Urbanising disaster governance

The politics of risks in the foothills of Santiago

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Publication date
2021

Citation for published version (APA):
Planning for exclusion: The Politics of Urban Disaster Governance

43 This chapter is a revision (with edits in 5.1 and including an afterword) of the article published as: Fuentealba, R., Verrest, H., & Gupta, J. (2020). Planning for Exclusion: The Politics of Urban Disaster Governance. Politics and Governance, 8(4), 244–255. http://doi.org/10.17645/pag.v8i4.3085
5.1 INTRODUCTION

Cities are important sites for realising climate change adaptation and disaster risk reduction (DRR). This requires urban governance to move away from state-centric, top-down approaches towards more horizontal and coordinated work with communities and relevant actors. Research on factors contributing to ‘good governance’ of disaster risk highlights the need for cities to reduce vulnerability and hazard exposure while enhancing democratic and effective protection (e.g. Ahrens & Rudolph, 2006; Gall et al., 2014; UNDRR, 2017b). However, while urban disaster governance can promote sustainable and resilient development, achieving such goals in practice is complex. Normative and technocratic approaches do not adequately address the political dimensions of city governance (Swyngedouw, 2005; Tierney, 2012). Academic research increasingly focuses on decentralisation and scale (Marks & Lebel, 2016; Rumbach, 2016a), accountability (Raju & da Costa, 2018), informality (Parthasarathy, 2015), community participation (Pelling, 2011b), networks and co-governance (Srikandini et al., 2018), urbanisation trends (Miller & Douglass, 2016), and vulnerability (Sandoval & Voss, 2016). These papers emphasize how institutions, socio-political relations, and discourses are coordinated and mediated in city contexts (Marks, 2015; Wamsler, 2006).

We aim to contribute to this literature on the politics of disaster governance by analysing the practices involved in land use planning as a particular instrument for reducing risks in cities. Land use management has been regarded as a more effective, systemic and integrated way of dealing with hazards, in comparison to using singular instruments such as warning systems, relief and insurance, or structural measures (Burby, 1998). The basic notion in this context is that, “rather than trying to keep the flood out of people’s way, government [should work] to keep people out of the flood’s way by discouraging development of hazardous areas” (Burby, 1998, p. 9). Land use planning for DRR includes zoning regulations, building codes, flood-proof requirements, the acquisition and transformation of land, or information regarding design techniques (Burby et al., 2000; Godschalk, 2003). It holds a crucial opportunity for managing risks in cities and, being embedded in the wider functioning of the urban system, involves a number of governance innovations (Asian Development Bank, 2016). As formal urban development results from land use planning, the presence of informal settlements in hazardous spaces is regularly seen as a failure of governance (IFRC, 2010).
However, all such interventions will have winners and losers: “land use planning, while superficially a technical act, is more often a reflection (not to say tool of) the dominant interests in a city and their vision for its future” (Pelling, 2011b, p. 384). Evidence shows that many well-meaning land use planning approaches produce unintended, ambivalent and unjust results in space (Sandoval et al., 2017). Land use planning can negatively affect already disadvantaged groups and “protect economically valuable areas over low-income or minority neighbourhoods” (Anguelovski et al., 2016, p. 334); adopting a coastal buffer zone produced socio-economic disparities, livelihoods lost, and ecosystem damages in post-disaster Sri Lanka (Ingram et al., 2006); the selective application of high-risk zones in Manilla in the name of resilience has led to evictions (Alvarez & Cardenas, 2019). Disaster governance can exacerbate vulnerability by (re)creating some ‘unsafe conditions’ (Sandoval & Voss, 2016). Although literature asserts that DRR – like all policy interventions – is a political process, there is still a need to expand this knowledge in terms of how DRR governance evolves over time and how and when policy implementation produces certain effects on the ground. Clearly, post-disaster politics is very complex (Ingram et al., 2006; Pelling & Dill, 2010). Hence, this paper asks: under what conditions does the implementation of land use planning for DRR produce and/or reproduce spatial injustice on the ground? We answer this question using an urban disaster governance framework and applying it to a case study in Chile where, following a landslide disaster in 1993 in the foothills of Santiago, the authorities developed a disaster risk management plan including a buffer zone in order to reduce the risks of future landslides.

