollution and GHG emission reduction to rainwater harvesting and resilient infrastructure toward improved disaster risk communication and updating existing institutional capacity. The state departments and the city municipal body in Bhubaneswar are at the forefront of most climate action in the city. The SAPCC attributes various climate risks in Bhubaneswar to multiple factors that include growing rural-to-urban migration and proliferation of slums in the city, which are making the city less resilient, while acknowledging that these spaces are the most vulnerable themselves to the effects of climate change [87].

Since 2011, owing to the framing within the SAPCC as well as other plans and policies, slums have gradually become a spatial object of governance ² in Bhubaneswar. The new city masterplan in 2011 and SAPCC in 2015 subsequently contributed to the discursive construction of slums as climate risk objects and governance objects, by framing slums as high-vulnerability areas that needed intervention. Consequently, the policy responses within the SAPCC identified affordable housing projects, including various slum redevelopment projects, as a relevant adaptation strategy to reduce climate risks in Bhubaneswar.

In the absence of a city-wide redevelopment plan, the BDA has formulated several slum redevelopment projects throughout the city (as of December 2022, 11 projects are in progress in several parts of the city) to implement the various plans [88]. These projects are guided by central and state-level policies as well as legislations. Noteworthy among these is the central vision of a slum-free India that was launched through the flagship program viz. Rajiv Awas Yojana (RAY) in 2013. In Odisha, the Land Rights for Slum Dwellers Act (LRSD Act) was passed in 2017, which guaranteed limited land rights to all slum dwellers in the state. Consequently, the Odisha Livable Habitat Mission (also known as the JAGA Mission) was launched to provide land titling to slum dwellers in Odisha. The LRSD Act in 2017 did not initially cover large municipal corporations including Bhubaneswar, but eventually was amended in 2022 to include all urban areas in Odisha state, including Bhubaneswar. It is noteworthy here that prior to its introduction in Bhubaneswar, the JAGA Mission has been considerably successful in several towns and cities in Odisha, and has received wide recognition internationally [89].

The 'slum-free' goal of the state was emphasized within the centrally led Smart City Mission 2015 (slum-free neighborhoods to achieve the goal of climate-smart cities). The SAPCC also identifies the need to integrate cost-effective and resilient buildings in existing slum redevelopment projects [87,90–93]. The projects are built through two main implementation strategies—first, through the process of in situ development (provision of maximum

30 sq. meters of land per household to existing residents) or second, by evictions and resettlement in transit homes [94,95]. The LRSD Act, however, provides limited rights to the slum dwellers (no entitlement, no resale and sub-leasing), and does not specify procedures for implementation [96]. In the absence of clear procedures for redevelopment projects in the legislation or the plans, the actual practice of slum redevelopment is dominated by past approaches of slum clearance and relocation through enforcement. In recent times, the Enforcement Wing within BDA has engaged in the eviction of several slums and other unauthorized settlements throughout the city (335 evictions between 2021 and 2022), as part of its slum redevelopment strategy. While many of the evictions have been largely peacefully carried out, there are also several instances of conflicts between the residents of informal settlements and the formal authorities [88,97–99]. These projects that led to local conflict are the cases chosen for this study due to their relevance to the research question.

Considering the above context, slum redevelopment initiatives in two locations within the city were selected for detailed analysis in this study, viz. Shantipally and Pandakudia (see Figure 1). The redevelopment projects in both the slums are ongoing, involving the relocation of six slum settlements in total. The two sites were selected as cases for this investigation since they have a similar history within the city, have similar risks and practices, have some form of self-organization visible, and, most relevant to this study, were both sites of conflict between the local slum resident group and local planning authorities. These two slums were selected eventually based on extensive media coverage of the eviction process since the redevelopment projects started.

