Interrogating Resilience: Governing Disasters in Metro Manila Post-Typhoon Ondoy

by

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Abstract

By studying the disproportionate catastrophic effects on Manila City and Makati City caused by flooding associated with Typhoon Ondoy (international name: Ketsana) in 2009 this thesis examines how resilient disaster recovery projects in Metro Manila support state myth-making activities pursued at various scales of governance to justify the expansion of territorial control. Political authorities in Metro Manila rely on resilience discourses to legitimize resilience interventions in the aftermath of a disaster, and these interventions are often to the detriment of those most socio-environmentally vulnerable. Drawing on the dual disaster framework and perspectives from urban political ecology, this thesis concentrates on the variegated power of global urban resilience discourses and how these, in turn, impact resilient disaster recovery projects on the ground in Metro Manila.

While national government officials argue it is an obligation of the state to make the city resilient, specifically by improving and building vital infrastructure; disasters, such as typhoon flooding cannot be neatly contained within jurisdictional boundaries and tend to spill over into neighbouring regions where there are overlapping areas of authority and competing interests – as demonstrated in the cases of Manila and Makati. As such, this thesis proposes two new theoretical concepts – shadow(s) of resilience and risk redistribution - in order to provide a contextualized understanding of urban spaces prior to change and account for the complex ways in which the socio-spatial realities of urban residents are altered due to the overlapping of natural and human-made disasters. Ultimately, resilient disaster recovery projects in Metro Manila contribute to an unequal redistribution of risks and resiliencies along axes of class, obscuring the role of state actors in creating these divides.
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<tr>
<td>CBD</td>
<td>Central Business District</td>
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<tr>
<td>CoRe-ACS</td>
<td>Community Resources for the Advancement of Capable Societies</td>
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<tr>
<td>DILG</td>
<td>Department of the Interior and Local Government</td>
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<tr>
<td>DRRM</td>
<td>Disaster Risk Reduction and Management</td>
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<td>EFCOS</td>
<td>Effective Flood Control Operation System</td>
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<td>HPFPI</td>
<td>Homeless Peoples Federation Philippines Inc.</td>
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<td>ICLEI</td>
<td>Local Governments for Sustainability</td>
</tr>
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<td>IFRC</td>
<td>International Federation of Red Cross and Red Crescent Societies</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<tr>
<td>ISF</td>
<td>Informal Settler Families</td>
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<tr>
<td>ISF-NTWG</td>
<td>National Technical Working Group on Informal Settler Families</td>
</tr>
<tr>
<td>MDRRMO</td>
<td>Manila Disaster Risk Reduction Management Office</td>
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<td>MEA</td>
<td>Millennium Ecosystem Assessment</td>
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<tr>
<td>MMDA</td>
<td>Metro Manila Development Authority</td>
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<tr>
<td>MMFMP</td>
<td>Metro Manila Flood Management Project</td>
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<tr>
<td>NCR</td>
<td>National Capital Region</td>
</tr>
<tr>
<td>NDRRMC</td>
<td>National Disaster Risk Reduction and Management Council</td>
</tr>
<tr>
<td>NFSCC</td>
<td>National Framework Strategy on Climate Change</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
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<tr>
<td>NHA</td>
<td>National Housing Authority</td>
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<tr>
<td>PACSII</td>
<td>Philippine Action for Community-led Shelter Initiatives Inc.</td>
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<tr>
<td>PMCIP</td>
<td>Pasig-Marikina Channel Improvement Project</td>
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<tr>
<td>RA</td>
<td>Republic Act</td>
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<tr>
<td>SAP</td>
<td>Structural Adjustment Policy</td>
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<tr>
<td>TAMPEI</td>
<td>Technical Assistance Movement for People and Environment Inc.</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNDRR or UNISDR</td>
<td>United Nations Office for Disaster Risk Reduction</td>
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Chapter One

Introduction

Coastal megacities pose a particular challenge for climate change adaptation and resilience planning. These dense concentrations of population, economic activity, and consumption – the majority of which are in the Global South – are often extremely vulnerable to the impact of climate change. These observations are especially relevant to Metropolitan Manila,\(^1\) the National Capital Region (NCR) of the Philippines, which ranks among one of the most disaster prone\(^2\) and populous megacities in the world (Maplecroft 2018).\(^3\) Subject to periodic seismic and climatic events, this megacity suffers from acute environmental strain manifested by floods of severe magnitude caused by tropical storms and typhoons. As an example, in 2009, Typhoon Ondoy (international name: Ketsana) dumped an average month’s worth of rain (34cm) on Manila in six hours, leaving more than 80% of the city flooded and displacing nearly 300,000 residents (World Bank, JICA, & ADB 2010). Although the Philippines has intensified its efforts to cope with increasingly uncertain conditions,\(^4\) its responses have not kept pace with the mounting severity and increased frequency of extreme environmental disasters nor have they adequately addressed the longer-term implications of climate change (Anguelovski & Carmin 2011; Carmin, Anguelovski, & Roberts 2009, 2012).\(^5\)

\(^1\) Metropolitan Manila or Metro Manila is made up of 17 local government units (16 cities and 1 municipality), one of which is Manila City. For the purposes of simplicity, “Manila” will be used interchangeably with “Metro Manila” throughout the thesis (unless otherwise noted), and is meant to refer to the entire metropolitan region.

\(^2\) Metro Manila is particularly prone to natural hazards such as earthquakes, landslides, floods, and tsunamis (World Bank 2018d).

\(^3\) Metro Manila has an overall population of 12.8 million per the 2015 Census (Philippines Statistical Authority 2015).


\(^5\) Of note, the Philippines has experienced 289 natural disasters from 1997-2016 (Eckstein, Künzel, & Schäfer 2017). The regular typhoon season of June to November has over time expanded to throughout the year (see Porio 2012, 2014).
Given the high risk of climate impacts in Metro Manila, particularly increased flooding, disaster risk reduction and management (DRRM) has become an important priority in the Philippines as a strategy for responding to natural disasters (Philippine Climate Change Commission 2010). The cornerstone of DRRM in the country is the Disaster Risk Reduction and Management Act (RA 10121) of 2010 (implemented following Typhoon Ondoy in 2009), which shifted the country’s disaster management system from a focus on response to a focus on resilience building. This shift recognizes the linkages between climate change and worsening disaster events and the need to simultaneously reduce disaster risk and increase climate resilience (Solecki, Leichenko, & O’Brien 2011). On the one hand, this phenomenon is related to a wider ecological crisis originating in climate change (Peduzzi & Deichmann 2009), but on the other hand, it also results from more localized human-induced activities rooted in urban capitalism (Oliver-Smith 2015).

Although environmental change and the resulting natural disasters can be framed in many different ways, resilience framings have become dominant in international development policy circles, often distilled in the idea of “climate-resilient development” (World Bank 2009b, p.xvi, 50). The power of resilience discourses resides in its malleability, flexibility, and the fact that it refers to something that seems intuitively desirable. This, however, creates great divergences in the ways in which resilience is understood and acted upon. Development organizations, like the World Bank, tend to support (and invest in) resilient disaster recovery projects in Metro Manila that tend towards physical infrastructure solutions (Hallegatte 2019; World Bank 2009b, 2013, 2019a) and population relocation (UN-Habitat 2004, 2011). Infrastructure projects occupy an interesting position in resilient disaster recovery projects in urban settings as they are promoted as being necessary for addressing a range of urban challenges; yet, they are often constructed and
disproportionately located in wealthier urban spaces and regularly shift the locale of a disaster from one area to another, usually to the disadvantage of the more socially vulnerable (Bunnell, Drummond, & Ho 2002).

**Research questions**

Within the context of typhoon-caused flooding in Metro Manila, this thesis is motivated by the following research questions: First, how might we understand the power and politics in resilient disaster risk reduction and management (DRRM) and disaster risk recovery projects in Metro Manila? Second, how might we understand the role of state agencies – at various scales of governance – in facilitating and legitimizing resilience as the key framework in mitigating and managing flood risk? Third, how might we explain historically the differentiated ways in which resilient disaster recovery projects have been implemented in the cities of Manila and Makati? Fourth, who has become more vulnerable and who has remained or become resilient in Manila and Makati, and why?

**Thesis statement**

By studying the social, political, and historical context, this thesis argues that resilient disaster recovery projects in Metro Manila are used to support state myth-making activities pursued at various scales of governance. That is, political authorities in Metro Manila rely on resilience discourses to legitimize resilience interventions in the aftermath of a disaster, and these interventions are often to the detriment of those most socio-environmentally vulnerable. This, in turn, shapes the physical realities of power and place in a highly differentiated manner, often benefitting private and elite actors over the urban poor. While national government officials argue it is an obligation of the state to make the city resilient, specifically by improving and building vital infrastructure; disasters, such as typhoon flooding cannot be neatly contained
within jurisdictional boundaries and tend to spill over into neighbouring regions where there are overlapping areas of authority and competing interests – as demonstrated in the cases of Manila and Makati. Ultimately, resilient disaster recovery projects in Metro Manila contribute to an unequal redistribution of risks and resiliencies along axes of class, obscuring the role of state actors in creating these divides.

*Theoretical framework*

Disasters occur in political spaces (Cannon 1994), which in urbanizing societies are invariably spaces fraught with heightened contestation and compromise, yet experience cooperation in times of crisis, rupture, and displacement. The concept of political spaces is, therefore, driven by an emphasis on the political as well as the social and historical dimensions of governance which extend beyond generalized operating procedures to encompass the range of actors, processes, and structures across both formal and informal sectors through which knowledge and information are generated and applied. This serves as a useful entry point for examining whose knowledge is privileged, how resilience is defined and by whom, and what priorities and resources are harnessed in the development of resilient disaster recovery projects following an environmental disaster.

The *dual disaster* framework provides an interesting perspective for understanding how the dual processes of global environmental change and human-made crises interact to shape inequalities and, ultimately resilience (Hyndman 2007, 2011). No other studies could be identified that use this framework to understand the problems and rationalizations of resilience as a mode of governance in Metro Manila. The concept of “dual disasters” (Hyndman 2011, p.145, 146) aims to capture the interconnections between persons, processes, and patterns produced in a

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6 By which is meant it enlists the selected historical interests and social groups in the decision-making process (Bartolini 2005).
given context across economic, political, and social terrains. The impact of a natural event on any given community is not random, but is determined by everyday patterns of social interaction and organization, particularly the socio-economic processes, which determine the degree and distribution of access to resources (Wisner, Blaikie, Cannon, & Davis 2004).