This chapter first presents a conceptual discussion of urban disaster governance, then the research design, followed by our findings, and a discussion and conclusion section.

5.2 THE POLITICS OF URBAN DISASTER GOVERNANCE: UNPACKING A CONCEPTUAL FRAMEWORK

Our framework combines the politics of governance with critical understandings of disaster risks and urban space, and aims to develop a situated analysis of urban disaster governance. The politics of governance refers to how different actors network, participate, and collaborate to solve their own problems (Bevir, 2013; J. Gupta, Verrest, et al., 2015; Torfing et al., 2012). While a normative understanding of governance focuses on what constitutes ‘good governance’ and calls for legitimacy, accountability, efficiency
and other such principles, this is critiqued for being implemented technocratically, obscuring political dimensions and prioritizing efficiency over equity. As such it may actually undermine democratic principles (Swyngedouw, 2005) and oversimplify complex social processes, resulting in “policies [that] often do not fully achieve the envisaged objectives and regularly have unintended consequences” (Di Baldassarre et al., 2014, p. 136). An analytical perspective on governance considers it as inherently political, encompassing differences, contestations, and power-laden decisions (Castán Broto, 2017; J. Gupta, Verrest, et al., 2015). For urban disasters, these include contesting visions of governing cities and their consequences for producing vulnerability and hazard exposure, as well as how power influences actor relations and shapes institutions, particularly in a context of decentralising fiscal and political competencies. For example, an ‘incomplete decentralisation’ in Thailand led to a transfer of mandates without accompanying resources to lower governments which unevenly increased flood risks (Marks & Lebel, 2016). Hence, there is a need to unpack the inherent power relations between actors in existing horizontal and vertical arrangements.

We focus here on everyday practices of governance as a fruitful way for understanding politics of policy design and implementation (Cornea et al., 2017). Such governance processes involve continuing negotiation and adaptation of norms and plans, and in these negotiations, issues may be technocratised by those with power (Ferguson, 1994). The “bias in disaster governance research” also privileges a focus on state-based processes over bottom-up and informal engagements (Huang, 2018, p. 384). Therefore, focusing on everyday practices helps to understand the informal and open-ended nature of certain formal structures in space (Koster & Nuijten, 2016; McFarlane, 2012; Roy, 2005; Yiftachel, 2009), such as disaster risks and informality (Parthasarathy, 2015) or coastal resilience planning (Weinstein et al., 2019), and exposes the unintended effects arising from (de) politicised settings (Marks, 2015).

We link urban politics, disaster risks, and injustice. Urban problems (e.g. inequalities, exclusions) do not just reflect governance failures, but arise from how governance systems work, as results of socio-spatial processes of stratification that represent particular (in)justices (Harvey, 1973; Soja, 2010). Such problems are exacerbated during disasters, understood not as natural but deeply social and contentious phenomena that can increase marginalisation (Susman et al., 1983) and vulnerability (Wisner et al., 2004), calling for a focus on root causes (Oliver-Smith et al., 2017) and disaster justice (Douglass & Miller, 2018; Huang, 2018; Nygren, 2018). We argue that analysing spatial
(in)justices is not only about describing the end state of social groups in space, but also about the relational and multilevel structural processes that put some people in marginal positions (Wacquant, 2015). Hence, we focus on “how, and where, power is being exercised, to whose benefit, and how it leads to urban development where risk is unequally distributed” (Rumbach, 2017, p. 784). Locating spatial injustices thus entails expanding on the distribution, procedural, and recognition dimensions of justice as exerted and produced by situated practices of governance.