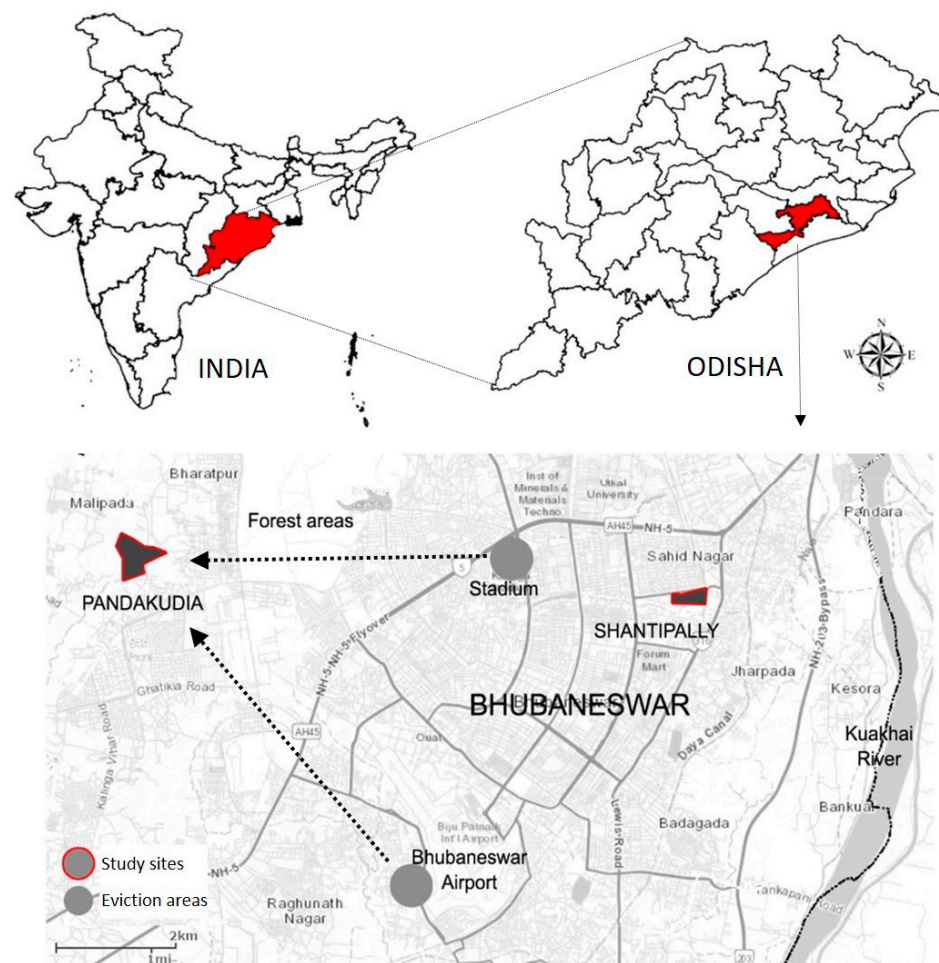


Figure 1. Location of the study area and two slum redevelopment sites in Bhubaneswar (maps sourced from bharatmaps.gov.in and OpenStreetMap (© OpenStreetMap contributors), images collated by authors).

3.2. *Shantipally Case*

The Shantipally slum has existed since the early 1980s in the center of Bhubaneswar city, and is home to over 1200 households at present. The land is in a low-lying area near a watershed area that was for most of the 1990s uncontested land. By the 1990s, with the economic boom in the city, the slum grew in size in recent times. In the early 2010s, to free up previously occupied public land by slums and squatters, various small-scaled eviction drives throughout the city began by evicting squatters, small roadside shops, and temples, but no significant threats were seen to the Shantipally slum due to its strategic location in a seemingly uncontested and unproductive land in the eyes of the burgeoning real estate market³.

3.3. *Pandakudia Case*

The initial eviction drives by the BDA since 2016 had a domino effect throughout the city, with over a hundred evictions of residences, shops, and religious buildings picking up pace in recent years, especially since 2017. Between 2017 and 2021, five slums, viz. Jagannath basti (basti is the local word for slum), Gowda basti, Farmgate basti, Trinath basti, and Laxmi Nagar basti were evicted from various parts of the city and allotted temporary land for rehabilitation in Pandakudia. Of relevance to this paper is the conflict that sprung up between BDA and BMC officials and the residents of Jagannath and Farmgate basti, residents who resisted the eviction attempts for months before eventually being evicted by force to the Pandakudia site in 2018. The reasons for evictions of these slums, as deciphered from various media reports covering the eviction drives, were land acquisitions for airport expansion as well as land clearance for large infrastructure projects as part of the city hosting two international sporting events. During the interviews with slum leaders and residents, the participants highlighted that the slums had a long history of eviction threats since the 1970s (there were conflicts earlier in 1975, 2002, 2006, and 2011 due to eviction threats). However, in 2017, based on our observation and data collected, the eviction threat seems to have been compounded by other powerful discourses in the city, through slum-free policy, climate, and smart city ideas⁴.

3.4. *Data Collection, Method, and Analysis*

We employed a qualitative case study approach in this study. The qualitative case study inquiry is extensively used in planning studies due to its usefulness in exploring 'how' and 'why' questions, and in situations where the researcher has very little control over the phenomena of interest [100–103]. The slum neighborhood is the geographical unit of analysis, while we also analyzed the various stories and statements narrated by the participants of this study based on their content and usefulness to answer the research question of [103]. This study is positioned broadly within a social constructivist paradigm, meaning that realities are socially constructed through subjective meanings and perceptions of individuals, including the researchers. We also adopt an evolutionist lens that emphasizes the importance of understanding phenomena through the lens of temporality. This means that the governance system in a city is always unstable, and changing. The governance system is also observed—especially in as far as different influential actors take collective decisions affecting the neighborhood (in this case, the slums), but also as a place where discourses originate, enter, and transform the neighborhood itself as well as its relationship with rest of the city.