However, the theoretical framing requires more depth and thickening, especially with regards to urban political ecology theorizations to build out the dual disaster concept. Here, urban political ecology refers to the theoretical framework that combines political economy’s focus on unequal (and exploitative) power relations with an examination of ecological change to provide an analysis of the highly uneven production and distribution of resources and ecological problems in cities under contemporary social relations of capitalist production and exchange (Batterbury 2015; Bryant 2015; Harvey 1974). Drawing on the work of notable scholars in the field, such as Watts (2004), this thesis employs an urban political ecology approach to analyse the violent and exclusionary character of post-disaster spaces in Metro Manila. While disasters may be site-specific, they are “connected to larger processes of material transformations and power relations” (Peluso & Watts 2001, p.5), which helps account for the ways in which present-day flood infrastructure systems in Manila selectively categorize and differentiate city spaces in the name of resilient disaster recovery, revealing the way disasters shape political processes within states.

In order to make sense of this, there needs to be a greater understanding of how the institutional mechanics and international politics of adaptation and disaster recovery projects support or undermine resilience. However, specific knowledge is lacking about the influence of different global political and development institutions on various resilience interventions; especially, in Metro Manila. In rethinking the scales at which disaster governance functions, this
thesis works to understand how global frames of resilience interact with national realities (Sassen 2007; Sayer 2000). Drawing on the work of Brenner, Peck, and Theodore (2010a, 2010b) and Watts (2015), this thesis broadens the scope to a wider array of historically and geographically contingent actors and processes that operate at the global, national, and local levels that produce narratives of risk and resilience in particular spaces, thereby moving us toward an understanding of how and where power is exercised, for whose benefit, and how resilience is materially and discursively (re)constituted at multiple scales (Bodin & Tengö 2012; Mustafa 2002; Swyngedouw 2004). Doing so makes visible the connections between disaster resilience and everyday urban inequalities (Murray 2009; Satterthwaite 2003).

Methodology and methods

This thesis explores how resilient disaster recovery projects are planned and implemented given Manila’s highly decentralized governance arrangements and the existence of international mandates and discourses. To do this, this research presents a comparative place-based case study method encompassing document analysis and key informant interviews conducted in Metro Manila between October and November 2019. This thesis relies on multiple qualitative fieldwork methods to enable the researcher to triangulate data, thereby improving the reliability and validity of the chosen methods (Bleek 1987; Mayoux 2006). Data sources include semi-structured and structured interviews with experts and local residents of flood-prone areas regarding the city’s DRRM policies and resilient disaster recovery projects, observations of disaster prevention meetings, attendance at local conferences,7 and analyses of primary and

7 Conferences included: “YUD-X” (UN-Habitat 2019a); the “Symposium on housing for low income families, slum upgrade and community integration” (UN-Habitat 2019b); “TAHANAN: Secure tenure summit 2019” (TAMPEI & UN-Habitat 2019); “Asia Finance Forum” (ADB 2019); and the “World Bank Youth Summit: Smarter Cities for a Resilient Future” (World Bank 2019b).
secondary sources\(^8\) to gain greater knowledge on the existing research and reports on resilient disaster recovery in Metro Manila. These methods further probe key issues underlying the theoretical framework and methodology, including the broader network of relations and processes that connect actors, places, and spaces with each other.

The cities of Manila and Makati were selected because of their similarities in physical geography, rapid urbanization, large numbers of informal settler families (ISF), and high rates of poverty and inequality (Garrido 2013). Makati is arguably considered to be more developed and more resilient than the city of Manila (Caoili 1988; Garrido 2013). By looking at the rise of large-scale private urban development from 1990 onwards and its transition to resilient infrastructure planning in 2010 following Typhoon Ondoy, this thesis is able to account for an enduring neoliberal model of urban governance wherein the exclusivity of cities increases and social divides are intensified. A critical topology approach will be used to reveal the “spatialized understanding of the problems” (Katz 2001, p.1232) in official post-disaster reconstruction and resilience initiatives. This approach implies that the findings will be “traced” (Bennet & Checkel 2015, p.9, 41) to unpack the multiplicity of influences on resilient disaster recovery projects, and parse out how local decision makers are influenced by external factors and policy mechanisms, and how these factors might affect long-term policy decisions. This will then be mapped

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\(^8\) This includes an examination of official sources produced by international development organizations and non-governmental organizations (NGOs) – e.g. the World Bank and its ongoing prescriptions of good governance and market liberalization, as well as its Cities and Climate Change Initiative and programs; United Nations Office for Disaster Risk Reduction (UNISDR); Annual Global Risk Reports of the World Economic Forum; policy documents from the Asian Development Bank (ADB); the Philippine Red Cross; and UN-Habitat. Philippine government official sources include documents pertaining to various policies, legislations, and development plans – including items from the Department of Social Welfare, the Office of Civil Defence, Effective Flood Control Operation System (EFCOS), the Metro Manila Development Authority (MMDA), and the National Disaster Risk Reduction and Management Council (NDRRMC). The research also relied on archival analysis and practitioner and academic literature to build on existing scholarship while addressing the gaps within it.
(Rocheleau 1995) to provide a geographic representation of flood (in)security and the resulting displacement in both Manila and Makati.

*Thesis structure*

The current chapter is an introduction to the thesis wherein the research problem is stated and the core research questions are formulated. The overall aim of this research is to conceptually engage with and assess the manner in which resilient disaster recovery projects in Metro Manila have become a technocratic discourse far removed from the socio-economic/material realities of the most marginalized. The remainder of this introduction outlines the chapters in this thesis.

Collectively, the chapters following address critical issues in resilient DRRM in Manila’s heterogeneous urbanizing populations. They consider the correlations between socioeconomic inequality and localised power relations in resilience initiatives that better protect some sections of society from typhoon flooding at the expense of others (Leichenko & O’Brien 2008). Chapter Two provides a literature review and explores some core aspects, problems, and promises of contemporary international policy discourses concerned with resilience and adaptation, and traces some of the reconfigurations in the literature on resilience itself. It seeks to situate itself within the core debates by highlighting and addressing the gaps in DRRM literature. The chapter focuses on the role of uncertainty, the shift from crisis response to resilience building, and the creation of a discourse of urban resilience that emphasizes both individual and infrastructural resilience. This chapter concludes by referring this discussion back to urban governance and indicates how fundamental principles of climate resilience and recommendations of policy processes do not necessarily fit within the realities of urban governance, particularly in a rapidly urbanising Manila (Lebel et al. 2006). “Urban governance” in this account encompasses the
actions by authorities of various sorts to order and regulate (Healey 2006, p.302). It brings attention to the specific rationale that frames resilience as a field for intervention, taking this not as a pre-given and universal field, but one framed by particular epistemological and moral imperatives (Mosse 2011). The scope, targets, and tools of resilience are demarcated through this framing. Examining the construction and origins of the discourse of resilience is crucial for understanding how it is carried out in practice.

Building on the literature review, Chapter Three aims to clarify the theoretical framework and methodology that will be used for the empirical analysis in the coming chapters. The spatially uneven implications and the long acceptance of flood risk in Manila are historically rooted societal and ecological issues that go beyond urban planning, which traditionally has focused primarily on decision-making by cities themselves. Drawing on the dual disaster framework (described above) and political ecology theorizations, this thesis finds Watts writings on “governable spaces” (2004, p.4) and ideas of myth-making (2015) and Brenner et al.’s (2010a, 2010b) notion of variegated neoliberalism useful; adding depth and volume to our understanding of how global and national interpretations of resilience reshape the spatiality and impacts of a disaster\(^9\) and enforce scales of resilience governance. This chapter advances two new theoretical concepts – shadow(s) of resilience and risk redistribution that address the ways in which residents of Manila are able to prepare for, respond to, and recover from typhoon flooding based on their location within the city. Both shadow(s) of resilience and risk redistribution have the potential for decreasing or increasing disaster risk and resilience, or for shifting risk from one

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\(^9\) Disasters create distinct spatial and social outcomes through the distribution of damages and victims, as well as responses to recovery initiatives. The concept of “space” is important in understanding how flood risk materially and discursively configures the socioecological terrains of city spaces. Many of these theorizations are based on a political economic understanding that views the urban space as an inseparable feature of the dynamics of capital accumulation (e.g. Harvey 1974, 1989; Lefebvre 2003).
place to another, or from one group of people to another. This is illustrated through typhoon flooding incidents in Manila and Makati. The chapter concludes with an in-depth discussion of the methodology and methods employed in this research.

The remaining chapters in this thesis draw on the theoretical and conceptual contributions made in the earlier chapters and use case studies of flooding in Metro Manila to make wider contributions to the understanding of resilience as a mode of governance. Chapter Four offers a historical and socio-geopolitical comparison of Manila and Makati by examining how the politics of resilient disaster recovery projects played out on the ground following Typhoon Ondoy. Despite important similarities, it is in their diverse historical pathways, rooted in colonialism and private-sector real estate development, that we learn that state myth-making activities (Watts 2015) are essential to explaining the differential implementation of resilient disaster recovery projects following Typhoon Ondoy. Chapter Five builds on the empirical material collected in both cities and the analysis conducted at the national scale to show the effects of these diverse historical pathways on current conjuncture. To do so, it concentrates on the variegated power of global urban resilience discourses and how these, in turn, impact resilient disaster recovery projects in Metro Manila. Specifically, this chapter explores how the definition of resilience utilized by the World Bank (2015b, p.19) – “the ability of a system, entity, community, or person to adapt to a variety of changing conditions and to withstand shocks while still maintaining its essential functions” – has been co-opted by economic and political interests at the expense of the poorest. In doing so, this chapter illustrates how policies and acts labelled as resilience by powerful governors such as government officials and development agencies can in practice be populated by a range of competing interests and ideas, and power relations therein. Following this analysis, the chapter then addresses how these
interacting frames have manifested themselves in Manila and Makati. Finally, Chapter Six provides the closing arguments of this research as well as its main implications for scholarship and policymakers.
Chapter Two

Literature Review

The purpose of this literature review is to situate this study within the wider academic debates surrounding resilience and disaster risk reduction and management (DRRM) in order to understand the rationale behind the need to be resilient (why?), the object of resilience (what is to be resilient?), and the subject of resilience (where is resilience guaranteed, by whom, and how?). These questions serve to organize this literature review into three sections, and the answers to each question highlight how resilience is used to justify various types of interventions and uses of power in the implementation of disaster recovery projects in Metro Manila. Section One provides an analysis of the rise of resilience in policy discourse and academic debate. Section Two outlines and problematizes three definitions of resilience from key fields which inform its present-day usage. While these definitions have facilitated communication and understanding across disciplines, coordinated groups of actors and stakeholders, and built consensus around particular policy issues (Baggio, Brown, & Hellebrandt 2015; Gunderson & Holling 2002), the adoption of a broad, generalized definition of resilience is not a goal worth pursuing. Rather, a broad definition would obscure the specific socio-political and historical contexts from which resilience emerges and is maintained. Key to understanding this phenomenon is the manner in which DRRM assesses the relationship between resilience and risk and the potential consequences of imbuing resilience with normatively positive values. This will be analytically contextualized in Section Three by exploring the scalar disconnect of the urban resilience discourse (i.e. between the implications for the city level and the subjectivization of resilience at the individual level) and situating the research within the wider academic debates surrounding
the reconfigurations and redistribution of resilience in hazardous areas in cities in the Global South.