We integrate the above in a conceptual framework presented in Figure 5.1, which visualises the need to mediate land use planning and its multi-level implementation arrangements through what we call their everyday governing practices. By addressing the interaction of these practices with grounded actors, that is, how planning interfaces with communities on the ground, we can further understand the ambivalent consequences of positive DRR outcomes along with socio-spatial (in)justices that emerge. Ultimately, this can help to address the process of implementation and outcomes of land use planning that make DRR not only ineffective but also unjust.

Figure 5.1 Framework to study land use planning
5.3 RESEARCH STRATEGY

We combined qualitative and spatial methods for understanding the implementation of a land use plan in Chile. We conducted six months of fieldwork focused on an area of the foothills of Santiago, characterised by steep slopes and hazardous hydro-geological formations (Muñoz, 1990; S. A. Sepúlveda et al., 2006). We gained access through a long-term resident of the foothills and later followed a snow-balling process for identifying and contacting key informants. We conducted 48 in-depth anonymized interviews that included: members of the local communities and residents with experience in planning initiatives; municipal representatives working on urban and emergency planning, politicians and representatives of National institutions, and experts in Chilean urban planning. We also conducted participant observation in community meetings related to risk awareness and emergency planning. We analysed relevant policy documents, historical archives, technical and scientific studies, reports of past disasters, and the planning instruments designed and implemented in the aftermath of a landslide disaster. During our fieldwork and document analysis we identified the scale and interrelation of actors to consider both vertical and horizontal arrangements in place. As we show below, our case represents a local-level phenomenon embedded in hierarchical and top-down arrangements that are critically affecting the land use implementation and its outcomes. Finally, we used official spatial data (www.ide.cl) to map some particularities of the land use.

On May 3rd 1993, heavy rainfall and high temperatures produced a debris flow or ‘alluvium’ in the Macul Ravine (Naranjo & Varela, 1996; ONEMI, 1995). The ensuing floods impacted 28 thousand families in east Santiago, damaged 5,610 housing units and destroyed 307 (ONEMI, 1995). The most affected households belonged to La Florida, a comuna (Chile’s lowest tier territorial division) in south-east Santiago. 23 people died, eight disappeared, 85 suffered severe injuries, and 3,800 people lost their home. The relief and recovery entailed victim relocation to an emergency camp for almost two years, and subsequently to a newly constructed public housing project called Santa Teresa located near their original dwelling, but in an area protected from the overflows of the Macul Ravine (SEREMI–MINVU, 2013).

For our fieldwork we focused on the poblaciones (neighbourhoods) of La Higuera and Ampliación La Higuera near the bank of the Macul Ravine, in La Florida. These poblaciones developed through rural migration during the 1960s and 1970s, accessing
urban space either through land occupations or via state housing policies (Astaburuaga, 1987; Muñoz, 1990; SEREMI-MINVU, 2013). We also focused on other sites throughout the foothills, where most of the original residents currently live: the Santa Teresa, El Esfuerzo and Las Perdices neighbourhoods; visited community centres, and the seven mitigation ponds constructed for reducing risks in this area (MOP, 2006).

We contextualised this field research in relation to Chile’s institutional development. The country’s response to disasters, despite their frequency and magnitude, has been a reactive one (Camus et al., 2016; Sandoval & Voss, 2016). This includes the processes of post-disaster recovery as well as more long-term risk management principles, which have tended to be improvised and less planned. In relation to the institutional background of urban planning in Santiago, this emerges from different levels of government. While national laws provide the general institutional framework, regional and local instruments provide the details of land use planning. The latter include the Metropolitan Regulatory Plan (Plan Regulador Metropolitano de Santiago, PRMS), which aims at developing space in the whole region, comprising 52 comunas (MINVU, 1994). The PRMS defines land uses for the metropolitan area, including areas excluded from development due to natural hazards. On the local level, each comuna should have a Master Regulatory Plan (Plan Regulador Comunal, PRC), which details land uses within their urban limit. Chile’s historical decentralisation process contributes to such urban planning arrangements, which are characterised by strong centralisation, metropolitan fragmentation, and weak capacities in the lower tiers (CNDU, 2017; Garreton, 2017), characteristics that also affect negatively disaster governance (Sandoval & Voss, 2018).