Data collection was carried out between May 2020 and January 2022 using online mode as well as through fieldwork in Bhubaneswar city (we adapted the overall fieldwork based on the restrictions owing to the COVID-19 pandemic). The methods utilized were semi-structured interviews (28 participants), document reviews (of plans, policies, legal documents, and media reports), and direct observation. In total, 9 state actors, 16 non-state actors (including 3 activists and 13 slum leaders and residents), and 3 academic experts were interviewed after recruitment through snowballing [104–106]. The main approach of interview recruitment and sampling employed in qualitative research was based upon data saturation [104]. The focus was thus on the richness of the data collected as opposed

to the quantity, drawing from Maxwell [104]. Guest, Bunce, and Johnson [107], in their exploration of the adequate number of interviews, found that between six and twelve interviews are enough for most qualitative studies. Our sample of 28 respondents is in line with these findings, as well as caters to multiple state and non-state actors. All interviews were conducted either in English or Odia (the local language), following all ethical protocols and data protection standards. The questions during interviews revolved around sharing past and present experiences of the redevelopment project and the existing disagreements between the communities and state officials. The interviews lasted from 45 to 120 min, wherein all questions were open-ended questions.

The interviewees were chosen by us partly by identification of key actors in media and policy documents, and partly by snowballing during the fieldwork, i.e., interviewees pointing at other people as potential interviewees. Interviewees were selected not only because they were 'key actors', i.e., people with influence on decision making and insight in governance, but also, in other cases, because they had a good insight in the processes of shock and conflict locally, or because they represented clearly different perspectives on what happened and what should happen. We ended the process of conducting interviews when we reached a point of saturation, i.e., when patterns of discourse started to repeat themselves, and when the mapping of local governance and the entangling with shock and conflict (the research question) became clear and understandable, and the logic became apparent.

The key data sources were interview transcripts, field notes, memos, and documents. We transcribed all interviews and coded them for descriptive and thematic codes. The codes were both inductive and deductive, based on the existing literature as well as the interview text. Codes were used to capture the emerging themes from the conversations and documents such as self-organization, adaptation practices, risk, and vulnerability. We employed thematic analysis to arrive at the main themes and coding categories relevant to the research question. The findings from the cases are used to arrive at theoretical propositions and generalized theory on SES and resilience theory, as well as policy in similar governance contexts.

4. Findings

4.1. *Shanti Pally Redevelopment Case*

4.1.1. Emergence and Persistence of Conflict

A major turning point in city planning in India came in the form of the introduction of the new Smart City Mission at the national level in 2015. A hundred cities were selected from the list of proposed smart cities throughout India based on a competitive ranking system between cities, with Bhubaneswar city leading the list. Consequently, a smart city proposal and strategies were formulated by 2016, which had overall goals to create specific smart and climate-resilient neighborhoods through area-based development through urban design approaches, as well as digital governance system introduction as the key implementation strategy [84,90,108,109]. Bhubaneswar city's proposal involved multiple slum redevelopment projects (with the aim to build smart and resilient development) in the city that included a large 2232-household redevelopment project near Shantipally, through a PPP (Public-Private Partnership) mode. With the introduction of the new Smart city discourse, new stories were introduced within the city system. Slums became a governance object owing to politics around evictions, and new planning goals were introduced in planning in the form of slum redevelopment that became an active governance strategy. These projects were framed as having co-benefits of being climate adaptive action in the revised Climate Action Plan in 2015 [91]. There was an acute shift in the prevailing stories and imaginaries among planning and municipal institutions, from 'slums as illegal encroachments' to 'slums as illegal as well as risk to climate change and city image'. Interviews with slum leaders in Shantipally revealed that the slum dwellers initially looked up to the new Smart City Initiative as a positive change that could potentially provide them with opportunities. A resident, for example, described the following:

“When the BDA did the Smart City survey, we were overjoyed that we would get all facilities like hospitals, grounds for our kids to play, and many other facilities. It came so suddenly; people here were very happy. We were just happy that our lives will improve.”

As the surveys started for the construction project in 2017, there were severe disagreements that emerged within the slum community itself, with one group of nearly 200 households agreeing to move to the redeveloped apartments in the future, while another disagreed with the terms of displacement, demanding either land ownership or larger apartments. Consequently, as interviewees revealed, the local political parties seemingly entered the scene, and internal conflicts brought out political allegiances to the forefront. There were initial eviction notices and informal coercion that proceeded. A slum leader in an accusatory tone described the following:

“That time there was party politics, they (the authorities) threatened us that they will remove us by force. Due to these threats, we decided to file a legal case to get a stay order from the High Court.”

The residents revealed that they decided to seek help from Right to Information (RTI) activists⁵ who helped the community self-organize through the internal election of leaders as well as provided them with necessary legal assistance to challenge the eviction in court. The conflict became codified when the residents secured a ‘stay order’ from the court, which directed all stakeholders to maintain the status quo at the project site⁶. Meanwhile, due to evictions that continued in other parts of the city, we observed that the conflict became normalized, as stated by an interviewee (a municipal planner) as “quite natural for these slum dwellers to keep coming at us in one way or the other”, and that the state must be “tough to develop the public land in the public interest”.