*How has resilience come to dominate the policy agenda?*

Resilience is a common term widely used in policy discourse. There are three areas where resilience is especially prominent in public and policy discussions which intersect with, and have relevance to, political responses to climate change: national security, disasters, and environmental change more broadly.

Resilience is a core topic in discussions of national, international, and human security. Cascio (2009, n.p.) suggested resilience as “the next big thing” in *Foreign Policy* magazine’s review of emerging trends, highlighting the inability of security to encompass profound uncertainty, non-linearities, and surprise in social systems. Resilience is increasingly linked to security as building resilience is promoted as a means to enhance security, both to reduce threats and their impacts, and to recover from disturbances. Examples include city-scale, national and, regional initiatives such as: the UN’s *Making Cities Resilient*-campaign (UNDRR 2019), the Australian Government’s *National Strategy for Disaster Resilience* (Australian Government 2011), and the *UNISDR Hyogo Framework for Action 2005-2015*. “National resilience” is perhaps the most noted ASEAN (Association of Southeastern Asian Nations) codeword (Antolik 1990). For example, the 1987 Manila Declaration (ASEAN 1987, n.p.) restates, “Member states shall strengthen national and regional resilience to ensure security, stability and growth in the

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10 See: Baggio et al. (2015); Chandler (2012, 2016); Coaffee (2013); Hornborg (2013); Johnsen & Veen (2013); Joseph (2013); Longstaff (2005); OECD (2012); Oxfam (2014); Scheffran & Battaglini (2011); Walker & Cooper (2011); World Bank (2008).

11 See also: Evans, Jones, & Steven (2010).
ASEAN region.” But the Declaration focuses heavily on resilience in national contingencies rather than resilience as a cross-scale system property.\textsuperscript{12}

The term resilience is increasingly used in relation to disasters and how individuals, communities, and nations respond to shocks and contingencies. For example, Gilbuena et al. (2013a) argue that the response to the 2009 Typhoon Ondoy flooding in Metro Manila demonstrates that fundamental systematic change is required in flood management assessment strategies. In Metro Manila, important decision elements, such as stakeholders’ perception and environmental protection are often overlooked in the development of sustainable flood mitigation plans (Gilbuena et al. 2013a). A strong thread in this field is that ordinary people exhibit resilience in the face of these events in spite of government actions and policies which, ironically, provoke events or make people and places more vulnerable. Resilience in this context is the ability to withstand, cope, and to recover from an event.

The adoption of resilience ideas and slogans also resonates in environmental change. Resilience ideas are evident in international science journals and policy statements. NGOs and think-tanks have used the term to frame their policy documents and analysis.\textsuperscript{13} However, few studies can be found that explore how resilience discourses operating at international and national levels interact to produce environmental outcomes in particular places. This is important as in the context of implementing resilient disaster recovery projects in Metro Manila following a

\textsuperscript{12} Changes to the resilience of a system do not “take place in a vacuum” and cross-scale interactions influence the dynamics of complex systems (Folke, Biggs, Norström, & Reyers 2016, p.40; Gunderson & Holling 2002). Change is cross-scale, meaning that systems are highly connected and any impact that is felt in one system may be felt across all scales, bottom-up or top down (Walker & Salt 2006).

\textsuperscript{13} Such as: The Millennium Ecosystem Assessment (MEA)(2005); in the Human Development Reports from the United Nations Development Programme (UNDP) (2007); the Swedish government-sponsored Commission on Climate Change and Development (2009); initiatives such as the World Bank’s (2008) Program for Climate Resilience; the United Nations Office for Disaster Risk Reduction’s (UNDRR) Making Cities Resilient 2012 report; the 2017 Philippine Climate Change Assessment; and the International Federation of Red Cross and Red Crescent Societies’ 2016 World Disasters Report.
flood resilience discourses are often (re)constituted, both materially and discursively, at multiple scales (Bodin & Tengö 2012; Swyngedouw 2004). Before analysing how the concept of resilience is used in policy discourses on climate change and DRRM, this chapter briefly overviews conceptualizations of resilience in different areas of natural and social sciences in order to understand its different meanings and multiple dimensions.

*The resilient object: What is resilience?*

Resilience ideas emerge from a number of fields. Norris et al. (2008) trace the origins of resilience to physics and mathematics, where the term is used to describe the ability of a material or system to return to equilibrium following a displacement – for example, a resilient material bends or bounces back rather than breaks when stressed. This reflects the term’s general understanding and usage. Resilience has since been applied to describe the adaptive capacities of individuals, human communities and larger societies, as well as ecosystems, cities, economies, nations and, particularly, social ecological systems. Norris et al. (2008, p.21) present twenty-one representative definitions of resilience from diverse disciplines including psychology, sociology, geography, anthropology, public health, ecology, technology, and communications. In these definitions, resilience is applied to physical systems, ecological and social systems, cities, communities, and individuals (Norris et al. 2008).

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14 According to the Intergovernmental Panel on Climate Change (IPCC) (2014, p.1758), adaptive capacity is “The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.” This definition is utilized across previous IPCC reports, the Asian Development Bank’s (ADB) initiatives on “climate proofing” (2014, p.7), the MEA (2005), Commission on Climate Change and Development (2009), and World Bank documents (see for example World Bank 2018a, p.1).


16 Brown, Dayal, & Rumbaitis Del Rio (2012); Carmin et al. (2009); Folke, Carpenter, & Walker (2010); Holling (1973); IPCC (2007); Leichenko (2011); Pelling & Blackburn (2014); Pizzo (2015); Solecki et al. (2011); Tyler & Moench (2012); Vale (2014); UN-Habitat (2011); World Bank (2009a, 2009b, 2019a); World Bank et al. (2010).

17 Gunderson & Holling (2002); Lebel et al. (2006); Walker, Holling, Carpenter, & Kinzig (2004).
Definitions of resilience emerge from three key fields which inform its current application to climate change. The first comes from the literature on social-ecological systems which emerges from ecology, extended to encompass social systems and institutions, and promoted especially through authoritative institutions and development organizations, such as the Asian Development Bank (ADB) (2014, p.4), the Intergovernmental Panel on Climate Change (IPCC) (2014, p.1772), the Resilience Alliance (2010, n.p.), the United Nations Office for Disaster Risk Reduction (UNISDR) (2009, p.24), and the World Bank (2018a, p.8). This definition takes an explicit systems approach. The second definition from Masten et al. (1990, p.425), comes from child developmental psychology where resilience represents the capacity of an individual to successfully adapt in the face of adversity. The third definition, relating to health and disasters, is slightly broader in that it applies to the ability of individuals, families, communities and systems to deal with shocks (Almedom 2008). Yet, despite emanating from these diverse fields, there are a number of key similarities which helps to broadly characterize a resilience approach; each uses resilience to describe a state and a set of characteristics, capabilities, or processes which confer adaptability or adaptedness (see Nelson, Adger, & Brown 2007).

18 Socio-ecological definition of resilience: “The capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks” (Resilience Alliance 2010, n.p.; Walker et al. 2004, p.5).
19 See: Folke et al. (2010); Holling (1973); Walker, Abel, Anderies, & Ryan (2009); Walker & Salt (2006).
20 Systems (populations, institutional frameworks, markets) understood as networks, as well as individuals understood as part of social (and material) environments (Hosseini, Barker, & Ramirez-Marquez 2016). Meerow and Stults (2016) identify 16 characteristics of urban systems through an extensive literature review. Examples of system characteristics include robustness, diversity, and efficiency (Meerow & Stults 2016, p.7). Other characteristics, such as iterative process, forward thinking, and feedback can be attributed to urban governance (Meerow & Stults 2016, p.7).
21 Psychological definition of resilience: “The process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best, & Garmezy 1990 p.425). See also Alexander (2013); Garmezy (1973, cited in Garcia-Dia et al. 2013, p.264); Rutter (2004).
22 Human development definition of resilience: “A multi-dimensional construct…the capacity of individuals, families, communities, systems and institutions to respond, withstand and/or judiciously engage with catastrophic events and experiences; actively making meaning without fundamental loss of identity (Almedom 2008, p.S1).
A number of critical issues are common to understandings of resilience across these disciplines. They each view change as part of how a system works, and so change is expected and management strategies must be based on this assumption. Further, uncertainty and surprise feature in these definitions; not all change is linear or gradual – it may be uneven, and may be characterized by thresholds or tipping points, both social and ecological. There are different types of change, sometimes classified as fast and slow variables, and there are interactions, linkages, and feedbacks between different stressors. The responses to change may also be distinguished as coping, adapting, and transforming. Each of the disciplines – or areas of study identified above – also recognize that change and even shocks or disturbances are not always detrimental and that crises may provide “windows of opportunity” (Åkebo 2016, p.86), a stimulus to shift from established patterns to (perhaps) more beneficial ones, which may change the distribution of costs and benefits between different individuals or sections of society. Finally, each of these approaches also sees resilience as a property of systems at different scales, and recognizes the significance of cross-scale interaction – for example, in the shape of “panarchy” in the social ecological systems literature where resilience and change at specific scales can influence or control dynamics at others (Gunderson & Holling 2002, p.3), and individual, family, and community in the human development literature (Masden & Obradović 2008; Norris et al. 2008). This is particularly useful for answering the main research questions of this work as the speed of recovery from a disaster and its inclusiveness, completeness, and durability are directly

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23 C.S. Holling (1973, p.21) in his seminal contribution, sketches out the differences in perspective executed in resilience understandings: “not the assumptions that future events are expected, but that they will be unexpected.” Recently reflecting on its implications and trajectories, he underlines that “consequences for theory and management were enormous. It implied that that uncertainty was inevitable” (Gunderson, Holling, & Allen 2010, p.426). See also: Gunderson & Allen (2010); Walker & Salt (2006).
related to the context of the disaster, including pre-existing relationships between actors, and the
geographies, amongst other matters.