5.4 FINDINGS: GOVERNING LAND USES, RISKS AND EXCLUSION IN THE FOOTHILLS

5.4.1 THE EMERGENCE OF A POST-DISASTER MULTI-LEVEL ARRANGEMENT

Following the impacts of the 1993 disaster, the Interior Ministry issued Decree 765 declaring a “Zone affected by the catastrophe”. This supported relief and recovery for the victims settled inside it, enabling them to access housing subsidies and relocation procedures to the Santa Teresa village. In 1994, after decades of ignoring Santiago’s natural system (Larrain, 1992), a new Metropolitan Plan was approved (MINVU, 1994). This plan included a number of risk zoning regulations that had to be implemented with its formalisation. Among other norms, the PRMS defined areas adjacent to ravines as
“Ravine parks” (PRMS Art. 5.2.3.3), where only recreational and other non-permanent activities are allowed; it identified areas susceptible to flood from ravines, where development is restricted or human settlements prohibited (PRMS Art. 8.2.1.1); and introduced similar restrictions in relation to geophysical risks, particularly from landslide hazards (PRMS Art. 8.2.1.4). Given the lack of PRC in the foothills of La Florida, the PRMS mandated that these norms were applied to this new urban space without discussion in the aftermath of the 1993 disaster, first on a temporary basis and then formalised in 2001 with a new PRC. This hierarchical and top-down application of land use norms created a 300,000 square metres zone alongside the Macul Ravine, with a minimum of 100 metres width on each side in which urban development is prohibited or restricted.

Map 5.1 *Area with risk-related norms in the PRC and the urbanised buffer zone*

Map 5.1 shows the restriction zones adopted in the research area associated with the aforementioned restrictions: ravine parks (AV3), flood risks (R-1), landslide hazards (R-4). The map shows that La Higuera and Ampliación La Higuera are visible as part
of the buffer zone. The changed land use transformed these areas by dividing each into a formal section (where uses include residential, commercial, and socio-cultural activities) and an informal section with restricted land use possibilities. Map 5.1 also shows that the buffer zone ignores block divisions and streets, running through many residential plots. The exclusion zone affects those residents whose homes fall now in the restricted zones: about 694 people in 99 households. Here we also find two informal campamentos (a type of informal settlement in Chile), the Santa Luisa and Quebrada de Macul, inhabited by 61 families.

The PRMS has triggered multiple transformations in the foothills, for example expanding Santiago’s eastern limit, increasing the urban density of the foothills of The Andes and generating conflicts and environmental mobilisations (Biskupovic, 2015b). Regarding the exclusion zone, this area corresponds in part with the zone of the aforementioned Decree 765, thus, where the bulk of the disaster victims were located. However, the rapid and vertical imposition of this arrangement and the buffer zone through a number of governance features practices has impacted the lives of the local people for more than two decades, as detailed in the next subsections.

5.4.2 PRACTICES OF IMPLEMENTATION: PARTICIPATION, ENFORCEMENT AND MANAGEMENT

We now assess the implementation of this post-disaster land use, focusing on three key governance practices explaining the current state of the buffer zone: voluntary relocation, arbitrary enforcement, and the management of acquired land.