4.1.2. Entanglement with Climate Shocks

While the existing social conflict was ensuing, the residents refused to be temporarily shifted to a nearby lowland area till the construction of the proposed housing project was completed, citing risks of waterlogging in the area compared to the safety of their present location, which they “made habitable” on their own. A slum leader reflected the following:

“We didn’t trust their words. We would not have survived there. That year (2018) there were floods, and the water reached chest height. Later many of our neighbors who used to oppose us also agreed that if we did the right thing and not moved there, we would have been in big trouble. Our houses would have got flooded.”

Local risk knowledge was likely being ignored in the adaptation frameworks by formal organizations, leaving space for more vulnerability of already at-risk communities. Following this event, the city administration faced a climate shock when the powerful cyclone Fani struck the city, bringing the physical infrastructure and service to a complete standstill for over a week and the social infrastructure for many months. For the slum residents, this meant the exacerbation and entanglements of multiple risks (health, livelihood, and housing risk), as well as the struggle for basic resources. The legacy of mistrust and unequal power relations between actors also likely deepened the conflict over the nature of post-shock recovery. A slum leader reflected on the post-Fani experiences as follows:

“There was no electricity for seven days throughout the city. When the BMC finally restored the electricity in nearby areas, they ignored Shantipally at that time. Only after we protested in front of the electricity Department office did they finally restore it for us after many days.”

With limited help from the authorities during the recovery phase, residents described that they had to rely on local private NGOs for relief, as well as to fix their damaged houses, and had to deal with waterlogging due to incessant rains. This also meant low motivation to invest in any future meaningful household-level adaptation actions, citing that they “will be removed from this location anyway”⁷.

4.1.3. Current Status

The community in Shantipally is hanging on to their existing land, while the case is still pending in court. The old disagreements remain among the actors, and based on our interviews, we interpret logically that the room for negotiations is seemingly narrow at this point. With several other projects within the smart city proposal in various parts of the city going on in full swing, the pressure of holding on is getting more complicated. The emergence of local slum leaders through the help of activists has provided a greater voice to the community, and space for future possibilities for a shared vision for the redevelopment project. Yet, we observed that local knowledge remains ignored in the implementation of the projects, especially in the management of risks as prescribed in the climate action plan that seems to be biased towards expert knowledge on resilience and adaptation, and also tends to have a narrow focus on risk assessment; i.e., a wide range of risks may be identified in the plans, but their overlaps with each other and with other elements of governance are not easy to decipher and are even more complicated to observe and interpret as they unfold in practice. From the case observations, it was clear that chronic social conflict has reduced trust between actors, making even short-term adaptation actions self-contradictory and difficult to implement.

4.2. Pandakudia Case

4.2.1. Emergence of Conflict

The BDA had an incremental approach to large evictions in recent times, as revealed by senior authorities within the BDA. The BDA managed to displace nearly 80 houses in July 2017 before the sporting event commenced. Following this, in early 2018, they demolished nearly 20 shops and the temple that was located at the center of Jagannath basti. This triggered unrest among the slum residents, who decided to protest⁸. A slum leader remarked the following:

“They (authorities) wanted to divide the shop owners from the rest, assuming that the Basti Sanghatan (Slum Committee) will weaken—this is because the shop owners were providing financial support as well as food for our community during emergencies. We (the slum committee) didn’t let them divide us, though. We collected money from all households in our slum to tackle the absence of shops.”

As the evictions continued incrementally, the slums started to reduce in size. The residents revealed that they eventually decided to organize formal protests to negotiate with the BDA and BMC believing they “will find a way to stop the evictions just like in the past”⁹. At the same time, local old rivalries seemingly emerged, with the slum leaders opining that local politicians and leaders who were waiting for electoral gains likely saw this conflict as an opportunity for demographic change (through the removal of the slum) within the area, and thus supported or opposed the eviction informally based on their interests.

Local risk knowledge was yet again likely ignored by the authorities in the redevelopment project, thus increasing the vulnerability of the slum residents due to poor land use decisions. As mentioned earlier in the paper, neither the masterplan, the SAPCC, nor any local policy of the BDA and BMC specifies any rational process involved in the selection of land for relocation of slums. Senior BDA officials within the Enforcement Wing confirmed this during our interviews, while also mentioning that they take decisions “on the ground” regarding relocations, depending upon the degree of cooperation by the slum community and the nature of the conflict. The proposed Pandakudia site is itself in a flood-prone area next to a reserve forest land on the outskirts of the city with a poor access road (revealed during interviews with senior BDA officials, and corroborated through a personal visit to the site). These potential new risks of displacing the community were ignored by the state organizations during the planning process; yet, the slum community was aware of this before relocation. Apart from the usual demands related to property rights and livelihood opportunities, the slum leaders emphasized in our interviews that they conveyed to the authorities the local risks associated with flooding and human–wildlife conflicts (the site is close to an elephant reserve). A slum leader during an interview remarked the following:

“When we got the news that they were planning to shift us to Pandakudia, some of us had visited these places out of curiosity. Just like they were surveying our slum, we were surveying their proposed site. We saw that the area was almost a forest with wild snakes and elephants. We also saw that the main access road was always waterlogged, even on non-monsoon days.”