Resilience as a dynamic systems concept: The gap in DRRM

But such a broad meaning for resilience also harbours the potential for conflicting
interpretations over the content of resilience, and for concealing socio-political and historical
contexts. In reviews from other fields (e.g. Ungar et al. 2007), Bahadur et al. (2010) highlight the
tensions between understandings of resilience as an outcome and as a process.\(^{24}\) This resonates
with further observations about the overlaps and confusion between resilience and resistance
(e.g. Jerneck & Olsson 2008). One of the major problems with resilience is that the term is
“applied in a normative sense, and overwhelmingly as a means to protect the status quo; to resist
or accommodate change; and to enhance stability rather than dynamic responses” (Brown 2012,
p.47). This contrasts with the emphasis on change in resilience thinking. When applied to
environmental change, development, and/or disaster fields, Bahadur et al. (2010, p.19) note that
1) there is a lack of clarity about the relationship between adaptation, adaptive capacity, and
resilience; 2) the boundaries and limits of the system and the hazards and/or stressors to which
resilience applies are rarely defined,\(^ {25}\) which often underrepresents issues of power (see Nelson

\(^{24}\) Where resilience as an outcome or goal focuses on the ability to quickly return to normal operations and resilience
as a process is understood from a transformational perspective that “accepts that change is inevitable, rather than
seeing change as a ‘stressor’ from which a community needs to recover its original state” (Maguire & Cartwright
2008, p.50. Within this focus on change and complexity, occurs a decisive shift from Holling’s (1973) initial
environmental formulation of resilience in which the meaning of resilience tilts towards adaptability and
transformability. In other words, being resilient – now meaning adapting and transforming – becomes a precondition
of sustained existence. It is precisely this encompassing shift in the understanding of resilience that Folke and
colleagues (2010, p.1) voice when they maintain that the requirement of adaptability and transformability “may at
first glance seem counterintuitive as it embraces change as a requisite to persist.” See also: Dovers & Handmer
(1992) and Klein, Nicholls, & Thomalla (2003)

\(^{25}\) The DRRM literature frequently refers to the definition of resilience outlined by the Hyogo Framework for
Action: “The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and
recover from the effects of a hazard in a timely and efficient manner, including through the preservation and
restoration of its essential basic structures and functions” (UNISDR 2009, p.24). This definition encompasses
various systems across scales but specifies a hazard as a stressor. This definition, as well as many others, resists
et al. 2007); 3) there is a major gap in how resilience is measured; and 4), most discussions are conceptual and there is a lack of robust case studies to test theories. These issues clearly have implications for how resilience is applied in different policy areas and how resilience approaches can be implemented and evaluated following a disaster event in Metro Manila.

There are a number of criticisms of resilience ideas, their assumptions and prescriptions, which require further interrogation from social scientists and policymakers, and these critiques have implications for theory and conceptualizations, as well as for policy and practice (e.g. Hornborg 2010; Leach 2008; Nadasdy 2007). At the heart of a resilience approach is the recognition of multiple stable states or equilibria – that is why it is such a paradigm-shifting concept in ecology. This also begs the question, of what use is resilience if you want to change structures? This is especially pertinent in debates around climate change adaptation – for example, in considering equity. Given the interest in the field of DRRM to identify the qualities that minimize fatalities, proponents of broad, cross-system conceptualizations of resilience argue that doing so is necessary given that “major disasters can threaten many levels of function at the same time” (Masten 2011, p.494). However, it is unlikely that an individual’s experience of a disaster would be analysed in tandem with the analysis of an ecosystem affected by the same disaster. Moreover, the same authors offering systems definitions of resilience still revert back to more discipline-specific operationalizations of resilience at different scales, leaving it unclear as to what these ubiquitous definitions of resilience can offer the general dialogue, as well as specific niches of research. Achieving conceptual specificity is highly constrained by cross-discipline disagreements over the intended outcome of the resilience process. For example,
“returning to normal” can be an exercise of resilience for some systems, but not for humans and communities, as there is no real way for humans to return to a pre-disaster state once they have experienced a crisis event (Matyas & Pelling 2014, p.s7).

The resilient subject: Who or what is resilient?

This section presents a critical review of academic and expert literature on urban resilience. It first approaches the two strands of the discourse of urban resilience separately and then discusses how they, in turn, shape one another.

The discourse of urban resilience

Several studies have analysed resilience as a discourse; they range from critical discourse analyses to Foucauldian ones with an emphasis on biopower. Yet, these examinations still largely remain at the theoretical level and address academic uses of resilience discourse. They rarely engage with the political life of resilience, its uses and circulation in different policy circles and institutions, and often neglect more empirical analyses of how this discourse works (Joseph 2013). In this thesis, the discursive field is urban resilience, which also has received less attention. To some degree, this thesis is a first attempt to answer this call of a more empirically grounded analyses of the discourse of urban resilience in Metro Manila. This research is inspired by Escobar’s (1995) tripartite treatment of discourse, which analyses the following: 1) the forms of knowledge shaping a phenomenon; 2) the systems of power governing its practice; and 3) subjectivities framed by the discourse. Escobar’s approach builds on Foucault’s (1985) and postcolonial (Said 1979) insights regarding how discourse and power become entangled in shaping social reality. This view is compatible with the critical approach adopted in this

29 See Brown (2012) as an exception.
research: objects of knowledge, such as resilience, are not out there in the world waiting for people to discover them. Instead, they are established as a result of historical processes that unfold over limited time and space (Foucault 2002).

While discourses can re-contextualize in different local forms, disasters are always historically and socially contextual. Who is affected and how they are affected is built into a society over extended periods of time (Oliver-Smith 1994). The meanings evoked by the urban resilience discourse are divided in two, often simultaneously deployed, strands of the same discourse. While the urban resilience discourse remains open, and different actors articulate it in varying ways, both strands of the discourse involve a set of encompassing categories and elements. The “robust city” strand stresses safety, stability, and unaffectedness, as well as infrastructural and technological solutions for building resilience and retaining the status quo. Meanwhile, the “responsible individual” strand highlights empowerment, self-organization, responsibility, social resilience, and self-governance of the affected individuals (Grove 2014b; Republic of the Philippines 2011; Rinne & Nygren 2016). These categories formed the basis for coding the analysed documents.

The “robust city” strand of the urban resilience discourse

Before delving into the literature, it is necessary to briefly outline what is meant by urban. There is no global consensus on how to define urban areas. Among many existing definitions, Lopez-Moreno (2017, p.4) declares an urban agglomeration as “the population contained within the contours of a contiguous territory inhabited at urban density levels with

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31 Population size, density, economic occupation or urban functions to characterize urban settings, as well as the changes made by different countries to classify urban areas over time are only a few factors considered when creating and defining urban areas (Moreno 2017).
regard to administrative boundaries.” Lefebvre (2003) argues that the rise of the urban, both as a physical space and as a set of social relations, is the result of industrialization and domination of capitalism. Similarly, Harvey (1989) highlights that capital accumulation and urbanization are inextricably tied and argues that the urban is both a result of and a condition for the ascendency of capitalism. These authors emphasize that the emergence of the urban is a class phenomenon tied to capitalist modes of production (Harvey 1982, 1989, 2012; Lefebvre 2003). The fact that resilience has increasingly evolved into a concept that not only applies to, but also conflates, the material, external world and the subjective, internal world suggests its duality constitutes a crucial aspect of its contemporary expression. Although much of the literature has focused on the Global North, recent years have seen the emergence of literature on the urbanization of the Global South, including the Philippines. The Philippines’ National Capital Region (NCR), Metro Manila, has featured prominently in the literature on increased urbanization in the Philippines. No reasonably accurate definition of urban areas exists among the official data collecting agencies in the Philippines. This is a problem as the criteria of what constitutes as urban is left open to interpretation and co-optation by economic and political interests at the expense of the poorest (Black & Sessay 1998; Ribot & Peluso 2009).

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33 See for example: Alsayyad (2004); Atkinson & Bridge (2005); Beall & Fox (2009); Beall, Kanji, & Tacoli (1999); Berner (2000); Bhan (2009); Bromley (2004); Brown (2006); Cernea (1995); Chan, Mitchell, Adekola, & McDonald (2012); Forced Migration Review (2010); Hardoy, Mitlin, & Satterthwaite (2004); Jha, Bloch, & Lamond (2012); Jones & Douglass (2008); Jones (1999); Koenig (2009); Liongson (2000); Lipton (1977); Mathur (2006); Mattingly (1999); Mejia (1999); Ortega (2016a); Patel, d’Cruz, & Burra (2002); Porio (2014); Porter & Shaw (2009); PwC & Urban Land Institute (2012); Rakodi & Lloyd-Jones (2002); Roy & Alsayyad (2004); Saguin (2017); Sassen (2000); Satterthwaite (2005); Shatkin (2008); Thomas (1995); United Nations Centre for Human Settlements (2001); UN-Habitat (2010); Zetter (2004).
34 See for example: Berner (1997); Camba (2011); Caoili (1988); Choi, Shin, Lees, & López-Morales (2016); Garrido (2013); Kelly (2000, 2003); Magno-Ballesteros (2000); Ortega (2014); Porio & Crisol (2004); Shatkin (2004); Teodoro & Rayos Co (2009); van den Muijzenberg & van Naerssen (2005); Zoleta-Nantes (2002).
At the city scale, resilient urbanism translates into security against nature and hazards, as cities compete against one another to position themselves as “safe places” with stable infrastructure (Davoudi 2014, p.369). National and local governments, international organizations, and researchers promote resilient urbanism that centres around physical infrastructure, which they present as the object of technocratic resilience building efforts (Davoudi 2014; Ziervogel et al. 2017). The top-down control over planning and building codes is promoted as a means of increasing future resilience, while the rapid restoration of infrastructure and houses – or their unaffectedness – is treated as a means or sign of current resilience (Joerin, Shaw, Takeuchi, & Krishnamurthy 2012). In addition to the focus on infrastructure and technological solutions, (climate-)resilient cities are intended to concentrate on smoothing “financial and logistical pathways for capital flows,” as well as creating expert knowledge networks (Long & Rice 2018, p.8). This side of the urban resilience discourse – the one that focuses on a city’s infrastructure and capital revival or unaffectedness after a shock – constitutes the robust city strand of the urban resilience discourse.

The robust city strand of the urban resilience discourse is discernible in the Resilient Cities Framework of the Rockefeller Foundation, which highlights cities as attractive “centres of economic activity, opportunity and innovation” (Arup 2014, p.11) According to this view, a resilient city can avoid “social breakdown, physical collapse and economic deprivation” following a shock (Arup 2014, p.11). From this perspective, the city is an economic entity that is independent of the people who live there. While the report refers to poor and vulnerable people as particularly susceptible to disasters, it argues that the city – as an economic machine – should be made resilient and proofed from shocks (Arup 2014). This approach to urban resilience highlights the city’s robustness and unaffectedness or ability to maintain the status quo (Davoudi
2014; Kelman 2008). Particularly since Typhoon Ondoy hit Manila in 2009, the safety and the robustness of economies, infrastructures, and networks have been elevated as vital characteristics of urban resilience (Meerow 2017).