After the 1993 disaster, the housing authorities under the Ministry of Housing and Planning (MINVU) played an important role, particularly SERVIU (Service for Housing and Planning, which implements MINVU’s plans and policies). SERVIU managed the emergency camp after the disaster and developed the Santa Teresa población for housing disaster victims permanently (ONEMI, 1995; SEREMI-MINVU, 2013). Most people residing in the camp were offered and accepted relocation to Santa Teresa. However, some residents from Ampliación La Higuera and La Higuera returned to their homes after the disaster, as their homes had not been destroyed. Inhabiting a risky area according to Decree 765, interviews reveal that SERVIU developed a “semi-voluntary process of negotiation” to relocate them in the
new población. Government officials would approach property-owners and offer an exchange between their home and one in Santa Teresa (depending on the value of their home this would be an apartment in a three-storey housing project or a house unit). Many residents accepted this and exchanged property rights. But despite pressure, some families continued to live in the exclusion zone. The semi-voluntariness of the process was thought to push local residents to “exchange their properties or lose everything”, but as the housing units of many were still standing, they risked remaining there for different reasons. As one interviewee explains: “if I exchange my house and plot from one in Santa Teresa, I leave here all of my memories and experiences... they do not go with me. Everything is here, my people, my neighbours...”. For other interviewees, their original living conditions were better than in Santa Teresa, which they saw as a housing project with lower urban standards. Hence, the semi-voluntary process failed to relocate all the people from the buffer zone because of their long-standing attachment and socio-economic conditions.

A second governance feature refers to the process of defining the buffer zone. To the north of the Macul Ravine bank, the exclusion zone had several demarcations between 1994 and 2001, of different sizes. One encompassed the complete neighbourhoods of Ampliación La Higuera and La Higuera (i.e. the decree 765). Another respected the design of streets and plots but was never formalised. The chosen demarcation (Map 5.1) measures a minimum of 100 metres from the ravine bank and cuts across several plots. In the South, the line was drawn along the Northern border of Santa Teresa and the exclusion zone was transformed into a public park in 2003. To the east the line is drawn along the border of the community of El Esfuerzo, which thus remains formal. Nonetheless, between 1994-2001 the PRMS applied lines that rendered El Esfuerzo within the exclusion zone. Then, continuous negotiation with state actors and especially connections with a politician with roots in the area, resulted in a re-drawing of the line. This informal network is not part of the local or regional levels of government, but resulted directly from access to MINVU at the national scale, through this political figure. Local representatives discussed this with housing and planning authorities, who redrew the line in the southern part, despite its hazard exposure. As this politician remembers, “this was done explicitly so that people do not lose their households, [but] they live in an area of high risks (...) and they know it”. This case shows the selective and political enforcement of the norms related to the exclusion zone.
Finally, we discuss land management practices. During the process of relocation, SERVIU was supposed to buy the housing plots inside the buffer zone and transform them according to PRMS restrictions, that is, into recreational spaces. However, while authorities knew that all properties within the exclusion zone should have been acquired and managed, the actual process proved to be difficult in practice. For decades, Chilean State housing structures have been focused on providing an important number of housing units through a targeted and subsidiary model (Cociña, 2018), which has impeded the development of regulatory responsibilities. Thus, the participation of the public sector in land buyouts is ineffective given its institutional capacities and scant resources. As a politician explained: “we tried to transform this [space] into a civic neighbourhood, with a church, a community centre, but the management capacity from the Housing Ministry impeded this kind of project (…) This would have been the only way to avoid the future squats”. As a result of state bureaucracy, a significant area of the buffer zone, filled with empty houses and plots, became an unmanaged informal space with irregular occupations, entailing some effects that we unpack now.