4.2.2. Negotiations in a Context of Conflict

As the dates of the Hockey World Cup in 2018 got nearer, the eviction drives of the BDA and BMC intensified, likely due to the pressures of achieving major development milestones before the event. While the authorities began their surveys of the households to be rehabilitated, the slum committee organized protests demanding land tenure. There seems to have been informal coercion by the authorities by deploying the police force “that looked like from outside the state since they did not speak the local language” as a strong deterrent against any potential violent protest. The residents on the other hand threatened the authorities with further protests during the sporting event to “protest and embarrass the authorities” as a countermeasure ¹⁰.

Eventually, the residents agreed to negotiate with the authorities over the details of compensation to be provided to the affected families. Upon negotiation, the authorities helped the community move to the new location by providing them with transportation and basic needs for a few weeks (such as water supply and temporary roofing material). A slum leader recalled the following:

“First they said they will settle us in another site on the outskirts of the city. We refused. After much arguments back and forth, finally, the Mayor and the Municipal Commissioner said that they will offer 35,000 rupees. They promised to construct one toilet for 10 houses; also they gave each house 120 square feet in Pandakudia. We did not agree, but what choice did we have”.

4.2.3. Acute Shocks and Spontaneous Adaptation

Only a month after the residents were displaced, the community was exposed to a major climate shock (Cyclone Titli in 2018) that created further precarity, since the residents had not yet recovered from the displacement. A slum leader in the Pandakudia site recalled the experience as follows:

“The two cyclones (Titli and Fani) hurt us badly. Due to heavy rains, the water flew downstream here from the jungle area and washed away many of the walls since they were merely built. All the sand that was accumulated here for construction was washed away. We lost a lot of valuables such as a TV, refrigerator, and fans. So basically, the 35,000 that we received as compensation, we lost most of it to the cyclones.”

Another slum resident highlighted how local coordination among volunteers and community leaders was instrumental in temporary and spontaneous recovery actions:

“During cyclone Fani, the roofs of our houses started flying in the air. All the electric poles were bent during the storm. The Electricity department initially did not respond to our complaints. How long could we wait? After a few days without electricity, we organized volunteers from all the slums here and restored it ourselves. It took us 7–8 days of constant hard work. Even the houses, we had to reconstruct by ourselves. They just gave us 10 kg rice and 2000 rupees after the cyclone.”

The double exposure caused due to overlapping risks (from climate shocks, and development projects, plans, and policies) also brought about spontaneous coordination among formal and informal actors, a positive effect of the combination of shock and conflict. For example, during the cyclone events, the government disaster community officers collaborated with the residents to effectively communicate risk and manage the evacuation and post-disaster relief process, as revealed by several interviewees. This local coordination helped the community cope with shocks with the loss and damage limited to material assets and livelihood threats. A slum committee leader described how lower-ranked officials from the BMC “contacted us informing about the cyclone 2–3 days before it came, and also

helped a lot by arranging relief materials". Yet, these collaborations were mainly with the state departments about whom the slum leaders spoke positively during the interviews, suggesting that the conflict may be a legacy of past local antagonistic relationships. Further, the collaborations were also limited to post-disaster relief, while the long-term recovery was left in the hands of the local governance system. Many new risks increased, such as loss of old social networks and linkages, as well as weaker access to schools and hospitals due to increased distance (many interviewees reported that school dropouts increased after the cyclones). Apart from these, interviewees revealed unanticipated effects of the original conflict in the form of the emergence of smaller conflicts, several smaller clashes occurring among the newly displaced communities and older urban villages nearby related to the construction of religious buildings and access to resources.

4.2.4. Current Status

As the communities focus on recovery from the recent shocks and adapt to the continuous and intertwining risks, conflict seems to be naturalized from both sides, thus reducing possibilities for long-term resolution or management. A senior planner expressed the larger public interest behind going ahead with evictions, during an interview:

"Every eviction meets with resistance. The government has to go ahead, and the proposed projects have to be built in the greater interest of the city. At times, the officials have been attacked. This is natural, it happens all the time."

In Pandakudia, while the conflict between the BDA and slum dwellers remains unresolved, the prolonged nature of conflict has also resulted in certain unexpected yet very useful outcomes in the form of local NGOs ¹¹, often with organizational and financial support from international agencies, now helping the residents by providing livelihood support (facilitating financial loans, enrolment of children in nearby schools, retrieval of lost documents, access to jobs, etc.). As a result, local adaptive capacity has improved in recent times, although uncertainties over future evictions remain a possibility due to a culture of mistrust between the formal and informal actors. While newer government guidelines around the provision of land to the slum dwellers have been proposed, it remains to be seen how they play out in improving the adaptive capacity and dealing with future risks of the residents, and especially how they are implemented in the context of existing relationships.