Cities produce and reflect socioeconomic inequalities, and decontextualized technical-reductionist (urban) resilience frameworks tend to omit the issues of marginality and locality (Vale 2014; Weichselgartner & Kelman 2015). The new normal to which the city resiliently bounces back tends to accommodate the interests of property owners, who typically prioritize the exchange value of infrastructure over its use value (Fainstein 2014). In Metro Manila’s case (to be discussed further in Chapter Four), the unequal urban system is reinforced: resources are allocated based on the unequal pre-disaster distribution structure, instead of directed to those most in need (Vale 2014). Furthermore, the city leaders and planners may be biased in both selecting the priorities for investment and in defining the we of the city (Bello, Kinley, & Elinson 1982; Broad 1988; Meerow & Newell 2016; Vale 2014). The discourse on natural disasters is frequently used as a way to cloak systemic vulnerabilities and justify the demolition of inner-city informal settlements of marginalized communities.35 Specifically, people who are excluded from inclusion as residents for whom the city is built and maintained are expected to exhibit resilience on their own following a hazard. To make urbanism resilient, the excluded might even be encouraged to stay out of cities altogether and to be resilient in rural areas instead.36

Hence, this strand of the urbanism resilience discourse conservatively calls for a robust city that is safe, stable, and unaffected by external and natural shocks – often by means of additional and better technology and physical infrastructure. By and large, it portrays the city as

35 See Bordadora (2011); Chavez (2010); Esguerra & Aurelio (2009); Gonzales (2009); Morelos (2012); NDCC (2010); Pante (2016); Smith (1996); Ubac (2012).
36 See Bordadora (2011); Esguerra & Aurelio (2009); Morelos (2012); NDCC (2010); Walker & Cooper (2011).
an economic whole, governed by a top-down approach. As this research demonstrates, this strand is particularly compatible and entangled with neoliberal logics of governance and has the potential of being deployed across various scales.

The responsible individual strand of the urban resilience discourse

The urban resilience discourse emphasizes top-down security and robust infrastructure, yet it simultaneously promotes bottom-up self-organization for the most vulnerable, with policies shifting towards the latter (Coaffee 2013). The resilience discourse increasingly fixates on vulnerable and affected populations (Manyena 2006; Sudmeier-Rieux 2014), while societal inequalities and access to infrastructure are treated as secondary concerns. This phenomenon occurs in a range of countries regardless of their perceived stage of development. Over the past few decades, the discourse in the Philippines has shifted from technological solutions to an emphasis on self-governance and responsibility of the local people, backed by political agendas, such as evictions of informal residents. To address climate change and long-term city-level resilience in Metro Manila, informal and low-income settlements are expected to improve their basic infrastructure through sustainable self-organization (Allen 2006; Vincentian Missionaries 1998; Yu & Karaos 2004). Similarly, low-income neighbourhoods facing flooding in Manila are called on to participate in resilience efforts while being urged to relocate from areas that are deemed unworthy of infrastructural hazard-proofing...at least while the low-income residents are living there (Government of the Republic of the Philippines, ADB, World Bank, & Global

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37 See for example: Mexico (Rinne & Nygren 2016), Uganda (Dobson, Nyanweru, & Dodman 2015) and the United States (Fainstein 2014).
39 See also: Berkes (2007); Coombes (2007); Diprose (2014); Grove (2014b); Joseph (2013); Kaufmann (2013).
Facility for Disaster Reduction and Recovery 2011; ISF-NTWG 2013). At the same time, the geographically proximate upper-income residents in waterfront apartments or hotels which cater to foreign tourists tend to be protected.\footnote{Article 51 of Presidential Decree 1067 (the Water Code); Article 635 of Republic Act 386 (the Civil Code); and several design parameters provided in the Implementing Rules and Regulations of Presidential Decree 957 or the Subdivision and Condominium Buyers’ Protective Decree (Housing and Land Use Regulatory Board 2009).}

The side of the (urban) resilience discourse that highlights self-organization and responsibility draws attention away from the material assistance that the government could provide to protect and aid populations; instead, it hones in on the attributes of the individuals and communities (Chandler 2016). It romanticizes the struggles of the people who manage to survive, but not thrive (Diprose 2014), emphasizing that people are not primarily victims, but empowered survivors with agency, who can manage their own vulnerabilities through taking responsibility of their situation (Berkes 2007; Grove 2014b). The tone implies that only the irresponsible do not “make more informed lifestyle choices” through enhanced self-awareness and self-reflexivity (Chandler 2016, p.47). While resilience measures are undertaken in the name of security and the welfare of the population at large, in practice, they effectively identify and objectify groups that are deemed vulnerable due to their alleged lack of adaptive capacity (Grove 2014a).

As highlighted above, this strand of the urban resilience discourse further conceptualizes community as a collection of individuals who are the object of governance. While neighbourhoods or other entities might be compared to each other based on surveys and analyses, these communities are compounded from their individuals (e.g. Lisnyj & Dickson-Anderson 2018) or households (Pujadas Botey & Kulig 2014) with certain resilience or vulnerability profiles or resilience capacities. The notion of community tends to receive little
analytical scrutiny, despite its presence. Moreover, the resilience building efforts described do not necessarily target a community as a whole and rarely address issues of class and other forms of social, material power. This is an important gap in the literature which this thesis seeks to fill by utilizing a multi-case study approach to investigate the specific power relations and hierarchies structuring and legitimizing resilience interventions in Manila and Makati.

Hence, whereas one strand of the urban resilience discourse calls for a robust city, the other strand is fuelled by the need to make individuals responsible for their own resilience. Those who are excluded from the robust city are expected to exhibit self-organization as individuals and as members of a community.

The discourse of urban resilience in international policy: The gap in scale

According to Meerow et al. (2016, p.45), urban resilience can be understood as “the ability of an urban system – and all its constituent socio-ecological and socio-technical networks across temporal and spatial scales – to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to quickly transform systems that limit current or future adaptive capacity.” The reference to spatial (and temporal) scales when defining resilience, as outlined above, is important. In practice, however, (re)building robust urban infrastructure and self-organizing after a disaster are material activities undertaken at various scales, yet the discourse creates a disconnect between the two. The scalar disconnect can frame vulnerable people and neighbourhoods as subjects of interventions, while visions for a robust city are executed via a top-down approach. An example of the discourse beyond the urban context is provided by the UNISDR’s Sendai Framework for Disaster Risk Reduction (SFDRR). The framework’s priorities are to 1) understand disaster risks, 2) govern risks on different scales, 3) invest in disaster risk reduction, and 4) improve disaster response through better preparedness, in
addition to “building back better” following hazards (2015, p.14). Whereas the first three priorities primarily comprise top-down activities, the fourth one also calls for empowering vulnerable populations; while resilience is concurrently “built” through technologies, critical infrastructure, and institutions (UNISDR 2015, p.5). The report (2015) highlights disaster risk as a threat to people and assets, but it mentions inequality only once, implying that top-down economic and infrastructural robustness is distinct from empowering the vulnerable. The urban resilience discourse is disjointed: robust societies have to be built, and the vulnerable must be empowered, but the connection between them is not spelled out. The connection is vital, however, because it enables a greater understanding of the multiple governance scales at which the discourse can be deployed to justify various types of interventions and uses of power.

The scalar disconnect of the discourse is also illustrated in Metro Manila. Garrido (2013) discusses resilience trade-offs in different settings. In the economically wealthy city of Makati, the trade-offs are made on a temporal scale: short-term approaches are weighed against longer-term solutions in the context of different (infra)structural solutions designed to protect the population. In Manila City’s informal settlements, by contrast, the major trade-off is staged between the social resilience of crisis-affected individuals and that of communities; those who are not protected by a governing authority are expected to draw strength from their own social capital (Garrido 2013). Consequently, resilience has the scope for both desired and undesired dimensions suggesting that it has the potential to guide management or planning approaches toward enhancing resilience when desired or reducing it when undesired.

Too frequently, the resilience concept is narrowly focused on a specific urban system’s scale in order to formulate and implement local environmental strategic planning and policies to increase the resilience of individual cities (McPhearson, Andersson, Elmqvist, & Frantzeskaki
2015) and has often been constrained to either single or narrowly defined issues (Marcotullio & McGranahan 2007; Seitzinger et al. 2012). These attempts are misleading: urban systems are open systems and have multiple scales from household to neighbourhood, and from city to region. The current focus on a single scale may, for example, lead to efforts to build resilience in a particular neighbourhood, without considering the effects on other neighbourhoods within a city, such as building flood walls to protect high value real estate in one neighbourhood of a coastal city that could increase flood risk in other unprotected, vulnerable neighbourhoods (Zoleta-Nantes 2002). What remains unclear from the examples above is how lower scales or subsystems (e.g. informal settlements) are transformed (i.e. become more resilient) within a city and how resilience is redistributed (be it intentionally or unintentionally) when resilience initiatives are planned and implemented. This is a major gap in the literature on the cross-scale dynamics of resilience. As such, this research proposes two new theoretical concepts (to be outlined in further detail in the following chapter) – *shadow(s) of resilience* and *risk redistribution* – which not only align the scalar aspect of resilience, but also account for the multiple sub-systems of resilience within a single city.

*The need for a redefined resilience*

It is clear from this literature review that fundamental gaps persist in scale of actions and knowledge on resilience. While the definition of resilience has changed over time, the current resilience approach mixes a number of different aspects of resilience thinking, including multiple and cross-scale dynamics; the emphasis on shocks and disturbances to the system; but also, aspects of hard, engineered resilience. Importantly, however, disaster resilient development is not presented as anything fundamentally different to current development – it emphasizes that current plans need to be “climate proofed” (ADB 2014, p.7); in other words, the potential future
impact of disasters and associated risks must be built in. But the premise of continued growth and the benefits of this strategy are not questioned; disasters reinforce the need to do development *better*, more effectively, and with an emphasis on shifting vulnerabilities and how they may reconfigure the distribution of costs and benefits within society. This mirrors discussions on climate change adaptation, where distinctions can be made between approaches which see adaption as necessary to protect development, and those which see climate change and adaptation as an opportunity to change development (e.g. Ensor & Berger 2009).

In terms of knowledge gaps, the role of other forms of political institutions in shaping governance for resilience merits more investigation. Few frameworks exist to emphasize the roles and responsibilities of different stakeholders within and across different scales, and to suggest ways forward which go beyond the dichotomy between actions from the top and initiatives from the bottom. The gaps between policy and implementation have led to several acute questions (see Introductory Chapter), particularly when investigating resilient disaster recovery projects in Metro Manila. In the following chapters, this thesis attempts to answer these questions by utilizing a *dual disaster* framework supported by political ecology theorizations to broaden the discussion by questioning what is missed by policy practice. The answers shed light on the nature and limitations of resilient disaster recovery projects in Metro Manila. At the core of the complexities are the conflicting interests and rights of multiple stakeholders among whom power imbalances are paramount (Koenig 2002).
Chapter Three

Theoretical Framework & Methodology

While resilience thinking provides an informative starting point for considering social-ecological systems, this Chapter builds on and extends this perspective by using a dual disaster theoretical framework (Hyndman 2007, 2011). This Chapter offers an alternative framing of flooding crises in Metro Manila by providing an urban political ecological theorization to help address the research questions and to provide methodological clarity and case study justification. The objective in utilizing this approach is to address the significant gaps highlighted in the Literature Review (Chapter Two) that underscore the uneven spatiality of urban resilient disaster recovery projects in Metro Manila, whereby risks and resiliencies are redistributed along class lines and resiliency is used as an object of governance. This is important in order to understand who has the power to define unwanted landscapes and populations and the manner in which this evolved to uneven infrastructure development and urban climate resilience in Metro Manila.