5.4.3 THE JUST AND UNJUST EFFECTS OF THE LAND USE

The land use plan has produced some positive outcomes. It organises spatial development while protecting thousands of people living in formally defined “safe” areas from natural hazards. This is recognised by the victims of the 1993 disaster settled in Santa Teresa. However, they still suffer from a post-disaster recovery process linked to neoliberal housing policies, which resulted in relocation to segregated, densely populated areas that lack basic urban services (Rodríguez & Sugranyes, 2004), features acknowledged throughout the foothills. The Santa Teresa is an example of what has been described as the “dark side” of Chile’s neoliberal housing policies: whereas the aggregated housing deficit has diminished with these policies, they have done so by increasing socio-spatial segregation and generating highly insecure, violent, and deteriorated spaces for lower income groups (Ducci, 1997). Along with this trend experienced by the relocated debris flow victims, the multi-level arrangement and the buffer zone generated have (re)produced spatial injustices for the communities settled there. Based on the issues identified by residents of the buffer zone, we have focused on those that are further marginalising them as a community and affecting their local resilience. We categorised these and expand on three issues: urban exclusion, spatial deterioration, and disaster risks reproduction.
Urban exclusion
With relocation, abandoned houses and plots unmanaged by SERVIU were sometimes squatted by the original owners who, after receiving a unit in Santa Teresa, rented that unit out; or by people from the exclusion zone itself as a means to enlarge their plot, locally referred to as micro-squatting. Although these squatters are officially subject to eviction, such practices also address over-crowding problems. Many squatters are from the neighbourhood itself or come from nearby areas, arriving from other informal spaces around the foothills aiming for more permanent dwelling. Therefore, this space has produced an irregular rental housing market for vulnerable groups seeking households, such as international migrants (especially Peruvians). The 2017 census shows that although 6% of the people of La Higuera living formally are immigrants, it is 12% inside the exclusion zone. Also, they tend to be younger than in their formal counterpart, being particularly economically active groups. Although not necessarily illegal, international immigrants are generally more likely to suffer from structural problems related to housing (Fundacion Vivienda, 2018). These rental spaces are precarious, with poor quality housing (e.g. mediaguas), illegal connections to water and electricity services, and lack of tenure security. Such irregular spatial practices are logical in Santiago given its structural lack of access to decent and affordable housing, especially when public policies are associated with segregation, overcrowding and low quality for low income groups (Fundacion Vivienda, 2018; Rodríguez & Sugranyes, 2004). The buffer zone provides respite from over-crowding but reproduces exclusionary development processes and arises from inadequate state policies and the decisions of vulnerable groups given their limited choices.

Spatial deterioration
The buffer zone is spatially deteriorating in public places, particularly along the bank of the Macul Ravine. Unlike the southern part where a green public park was built with regional-level funding, the northern exclusion zone is deserted and undeveloped, and used for crime, drug-dealing and drug-use, increasing local insecurities (See Figure 5.2 (a) and (b)). While owned by the municipality, it reportedly lacks funds for managing and transforming this public area. But there is also uneven funding for services such as streets or sidewalk pavement (Figure 5.2 (c) and (d)), or for addressing the current termite infestation, as residents of the exclusion zone cannot apply for public subsidies. Thus, households also experience spatial deterioration as residents are unwilling to invest in their properties given their irregular status, as a potential sale value would
be only the fiscal value, roughly 59% of the market price (Ruiz-Tagle et al., 2018). As a resident explains: “we are frozen, we cannot apply to these public funds for improving our houses... [and] the termites are the cancer of wood”. A 75 year-old resident says she cannot access credit and “my beautiful house is falling little by little...”. As a result, properties inside the exclusion zone have devaluated, making owners poorer, despite long-term ownership.

Figure 5.2 Deteriorating spaces in the buffer zone

Disaster risk reproduction
Many informants and official documents argue that constructing seven mitigation ponds, roughly two kilometres upstream from the buffer zone, has reduced the likely impact of an event similar to the 1993 disaster (S. A. Sepúlveda et al., 2006; SEREMI-MINVU & INDUAMERICANA, 2014). These ponds need maintenance
and systematic cleaning. However, a persistent ambivalence towards managing risks persists in the area in relation to the Macul ravine and other ignored ravines (Ferrando et al., 2014; Garrido & Sepúlveda, 2012; SEREMI-MINVU & INDUAMERICANA, 2014). Such risks are borne by the informal community in the buffer zone. Living in an informal settlement means not only that they might face greater uncertainties in the event of another disaster, but also that they inhabit a space that all acknowledge as hazardous. As a resident describes: “what happens tomorrow (...) if there is a new alluvium? Those people will not have any housing solution because they were settled in a prohibited place”. Another resident points out that their choice to live here limits their ability to demand permanent risk reduction. ‘Voluntarily’ living in the exclusion zone has in practice made this community invisible to disaster planning initiatives, reproducing their disaster vulnerability.