5. Discussion

In this section, we shall discuss the above observations from the cases presented through a reflection on the complex and contextual interactions between conflict and shocks within a particular governance and policy domain. We make three broad observations based on the cases and link them with the existing literature. Following this, we point at several implications for climate risk governance in theory and practice, and finally provide some reflections on future possibilities.

First, the cases discussed demonstrate that the slum redevelopment initiatives in Bhubaneswar city rely on three strategies, viz. through eviction, demolition, and displacement; active and passive coercion to negotiate land tenure; and passive neglect in the aftermath of the shock events [110]. Both the Shantipally and Pandakudia cases highlight that slum demolition and relocation remain the most active and favored risk governance policy by formal organizations and institutions. This is based on the objective observation and assessment of slums as a governance risk (including climate governance risk), and consequent attempts to formalize them as a policy response.

Second, this study highlights how particular policy domains (in this case climate risk and smart development policies) can engender local conflict, when specific aspects of formal–informal interactions are not sufficiently addressed in the formal plans/policies and when implementation faces resistance [6,111–113]. Consequently, the possible pathways to observe risk, the vulnerability of marginalized groups, and options to respond to climate shocks are influenced. The dominant planning and governance approaches, as we inferred through our analysis of Bhubaneswar's plans, policies, and legislations, are inspired by

modernism, through prescriptive ideas and discourses associated with climate change, resilience, and urban development. We refer to ‘modernism’ here as an approach to policy, planning, and administration where strong state administrations and their experts practice the belief that they can objectively map out society, define problems, and articulate, with scientific help, neutral and optimal solutions. In this case of planning, this can be linked to a belief in ‘the best’ possible organization of space through design or institutional procedures [114,115]. We argue based on the synthesis of our findings that the state-led smart city projects and large image-building infrastructure projects are a manifestation of these policies, which are in this case based on a biased and only partial observation and judgment of risk (including climate risk), resulting in selective use of governance tools and instruments. In doing so, the governance tools continue with a chronic ignorance of contextual factors such as local risk knowledge (based on history and lived experiences of previous disaster events), existing nature of conflicts, informal institutions within slum settlements as well as the plans themselves, livelihood networks, and local vulnerabilities that determine urban practices and adaptation choices of slum dwellers.

Third, this study revealed how climate shocks and their entanglements with existing social conflict made the overlaps between different climatic and non-climatic risks more visible and easily observable [116]. In the cases discussed, local risk knowledge and associated discourses that were previously not part of the land conflicts came to the surface after the shock events, with the slum resident groups highlighting local risks as a key factor in their refusal to relocate. Both the residents of Shantipally and Pandakudia, in the reflections on the current status of conflict as well as future aspirations, brought up flood and cyclone risk knowledge into the discussion. Risks from climate shocks also increasingly became inseparable from livelihood and social risks that the residents faced due to the shocks and the conflict. We further reflect and add that important climate shock events can be crucial sites of scholarly inquiry to use analytical tools to observe risks and help identify and open up ‘black boxes’ within existing risk governance approaches. We point to a dominant methodological challenge for risk governance, that is related to managing overlapping risks [3,117–120]. In the present cases, conflict increased the slum community’s vulnerability to a plethora of risks (climate, non-climate, and risks from the decisions based on fantasy and imaginaries of smart-resilient neighborhoods). Old narratives of conflict and mistrust between the slum residents and the authorities limited the possibility of adaptive response to the cyclone event, even though interdependencies improved momentarily during the cyclone-preparedness phase with evacuation and relief work carried out seamlessly by the coordination of formal and informal actors.

Implications for Climate Risk Governance

Based on the case findings and discussions, we identify two implications for climate risk governance. First, based on our interviews of state and no-state actors, as well as direct field observations, there is a strong indication of the permanence of conflict within climate risk governance [6]. This is corroborated in theory, because conflicts never die in social–ecological systems, and resolving them may be theoretically impossible [8,53]. Since conflicts are inherently discursive, they are never stable, and with time become temporarily dormant, normalized, or evolve into disagreements between different narratives and discourses. This was observed in the cases presented, wherein the discourses used by the formal and informal actors changed abruptly after the shock events, so the conflict did not die, but evolved into new narratives. In spite of their best interests, we contend that the existing plans and policies have clear assumptions about future development; and by not specifying the nature of redevelopment, the plans directly affect the informal system through forced evictions and hence create the potential for local conflicts.

Second, as presented earlier, certain aspects of social conflicts may be productive from a climate governance perspective. This was observed specifically in the Pandakudia case, which highlighted how the conflict between the formal and informal actors resulted in improved self-organization strategies developed by the slum residents to adapt to

the various perceived risks from formal imaginaries. These coordination mechanisms (for example between the Pandakudia community and the BMC officials) become the backbone of the community in dealing with climate shocks, by helping coordinate better local adaptation actions during the crisis, even though they are short-term and spontaneous. When conflicts combine with shocks, they provide room for opening up of previously hidden black boxing of notions about risk, reflections on existing institutions, new power relations between actors (possibly through more formal and informal recognition of local knowledge by the planning institutions, increased media attention, and help through social entrepreneurship such as the NGO in the Pandakudia case), and the emergence of new discursive directions in policies and tools. In this sense, conflicts and their complex entanglements with shocks can hold important governance and planning lessons.