This Chapter is organized in four sections. Section One describes the theoretical framework that underlines this analysis and identifies the scholars whose work this thesis draws from before demonstrating why this framework has been adopted. Section Two proceeds with a discussion of the ways in which the theoretical framework can be linked to the empirical analysis of resilient disaster recovery projects in Metro Manila. Informed by the theoretical framework, Section Three outlines two new theoretical concepts – shadow(s) of resilience and risk redistribution – that follow from the multiple spatial classifications of resilience in Manila in order to illustrate the vulnerabilities of marginalized groups to typhoon flooding. To this end, resilience should not be viewed as a mere act or outcome, but rather as a “processual unfolding moment(s)” (Springer & Le Billon 2016, p.2). Examining these processes reveals historical
modalities of power, exploitation, myth-making, and discursive abilities, which are all critical to understanding how resilience operates at different scales creating uneven metropolitan geographies in Metro Manila. Finally, Section Four concludes with a discussion of the methodology and methods employed in this research project.

**Dual disasters framework**

Dual disasters refers to an approach “where humanitarian crisis with human-made political roots overlap[s] with a humanitarian crisis induced by environmental disaster” (Hyndman 2011, p.1). While similar to the concept of “cascading disasters,” the concept of dual disasters, by contrast, aims to capture the interconnections between persons, processes, and patterns produced in a given context across economic, political, and social terrains (Hyndman 2007). In other words, disasters are not natural (Hartman & Squires 2006) and should be read less as an event and more as a destabilizing constellation of social, economic, and political relationships across space and over time (Peluso & Watts 2001; Watts 2004). While the concept of dual disasters has been applied to analyse the controversy over the implementation of post-tsunami buffer zones in Sri Lanka following the 2004 Indian Ocean tsunami (Hyndman 2011), no study exists that utilizes a dual disaster lens to understand the problems and rationalizations of resilience as a mode of governance in Metro Manila.

In order to understand the complex webs of interactions involved in disaster planning and response, the dual disaster framework is supported by political ecological theorizations which locate the root causes of environmental change and disaster risks in political, economic, and

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41 Cascading disasters refer to progressions of disaster-related impacts which are said to produce multiple-cause-effect chains. See Pescaroli & Alexander (2015) for a more extensive definition.
42 By adding urban, the focus narrows to material production of and within cities. Urban political ecology has entailed approaching cities and urban life as constituted by and constitutive of the circulation of unequal capitalist production and flows of power (Cornea 2019; Harvey 2001, 2005, 2014; Heynen 2016; Keil 2003, 2005).
cultural dynamics that link societies and the biophysical world across geographic and temporal scales. Combined, the theoretical approach developed in this thesis brings together “the separate and interactive roles of natural and human drivers [of disaster risk] that are still not adequately understood” (IRDR 2011, pp.12-13).

**Political ecology theorizations**

Political ecology is an umbrella term used to identify a broad and eclectic realm of scholarship and practice “which seeks to understand the complex relations between nature and society through a careful analysis of form of access and control over resources, and their implications for environmental health and sustainable livelihoods” (Watts 2000, p.257). It focuses on the distribution and contestation of unequal (and exploitative) power and resources, and in doing so, seeks to analyze and reveal the underlying institutions, incentives, and interests that give them their shape (Bryant 1998, 2015; Wisner 2015). In this way, political ecology provides a toolkit with which to unpack the generative dimensions of vulnerability and, in particular, the linkages between natural and human systems that underpin the production of risky and resilient environments (Robbins 2004). Instead of seeing each as separate and external to the other, environment and society should be seen as inseparable and mutually reinforcing, implicated in each other’s vulnerability and resilience (see dual disaster framework) (Robbins 2012).

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43 See Blaikie (1985); Blaikie, Cannon, Davis, & Wisner (1994); Pulwarty & Riebsame (1997); Pelling (1999); Oliver-Smith (2004); Ribot (2014); Watts (1983); Wisner et al. (2004).
Dual disasters and the political ecology of governable spaces

This thesis draws primarily on Watts’ (2004) writings on governable spaces in order to place the research on disasters and resilience under the umbrella of governance. In so doing, it strives to move beyond existing limitations to improve the understanding of how associated power dynamics are territorialized, and socially and spatially uneven. Drawing on Rose’s (1999, p.32) discussion of the spatial dimension of government in Foucault’s writings on authority, governable spaces is defined as “the modalities in which a real and material governable world is composed, terraformed, and populated.” Watts (2003, p.15) further operationalizes the idea of a governable space, which in his interpretation, “necessitate[s] the territorialization of governmental thought and practice”; in short, it is “political thought territorialized.” In other words, governance is attached to space at multiple levels and places. Seen in the context of flooding in Manila, Watts’ (2004) concept helps explain how resilient disaster recovery projects enable the national government to reconfigure the exercise of power and territorial control over people through the reclassification of urban spaces.

Dual disasters: The political ecology of variegation and the myth-making role of the state

Despite the power of governable spaces (Watts 2004) as an analytical category in which to embed and understand the interrelationships between environmental change – notably flooding – and the creation of resilient (exclusive) urban spaces in Metro Manila, it is important to underline that the “capitalist core,” as theorized by Marx, has not spread evenly nor has it maintained the same legitimizers and consequences throughout time and space (Henderson, Appelbaum, & Ho 2013, p.1224). This thesis draws on the work of Brenner, Peck, and Theodore (2010a, p.330) who conceptualize neoliberalization as “historically specific, unevenly developed,

44 See also Corson (2011); Lee, Wainwright, & Glassman (2018); Scott (1998).
hybrid, patterned tendency of market disciplinary regulatory restructuring.” In doing so, the framework is able to recognize multi-scalar complexities without erasing distinctive spatialities. This work builds on this approach by paying attention to environmental and/or resilience justifications and outcomes within variegated contexts.

The use of variegation requires us to pay attention to “the conflictual, volatile and contested interaction of transnational regulatory experiments with inherited (national and subnational) landscapes” (Brenner, Peck, & Theodore 2010b, p.195). At the national level, Watts’ (2001, 2015) ideas of myth-making help explain how discursive strategies are used by the Philippine national government to create mystifications over resilience and to hide the realities that some people suffer under capitalism.\(^\text{45}\) In doing so, the state doles out resources differentially across axes of class, creating uneven patterns of vulnerability that place people at “different levels of risk from the same hazard” (Oliver-Smith 2009, p.14). Technocratic and neoliberal resilience discourses enable political actions to be presented as apolitical, and hence outside the contours of controversies which are essential to politics (Swyngedouw 2011).

However, these discourses are not just utilized at the national level. Rather than focusing solely on the actions of states and the elites within them, it is important to understand how policy-makers shape the interrelations under analysis. In other words, in order to understand resilient frames around disaster recovery politics in particular places, such as Manila and Makati, we must pay attention to how and why broader resilient discourses and geopolitical (im)balances are infused with other power struggles on the ground (not only at the national level but also at the global level). Hence, the production of governable spaces (Watts 2004) is not simply the outcome of a single state’s activity, but rather is affected by multiple actors, located at multiple

\(^{45}\) See also Dalby (2013); Parenti (2011).
scales of governance (not exclusively states). These scales include: 1) a global network of foundations, multilateral agencies, non-governmental organizations (NGOs), and private sector goods and services providers wielding differential power and influence; 2) measurement and assessment devices that both mobilize and define resilience; and 3) initiatives that marketize and institutionalize resilience for the benefit of private sector firms and investors (World Bank 2019a).

Appropriateness of the theoretical framework

Analyzing this topic through a dual disaster framework supported by an urban political ecology lens augmented, in particular, by the work of Watts’ (2001, 2004), aids in addressing a number of the identified gaps in the literature (see previous chapter). First, no prior studies utilize this theoretical framework, which is indispensable to understanding the dynamism of power working through resilience interventions in urban communities in the Philippines. Given there has been little scholarly work aimed at understanding the differential socio-spatial impacts of resilience in a single geographic space, the chosen theoretical framework, specifically the urban political ecology theorization, is the ideal lens to address this gap in the literature and develop an argument that engenders a better understanding of the material circumstances and transformations driving, as well as ensuing from, the ongoing production of differential spaces within urban areas.

Second, the heterogeneity of the Philippines, where extreme environmental conditions unfold across enormous ethnic and geographic variation, is another key challenge that is yet to be taken up by DRRM and resilience scholarship. Despite the increasing pace and scale of academic explorations of disasters in the Philippines, scholarly discussions have focused, primarily, on the experiences of the majority in ways that are often homogenizing and do not account for regional
specificity (Scott 1998). Regional variation is poorly accounted for in resilience and disaster literature that considers the implications for the nation of catastrophic experiences arising from environmental change. Drawing on the theoretical framework, this thesis allows us to transcend the abstract implications of resilience by studying its particular experiences in Manila and Makati – experiences that are not homogenous and ubiquitous, but rather specific and concrete (Burawoy 2000) and hence variegated (Brenner et al. 2010b; Peck & Theodore 2007).

Third, further research is needed in the context where the causes and consequences of resilient disaster recovery projects are converging within the space of urban areas as a result of natural and human-made disasters and other urban initiatives. The limited knowledge on the topic manifests itself in an inaccurate conceptualization of the problem and inadequate or partial policy responses to resilient DRRM. As few frameworks exist to emphasize the roles and responsibilities of different stakeholders within and across different scales, and across time, the dual disaster and urban political ecology lenses of the theoretical framework are useful in identifying the agendas of power, the actors and actions involved, and the arenas in which the dynamics of unequal distribution of ecological costs are occurring. These processes underscore the central import of place in shaping daily lives, which as McDowell (1999, p.4) notes is “made through power relations which construct the rules and define boundaries” that are both social and spatial (i.e. governable spaces).

Resilience is inevitably context specific. As such, attention to the interlinkages that facilitate the connection of context and scale leads to an expanded appreciation of the human-environmental system in terms of the social and political relationships that distribute resilience outcomes. Shadow(s) of resilience and risk redistribution are two concepts that provide further means to understand both the pre-contexts and the impacts of urban change and provide insights
into the structural constraints and multiple contingencies within which resilient disaster recovery projects are imposed on different urban spaces and residents, with particular focus in this research on Metro Manila.