After an alluvium in March 2015 in north Chile, an opportunity for addressing problems in the exclusion zone emerged. Then, some discussions took place at the national level (e.g. BCN, 2015) and relevant public organizations and the community met in the foothills to discuss, inter alia, three relevant topics for the buffer zone. First, the need to address irregular occupation of SERVIU owned plots, which led SERVIU to update the registry of these, including those belonging to private owners (n=98), those it had acquired (n=93), and those it needed to acquire (n=41). Second, while some efforts at improving disaster response in the buffer zone were made, these were limited to emergency preparedness and evacuation routes. Regardless, informants state that bureaucratic obstacles impeded the realisation of massive evacuation try-outs. Finally, following a participatory process in 2017, it was decided that the abandoned public space north of the ravine should be transformed into a new green public park, with a design to be developed in 2020. However, even though the residents of the exclusion zone gained some visibility, there has not been any substantive change in their situation. From their perspective, the land use initiative has condemned them to live in uncertainty regarding both spatial injustices and possible climate disasters.

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44 See Chapter 7.
45 See Annexe E.
5.5 Discussion and Conclusion

Our paper expanded the knowledge on urban disaster governance by addressing the relationship between DRR, urban politics, and spatial (in)justices. By grounding governance in situated practices, we showed that despite well-intentioned initiatives defining risk areas being implemented, they reproduce and even create new injustices. While a land use plan can protect a population by defining a buffer zone that restricts development, it can adversely include those who relocate to worse housing situations or stay informally within the buffer zone. The planning process of excluding land from urban development also furthered socio-spatial exclusion of local communities. In that sense, albeit it has been argued that informal settlements result from governance failures related to land use planning (IFRC, 2010), the chapter showed that the land-use resulted in the informalisation of a long-standing neighbourhood due to the application of rules. It is not an issue of having urban planning and land uses or not, but instead of who are being favoured by these and who are neglected. We argue that addressing the challenges of the poor and marginalized needs resources and political will. But in particular, three governance conditions need to be considered in DRR and urban planning.

First, although post-disaster settings are highly contentious moments, decisions taken rapidly will affect concerned people in the short and long-term. However, in such rapid decision making, there is little space for discussing differences and contestations, creating depoliticised environments where no debates on the root causes of risks were addressed (e.g., on the uneven urban development process or the neglect of local and scientific knowledges to manage risks). The Santiago case shows how affected groups see their participation in risk management processes reduced (as in the Santa Teresa housing recovery, shown in the last chapter) or excluded (as in structural disaster responses like the mitigation ponds or the exclusion zone, see Chapter 7). Not only are local knowledge, choices and experiences included in risk management, but interventions themselves may produce adverse and detrimental consequences such as within the informalised community. Hence, the depoliticization of post-disaster settings means a lack of power and participation of local communities, which implies that planning interventions should consider their long-term consequences and address structural causes.
Second, the inconsistent enforcement of interventions may produce unjust situations. The voluntariness of relocation during the exclusion zone’s definition and the lack of enforcement of the ban on building in the exclusion zone has led to households in risky areas experiencing economic hardship. Although the El Esfuerzo community managed to move the border of the exclusion zone and thus lives formally, it remains at risk from future floods and landslides. From a DRR perspective, this shows how grounded risk management can be both spatially unjust and ineffective, even rendering useless the dichotomous definition of formal and informal. This mirrors Yiftachel’s grey spaces (2009) in that defining certain categories becomes blurry, particularly by naming spaces as formal/secure and informal/at risk. In that, it raises questions about whether governance interventions should aim at making spatial areas less vulnerable, or people less vulnerable; and moreover, a paradox of effective governance, as people either comply to voluntary relocations or face further marginalisation.