In practice, we contend that much planning and risk governance tend to focus on either ending or resolving the conflict as an end goal. This is faulty due to the reasons discussed above. We argue for plans, policies, and risk management approaches to be more conflict-sensitive. We recommend that the focus thus should be on what happens when the conflict is seemingly temporarily managed, especially its implications on the vulnerability of the communities involved and reflecting on the long-term adaptation capacity through policy and governance. Avoiding or partially acknowledging social conflicts in the formal governance frameworks and tools is a futile exercise, especially when observed within local informal settlement communities. In this context, we argue that prescriptive governance frameworks based on clear assumptions of a top-down and expert-driven modernist approach as seen in Bhubaneswar have too many blind spots by failing to acknowledge local complexity and conflict. They may rather benefit from being more reflexive about their potential contribution towards an exacerbation of existing conflicts, the emergence of new vulnerabilities, as well as undermining of existing locally scaled adaptation possibilities. Based on document analysis of existing plans as well as interactions with the state actors, we further advocate for the inclusion of conflict management approaches within risk governance frameworks and risk reduction policies [121,122]. In the case of informal settlements as those studied in this paper, the inclusion may be approached by being more reflexive about the historically dominant narratives and imaginaries about informality in formal plans; focusing on the inclusion of alternate discourses, stories, and local risk knowledge; and striving towards stable institutional arrangements within informal settlements to identify, assess, and reduce risk.

6. Conclusions

We set out to understand the effects of the combination of social conflict and shocks and conflict on risk governance, in the context of informal settlements in Bhubaneswar. Based on our study findings, we strongly argue that conflict is rather permanent and certainly prevalent in social–ecological systems—even though conflicts may become dormant—and thus cannot be ignored in climate risk governance. Shocks are crystallized events where climate change manifests itself materially and socially within social–ecological systems. At the same time, shocks make existing and past conflicts more visible in certain contexts, while in others, they may blur conflicts. In the cases discussed earlier, on the one hand, shocks exposed the conflicts emerging from the existing affordable housing initiatives-related eviction attempts of the local state authorities, and on the other, the formal–informal boundaries temporarily became blurred due to small-scaled local attempts at adaptation and response that relied on local knowledge and support to absorb the effects of shocks.

This study demonstrated that slum redevelopment in Bhubaneswar as an adaptation strategy and risk governance tool through its modernist tendency is accompanied by the baggage of unwanted outcomes such as the patterns of exclusion by being blind towards existing and anticipated conflicts, by focusing on particular risks while ignoring others, and through the construction of new risks and opportunities and associating them with particular spaces within the city. Although this may not be the norm across all redevelopment projects, this observation is made based on the cases that result in conflict. In

this context, an abrupt change in the form of forced evolutions and spontaneous adaptation can be brought about through sudden experiences with shocks, which adds uncertainty to risk governance.

We provided insights into the complex entanglements of conflict and shocks within particular risk governance and urban development contexts. This is useful for social-ecological systems and resilience theory in general, which tend to obscure the role of local conflict. We argue for a reassessment of local narratives around risk and conflict within the climate governance literature that tends to focus on conflict in the context of the global climate crisis also see [3,73,123]. The analysis is immediately useful for southern contexts marked by informality, slum clearance, and self-organization, all contributing to risk exposure under climate change, but it has considerable implications for other parts of the world where the planning system is based on hybrid combinations of modernism and institutionalism. The Bhubaneswar cases reveal the myriad risks coming with risk governance approaches in a modernist paradigm, i.e., relying on expert discourses, specialized and segmented governance domains constructing their own risks, blindness for local knowledge, hostility towards informality, aversion to conflict, and linear relations between risk perception, assessment, and management. Such a modernist paradigm of risk governance can be recognized across the world and seems reinforced by the feeling of urgency, sometimes panic, engendered by climate change.

Bhubaneswar shows us that blindness to conflict in the formal system can engender new conflict during planning interventions and reduce resilience when responding to shocks. The cases demonstrate that ignoring existing forms of self-organization, local knowledge, and adaptive formal-informal relations can undermine resilience and increase risk. They reveal that, as noted above, risks never exist in isolation from each other, and are never detached from perspectives on the future. Comprehensive approaches to risk management, such as slum evictions, can thus never be comprehensive if they focus on one type of risk (development risks for example), and they will be blind to alternative strategies and opportunities while creating new and invisible risks and most likely new and evolved conflicts.