*Shadow(s) of resilience and risk redistribution*

In the context of agencies involved in transforming infrastructure, the literature does not always recognize the messy world of infrastructural transformation. As stakeholders in Metro Manila embrace new resilient technological arrangements as a means to govern urban spaces and the urban poor, governing aims do not always become reality; or at least not always in the ways expected. For example, it is important to stress the fact that some informal spaces within cities become more resilient due to their relative proximity to developed urban centres. This is what characterizes *shadow(s) of resilience*, whereby informal enclaves within a city benefit from the spillover of resilient disaster recovery projects (be it flood drainage and infrastructure, building standards, etc.), thus minimizing the impacts of disasters and associated risks. A notable case is the presence of informal settlements near the central business district (CBD) of the city of Makati (Garrido 2013), which is one of the study sites of this research. In this sense, the flood risks facing informal settlements in low-lying, flood-prone areas are minimized by a resilience that arises from the architecture of the city and the social and economic capital of its primary (elite) residents.

It should be noted that *shadow(s) of resilience* does not occur in all cities. In other words, not all informal spaces in urban centres are equally protected in the event of a disaster. Rather, it is dependent on the historical and geographical specificities of urban spaces. With increasing competition for limited urban space and rising urban land values, many city governments in

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46 See Gandy (2003, p.87) and Kaika (2005, p.51) for an urban political ecology analysis of the “uncanny nature of the city.”
Metro Manila have not experienced sufficient growth to tackle urban disaster problems in the same way and have continued to struggle to meet the costs of disaster prevention and resilient recovery projects because of their limited funding and resources (Satterthwaite 2005). As a result, a further (negative) spillover may occur whereby in developing and implementing resilience initiatives in one city, neighbouring cities are disproportionately disadvantaged – redistributing the risks and shifting the locale of a disaster from one area to another, usually to the detriment of poor and low-income residents already living in precarious spaces in a city. This is illustrated in the coming chapters of this thesis through an examination of the differential impacts of flood hazards among informal settlers in the cities of Manila and Makati as a result of private planning.

Shadow(s) of resilience and risk redistribution work in tandem in Metro Manila and have the potential for decreasing or increasing disaster risk. These terms are unique and support the theoretical framework by providing a contextualized understanding of urban areas prior to change, in particular, the complex ways in which the socio-spatial realities of urban residents are altered due to the overlapping of natural and human-made disasters.

Methodology and Methods

This section of the thesis outlines the research design and methodology of the present study of resilient disaster recovery projects in Metro Manila. It will articulate the study’s qualitative research underpinnings through case studies to explore the efficacy of the proposed theoretical framework to bridge the gaps in resilient DRRM and to discuss the extent to which this learning can be translated for current and future practice in Manila. Finally, this Chapter will

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47 For example, some cities in Metro Manila have larger budgets and/or have received private funding to tackle urban-specific disaster risks (PwC & Urban Land Institute 2012). This will be discussed further in Chapter Four.
identify the strengths of mixed methods research for the thesis and discuss the methods utilized during fieldwork in detail.

Case study approach and justification

The qualitative case study is an approach to research that facilitates the exploration of a phenomenon within its context using a variety of data sources. To this end, the case study method was used to: investigate the underlying principles and practical attributes used to tackle a current and persistently problematic issue (i.e. typhoon flooding); explore processes of decision-making and resulting successes and failures of resilient disaster recovery projects; synthesize current knowledge and practice on DRRM; and determine scalability, adjustability, and applicability beyond the case study context. The last point is particularly relevant; the research and methodological objective is not to achieve generalized outcomes, but to derive learning from which new knowledge is created.

This thesis explores the historical and contemporary cases of the cities of Manila and Makati as examples of integrated approaches to urban resilience. These cities were identified based on evidence of their disaster resilience and urban inequalities (Murray 2009; Satterthwaite 2003). An initial literature review was conducted to identify case examples based on the following selection criteria: 1) spatial: the exposure to flood hazards and disaster risks; 2) evidence of resilient disaster recovery projects (specifically with regards to flooding); and 3) observed consequences of increased urbanism in adapting to changing environmental conditions (Zevenbergen, Veerbeek, Gersonius, & van Herk 2008). The choice of the two cities was then reaffirmed upon completion of the fieldwork. The severity of flooding as well as the degree of resilience varied in each city. This, however, validates the scope and impetus to explore what
makes some urban areas more resilient than others (see core research questions in the Introductory Chapter).

*The mixed methods approach*

Qualitative research as “an inquiry process of understanding” (Creswell 2013, p.15) enables the extraction of “meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things” (Berg 2007, p.3). A qualitative approach is best positioned to address the research questions and establish a base knowledge for understanding which actors, through what processes and policy/project mechanisms, have shaped the evolution of resilient disaster recovery in Metro Manila, and how the cost and benefit of this process are distributed.

Mixed methods involve the collection, analysis, and use of qualitative data. Also called “triangulation of method,” this mixing of qualitative methods is noted for yielding “richer and more comprehensive” studies (Neuman 2011, p.165) and overcoming the limitations and biases of using one method (Creswell, Plano Clark, Guttmann, & Hanson 2003). Mixed methods are particularly warranted when examining complex social phenomena about which little is known (Greene & Caricelli 1997).

The decision to adopt a mixed methods design was bolstered by the literature. Creswell et al. (2003, p.21) assert that the decision to adopt a mixed methods approach hinges on three considerations: a match between problem and approach; the expertise of the researcher; and the audience of the report. Creswell et al.’s (2003) first consideration, in matching the problem with the approach, was given the most deference in the research design choice. Little is known of the problems outlined in this thesis’ research questions. Due to the historical and context-specific nature of these inquiries, an exploratory, inductive approach was necessary to develop theory and probe key issues underlying resilient disaster recovery projects in Metro Manila.
Despite the practical reasons for applying a mixed methods approach in this research, weaknesses in the chosen design are acknowledged. Johnson and Onwuegbuzie (2004, p.22) note that while mixed methods designs can be costlier and time consuming, and require more expertise in qualitative approaches, mixed methods can be “superior under different circumstances” and the researcher must decide which approach or combination of approaches is preferable for their intended study. The many advantages of a mixed methods approach outweighed the additional time and expense of the approach because of the improved reliability and validity of the chosen methods; the precedent and preference for mixed methods designs among DRRM and resilience scholars; the approach yielded an original contribution to the disaster response literature by reflecting on the utility of using resilience as an analytical category; and this thesis informs better policies and practices on resilient disaster recovery projects in Metro Manila.

The following paragraphs discuss the data collection process, with each method utilized in this project described separately. In actuality, however, these methods were frequently used simultaneously and bled into each other in the field.

Data collection process

(1) Primary and secondary source review (content analysis)

Written works can assist in exploring and supporting hypotheses and the research questions; they can complement or refute other data sources; or they can even become their own body of data (Reid, Greaves, & Kirby 2017). Primary and secondary data is evaluated to shed light on the policy decisions that have had negative, counter-productive outcomes for those who inhabit Manila’s informal city spaces (Reid et al. 2017). This thesis draws on legislation, policy documents, and development plans by the Government of the Republic of the Philippines and
other relevant governing bodies and/or public authorities, and official sources produced by international development organizations and NGOs. Although government and NGOs have the resources, legal power, and breadth of involvement to acquire or produce data, official sources are treated skeptically; state trustees are motivated to obtain, process, and present certain information that they can use to their own benefit (Cloke 2004; Hill Collins 1990; Leech 2002; Scott 1998). In other words, the notion of who makes knowledge is as important as the knowledge itself (Hill Collins 1990). Further, this research relies on archival research of old and relevant newspaper articles from Filipino and international news sources and secondary sources consisting of articles from peer-reviewed journals and academic books. Utilizing both primary and secondary sources allows for a detailed illustration that captures the complexities of the phenomenon under investigation.

Moreover, built environments are also considered as a primary source of data. This is because “buildings are…functional objects…[which contain] meanings bound up in their construction” (Cloke 2004, p.113). Architectural details can reveal a deliberate intent to exclude, to exercise power, or to help or hinder mobility (Weizman 2007). In this thesis, such data are found in the built environment of Manila City and Makati City, and especially in the informal settlement housing sites. These sources help confirm or refute claims made by official and non-official data sources, and by informants used during the research process.

(2) Semi-structured and structured interviews

The main field research was conducted from early October to the beginning of December 2019. Over the course of the fieldwork six cities were visited in Metro Manila: Makati, Mandaluyong, Manila, Marikina, Pasig, and Quezon City (see map of Metro Manila on page vi).

48 See Footnote 8 in the Introductory Chapter.
The fieldwork yielded a total of nineteen interviews with thirty-five respondents representing stakeholders ranging from government officials; staff members from humanitarian organizations, United Nations agencies, and NGOs; civil society actors; and experts on urban and infrastructure planning (see Appendix A). Respondents were selected through snowball sampling on the basis of accessibility (Reid et al. 2017) as well as from leads identified in archival analysis, practitioner and academic literature, and during local conferences hosted by UN-Habitat and the Asian Development Bank (ADB) in Manila. Accounts from informal settler families (ISF) living in Metro Manila are also included in this thesis. Due to research access limitations in Manila, as well as the focus of this thesis, these accounts are supplementary. They are not representative of all who have been displaced by typhoon flooding and/or rapid urbanization and intensifying construction of resilient disaster recovery projects (Robinson 2003), but provide some perspective from those whose lives have been fundamentally altered through resilience interventions.

Most interviews took place at a location and time of the interviewee’s choosing (Guest, Namey, & Mitchell 2013) and were conducted one-on-one or in a group setting. Conducting individual and small group interviews minimized respondent burden as the researcher was able to travel to each participant’s place of business (or nearby). This strategy also permitted the researcher to gain invaluable observational data on the participants’ natural environment. Going to the participants’ natural or chosen environments also helped minimize any perceived power imbalances and to build rapport between the researcher and participant. Formal interviews varied in length from forty-five minutes to two hours. Apart from a few cases where research

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49 The majority of interviews were conducted in formal settings, such as government and NGO offices. On occasion, informal interviews were conducted in transit to local conferences in Metro Manila. Interviews with ISFs were arranged by the Philippine Red Cross and conducted, with permission, in their respective homes.
participants spoke Tagalog,\textsuperscript{50} questions were asked and answered in English. Originally, interview questions were asked in a structured format based on an interview guide consisting of a repertoire of question clusters on resilient DRRM in the Philippines (Guest et al. 2013). These questions were asked in every formal interview,\textsuperscript{51} and when possible, in informal interviews. This was done to maintain as much consistency as possible in terms of topics and key questions within each cluster and, upon analyzing the interview data, to compare the responses of expert interviewees (who are positioned in local, regional, national, and international positions) in the Philippines. This permitted the triangulation of findings from different stakeholders, and ultimately, a means of understanding the disconnect between policy and practice in terms of resilient disaster recovery and governance. Over the course of the fieldwork, the data collection process became progressively more open-ended with spontaneous questions added and less relevant questions dropped.