Finally, governance actors have uneven capacities. We described how transferring norms and regulations from one level of government to another does not consider problems associated with managing urban space at the local level. This is consistent with previous evidence of disaster governance in Chile in relation to hierarchical and top-down inter-relations between scales of government, as Sandoval and Voss (2018) argue in a recent post-disaster context. In that sense, our analysis adds an additional dimension by describing how governance arrangements extend over time, maintaining some unjust effects on the ground. This includes the bureaucratic complexity and resource shortage in managing empty houses and plots and developing abandoned spaces. Hence, the buffer zone problems reflect low capacity and resources at local level and the political lack of will at higher levels to reduce the vulnerability of people by using an appeasement strategy of pacification. For sustainable, inclusive and resilient cities, the focus must be on the daily practices and challenges of disaster governance and on empowering governance actors at the lowest level to structurally address the long terms challenges for better risk reduction and spatial justice.

5.6 AFTERWORD

In January 2020, ten months after finalising field research for this thesis and three months after the eruption of protests and social unrest in Chile in October 2019, an informant and resident of the buffer zone alerted the first author of this paper
to an ongoing crisis. Hundreds of families from districts across Santiago were arriving in the buffer zone and settling there informally in a new campamento. Despite some initial efforts by the municipality and the police to expel them, the settlement remained. Today, around 600 families live in the Toma Dignidad (‘Dignity Squat’), occupying the buffer zone on a more permanent basis.

The trajectories of these families are diverse. In recent years, the number of campamentos in Chile has been increasing (TECHO-Chile, 2021). The Toma Dignidad in particular houses inhabitants from failed housing projects in neighbouring districts, families suffering from unemployment and rising rents, and a considerable number of immigrants who have moved across Santiago in search of housing (Acuña Bravo et al., 2020). As an informal settlement, living conditions in the Toma Dignidad are precarious and inhabitants are plagued constantly by hunger and health issues; lack of electricity, sewerage and water provision; and non-existent education and healthcare services. Research on the management of COVID-19 in this area reveals the complexities of dealing with the pandemic on top of other everyday hazards, and the virtual absence of the state is particularly problematic (Acuña Bravo et al., 2020).

In that sense, the study presented in this chapter shows the processes and outcomes of an ill-managed urban disaster risk initiative. By presenting a genealogical analysis of a particular arrangement and the practices involved in land management to reduce local risks, the chapter illustrates the trajectory of this abandoned space in which marginalised groups prefer to live. The Toma Dignidad is thus the continuation of a long-running process that began with the 1993 disaster, driven by the top-down definition of this space as excluded from development. As such, it is the result of the politics of urban disaster governance in its production of particular grey spaces; the open-ended destiny of the zone is not predefined by formal rules but rather is permanently remade. Moreover, the buffer zone is part of wider processes of marginalisation that affect low-income families in Santiago and mirror the kind of urban problems described in the previous chapter (e.g., overcrowding or living in insecure spaces). The current state of the buffer zone ultimately highlights the pressures exerted by other urban issues such as provision of adequate housing and immigration processes in recent years, as they interact with disaster-related initiatives.
Critically for this thesis, the current occupation of the *Toma Dignidad* has consequences in terms of localised disaster risks. After all, the exclusion of this area from development is the result of a political definition that acknowledges flood and landslide hazards therein. Indeed, in January 2021 a climate event caused an expansion of the Macul Ravine’s watershed, affecting the settlement. Thanks to emergency response and relief initiatives from local organisations (see Chapter 7), and despite attempts by the municipality to evict them, the impact was not too severe and the *Toma* remained. The fact that both households and community organisation are female-led, it has been argued, has enhanced self-governance of risks, including flood preparedness in the face of warnings (Acuña Bravo et al., 2020). Ultimately, while the reconversion of the zone into a public park constitutes yet another unrealised project for the inhabitants of La Higuera, the buffer zone continues to represent a space in which many of the harms described in this chapter – from further excluding urban dwellers and recreating disaster risks – are amplified.