Climate change adaptation discourse, and the associated risk governance ideas, in many places, come with a risk of reviving and reinforcing modernist policy and planning fantasies. This often leads to a renewed blindness for alternative interpretations of place, opportunity, and risk, and reinforced positions of power of bureaucratic, political, or economic elites seeing the potential of the new climate risk discourses to pursue old goals [124,125]. This then can create or maintain social conflict, especially in places with a history of groups having been excluded and marginalized in governance, where opportunities are scarce and scarcity is a real problem [126]. In this sense, we recommend that future climate and development plans/policies in Bhubaneswar and beyond need to be more conflict sensitive, and not just be driven by resilience frameworks which in our interpretation borrow from modernism, and tend to ignore local knowledge and local risks in informal settlements, a dominant part of the urban landscape in many southern cities.

By acknowledging the existence and permanence of local conflicts in cities, climate plans and policies can also focus on incorporating experiences around productive aspects of combined shocks and conflict that may provide space for new forms of local collaboration between formal and informal actors. This may help sustain these short-term collaborations by not being limited to post-disaster recovery and spontaneous adaptations, but by promoting sustained resilience in the long term. Furthermore, we also recommend that formal plans and policies around climate risk take cues from the framework and results presented in this study to become more reflexive in the future by asking critical questions about why and how slum redevelopment has been accepted as a climate adaptation and smart development strategy, as well as the risks associated with such decision making.

Resilience and adaptation in cities can be planned and unplanned, it can be the result of routine responses in governance and by a group of individuals, and it can be the result of intentional responses to change in planning and long-term strategy, when these activities are not under the label of 'resilience'. Nor does a contribution to de facto resilience need

to be a type of response to a type of change that is also recognized in the community as relevant for resilience. In fact, the response itself, planned or unplanned, might not be closely connected to any easily recognizable feature of resilience, but only very indirectly contribute to the resilience of the system [37]. This brings us to the basic idea, compatible with General Systems Theory [127], that resilience cannot be a list of system features that can be the end goal of planning and policies, but has to include a consideration of fit between the system and environment. In our cases, the resilience of the informal settlements hinges on internal features and on the relation with the rest of the city, while the resilience of the city as a whole can be seen in a similar way, in relation to the state. Our cases strongly indicated that the legacy of shock and conflict increased the opacity of the governance system for itself, as well as the opacity of the environment for the governance system. If we can consider governance as a basic feature of a resilient system, and a relation with its environment whereby opacity is a problem for resilience, then the observed situation does undermine resilience in the longer term.

We conclude the paper by making a final argument that it is more fruitful and realistic to present the relations between risk perception, assessment, and management as non-linear and as multiple and competing. We contend that risk governance has to be at the foremost ‘governance’, that is, the deliberation and taking of collectively binding decisions to address the risk (to mitigate, ignore, compensate, etc.) and this has to fit the overall principles and direction for the development of the area adopted in the relevant governance arena. Focusing on risk rather than opportunity is a decision that ought to be taken in governance, as is the privileging of one type of risk over others, or of one relation between risk factors over others. Not recognizing these principles is de facto de-politicizing not only climate and risk governance but governance as such [128]. The relations between risk perception, assessment, and management, moreover, will be affected by shock and conflict, and vice versa [129]. A shock event potentially engenders shifts in risk perception which are never entirely predictable; it can create conflict, while existing conflicts are very likely to frame the perceptions of risk and opportunity by actors, as well as the perceived options for risk management. In many southern cities, where there often exists a mistrust between the formal and informal systems, the risk perception of slum dwellers is always likely to be affected by the anticipation of conflict and make them suspicious of new resilience initiatives [54,108]. Shock and conflict are thus inextricably linked to climate risk governance, and a modernist delineation and isolation of such risk through plans, policies, and actions from the rest of governance is bound to make the formal system blind to these essential intricacies.

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Notes

- 1 The last Census in India was held in 2011.
- 2 Objects of governance in the EGT lens are produced through discourses and practices of thinking and action, though the processes of reification (conceptual surfacing through discourses and action), solidification (internal differentiation and articulation of elements within the system), and codification (creation of distinct system/environment boundaries).
- 3 Based on interviews, personal observation during field visit, as well as informal discussions with residents.
- 4 Sources: interviews with slum residents and key informants within BDA, media reports, and document analysis.
- 5 The Right to Information (RTI) Act, 2005 in India mandates timely response by state officials to citizen queries and requests related to government information. The Act was brought to empower citizens and promote accountability and transparency in the governance process at all levels (central, state, and urban/rural bodies). RTI activists use the RTI Act as an instrument to legally challenge eviction attempts by state authorities.
- 6 Based on legal case documents shared by participants during interviews.
- 7 Source: interview with slum resident.
- 8 It is interesting to note that the slum residents here did not decide to pursue a legal stay order like the Shantipally residents; when probed about it during the interviews, several residents leaders noted that such an approach “wouldn’t work in the long run”.
- 9 Source: interviews with slum residents and leaders.
- 10 Source: interview with slum leader.
- 11 In Pandakudia, the CSNR (Centre for the Sustainable use of Natural and Social Resources), a local NGO, has been instrumental in providing livelihood support to the displaced residents.

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