(3) Observation

Observation is firmly embedded in the ethnographic tradition and promotes triangulation to enhance validity (Reid et al. 2017). Observations were taken throughout the fieldwork and recorded by hand-written notes and pictures (where appropriate). This method included a “reconstruction of dialogue, a description of the physical setting, accounts of particular events or activities” (Creswell et al. 2003, p.189) as well as reflexive notes regarding the researcher’s personal thoughts including “speculation, feelings, problems, ideas, hunches, impressions and prejudices” (Bogdan & Biklen 1992, p.121). Observation included site visits to the cities of

\textsuperscript{50} In the event that participants did not speak English, questions were asked by the researcher in English and answers were given in Tagalog, with both being translated by an interpreter. This was only necessary during interviews with ISF.

\textsuperscript{51} On occasion, all interview questions were asked to be sent in advance to be vetted by international development organizations and government officials. Once the interview questions were approved, the researcher was not allowed to deviate from the submitted questions.
Manila and Makati and current and former temporary housing sites within the two cities, and through the attendance at disaster prevention meetings and local and national conferences, in order to observe firsthand the experience of living temporarily in official post-disaster space and how, according to Scott (1998), centrally managed social plans to control people and landscapes inevitably go awry.

(4) Critical topography

Understanding Manila’s post-disaster landscape is a critical component of this research project. Consequently, this thesis offers a critical post-Ondoy topography in which the processes and practices of producing post-disaster spaces are exposed (Katz 2001). This method is framed within the “governable spaces” theoretical framework in order to help articulate the exclusionary character of resilient disaster recovery projects in Manila and Makati. The objective in utilizing a critical topography approach is to destabilize dominant, naturalized knowledges and social structures, and to expose the people and institutions who draw the lines and the ways in which they do it (Fonow & Cook 2005; Fusco 2012). Such an endeavour will reveal the “spatialized understanding of the problems” in official resilient disaster recovery projects (Katz 2001, p.1232).

Conclusion

The theoretical framework outlined above excels in its explanatory power and provides methodological guidance for accounting for unequal distribution of ecological costs as a result of resilient disaster recovery projects. The methodology and methods are complementary to the theoretical framework in that they provide descriptive and methodological insights for identifying, synthesizing, and analysing important actors and the flows between them – including social relations and structures of domination. The main aim of this Chapter is to address the gaps
in the literature outlined in Chapter Two by proposing a comprehensive theoretical framework and new empirical concepts. The following chapters will apply the established theoretical framework to analyse how resilience to flooding in Metro Manila has become governable.
Chapter Four

Resilience – For Whom?

This chapter addresses the core research questions and main thesis underlying this research project (see Introductory Chapter) by examining how the politics of resilient disaster recovery projects plays out on the ground in Metro Manila. Using historical and social context it analyses the disproportionate catastrophic effects on Manila City and Makati City in 2009 of the floods caused by Typhoon Ondoy (international name: Ketsana). Through this analysis, the chapter argues that interventions undertaken in Metro Manila by the national government in the name of resilience had the effect of devaluing the lives of the urban poor living in informal settlements in the city of Manila. These devaluations were not produced by the natural hazard; they were brought about by government officials and private developers, demonstrating the negative confluence of natural and human-made disasters (Hyndman 2007, 2011; Schuller 2008). Catastrophe is now framed by these actors as an opportunity for resilient investment and to “build back better” (Government of the Republic of the Philippines et al. 2011, pp.24, 58, 63).

As the concept of resilience – including strategies such as disaster risk reduction and management (DRRM) – has gained more traction in the public imagination, in global and local policy agendas, and in urban infrastructure budgets, it is necessary to contribute a critical evaluation of the historical and social context in which it operates in order to appreciate the power and politics of this dominant policy objective. Framed in the theoretical approach (see Chapter Three), this chapter supports the argument above by providing a historical and place-based conceptualization of dual disasters (Hyndman 2007, 2011) to reinterpret the disaster itself, the pre-existing landscapes that precipitated its uneven effects, and the selective exercises of

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52 Allen, Johnson, Khalil, & Griffin (2017); Biermann, Hillmer-Pegram, Knapp, & Hum (2016); Cretney (2014); Evans & Reid (2014); Leitner, Sheppard, Webber, & Colven (2018).
resilience. On this view, this chapter explores the different flood risk analyses and integrated metropolitan and flood management plans proposed for Manila and Makati and points to the importance of spatial dimensions in explaining diverging and unequal DRRM outcomes, focusing on the reshaping of *governable spaces* (i.e. shifts in territorialized power relations) (Watts 2004) following Typhoon Ondoy.

This chapter is organized in three sections. Section One discusses how Metro Manila’s historical and physical contexts critically shape metro-wide infrastructure planning – focusing particularly on the rise of large-scale private urban development from 1990 onwards\(^{53}\) and its transition to resilient infrastructure planning in 2010 following Typhoon Ondoy.\(^{54}\) By examining the development of resilient infrastructure in 2010, this chapter reveals the influence of enduring neoliberal ideology in shaping the governance of spaces in Metro Manila. Section Two then shifts the focus of the analysis to the politics that enabled elites to redefine unwanted landscapes and populations in terms of risk and vulnerability, justifying selective and exclusionary exercises of resilience. By calling attention to the effects of resilient disaster recovery projects in Manila and Makati, this chapter concludes in Section Three by reframing resilience as a form of governance and documents the shortcomings of resilient disaster recovery policy and practice in the Philippines.

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\(^{53}\) This timeframe is chosen because it marks the proliferation of commercial and exclusionary enclaves created by private developers in Metro Manila (Fano 2000; Garrido 2013; Shatkin 2004), entrenching a class boundary as well as a threshold between different kinds of social space.

\(^{54}\) This is important because it marks the first-time *resilience* emerged in the policy discussion in the Philippines.
The historical context of uneven urban development in Metro Manila

Manila’s exposure and response to flooding can be best understood in the historical political economic context of the Philippines. Urban governance has shifted with the country’s various regimes; yet, throughout most of its history, Manila’s development has been shaped primarily by the confluence of Spanish and American colonialism, the private sector (particularly elite land-owning families), failed centralized urban planning, fragmented local governance, and strong urban social movements (Magno-Ballesteros 2000; Michel 2010; van den Muijzenberg & van Naerssen 2005). To complicate matters, globalization and neoliberalization have unfolded contemporaneously with climate change, reinforcing patterns of inequality and vulnerability, ultimately undermining social-ecological resilience (O’Brien & Leichenko 2000). This led to the absence of a coherent and encompassing vision for the city-region and fractured resilient urban and flood disaster management. This section describes how infrastructure planning has been affected by these processes, and the myriad of ways in which they intersect.

The rise of private urban development: 1990s

The most effective directors of Metro Manila’s development in the postcolonial era have been private sector actors. Landed families like the Aranetas, Ortigas, Ayalas, and Tuazons, who inherited large tracts of land during the period of Spanish colonialism (1521-1898) owned much of Metro Manila’s real estate, and government planning agencies were rendered ineffective by the lack of funding and the absence of political will (Caoili 1988; Ng 1981). Until the end of the American rule (1898-1946), private-sector real estate development was marked by a lack of planning beyond the scale of a building or block (van den Muijzenberg & van Naerssen 2005). Many landowners did little more than “guard the property and collect the rent” (van den

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55 For a more detailed history see Connell (1999); Garrido (2013); Michel (2010); Ortega (2016a, 2016b); Roberts (2011).
Muijzenberg & van Naerssen 2005, p.151); as a result, family-owned agricultural estates gave way over time to poorly planned and densely populated neighbourhoods. Early efforts of urban development in Metro Manila have been summarized by many authors in a similar manner: “the urban plan for Metro Manila has been grandiose (Magno-Ballesteros 2000, p.4) but “virtually nothing was ever put in place” (Connell 1999, p.420). It is no wonder, then, that the metropolis came to exhibit a motley and haphazard aspect.

The emergence of private urban development in Metro Manila can be traced back to the creation of the Forbes Park subdivision in Makati City in 1949 (Shatkin 2008, 2011) which became the prototype for private sector real-estate development for the metropolitan region throughout the 1990s. Urban development in the 1990s brought about the formation of self-contained communities with residential, commercial, and industrial districts, eager to separate themselves from the rest of Manila’s infrastructure failures (Shatkin 2008, 2011). In the post-Marcos era,\textsuperscript{56} decentralization has been coupled with a focus on market-based policy and extensive privatization of public infrastructure and services, ushering in a period characterized by a “neoliberal vision in national development policy” (Shatkin 2004, p.2479), the consequence of which “has been the adoption of an urban framework that, perhaps more than any other country, exemplifies the ideal outlined in the World Bank’s vision of the ‘new policy agenda’”\textsuperscript{57} (Shatkin 2004, p.2479). The growth of these private ventures resulted in a proliferation of self-

\textsuperscript{56} Ferdinand Marcos was elected president of the Philippines in 1965 and was overthrown in 1986.

\textsuperscript{57} This agenda adopts a neoliberal framework of analysis that views the role of cities as engines of globally-oriented, manufacturing-led economic growth (World Bank 1991). With its strong focus on increasing economic efficiency, the new agenda eschews government intervention in the urban economy and emphasizes the need to enhance the role of the market in all aspects of infrastructure and service delivery (World Bank 1991). In the context of the Philippines, the national government has “cut its budget, decentralized the provisions of infrastructure and services, and focused on attracting investment through the development of trunk infrastructure” (Shatkin 2004, p.2479).
contained development that served as a spatial manifestation of structural inequalities, which has mostly benefitted a wealthy minority.

The formation of “governable spaces” (Watts 2004) is relevant and useful to understanding the formation and preservation of exclusive spaces in Metro Manila as a result of privatized urban development. The private urban developments that characterized the metropolis in the 1990s indicate a strategy of enclosure (Harvey 2003): corporate megaprojects, bundling services with exclusive spaces, and the proliferation of walled residential subdivisions or enclaves called villages\(^{58}\) (Garrido 2013). Their walls literally delineate urban inequality. These corporate developments emerged with a “network of elite spaces, including proliferating citadels (e.g. gated subdivisions, luxury condominiums, high-rise office buildings) linked to spaces of elite consumption (e.g. exclusive malls, recreational areas that are fenced-in or simply forbidden to the poor) through toll-highways, power and water infrastructure” that does not extend equally throughout the city (Garrido 2013, p.182).\(^{59}\) The parallel growth of informal settlements at the perimeter of villages is continuing apace, leading to territorialized processes of resettlement, infrastructure planning, and reshaping of urban areas. Consequently, winners and losers in the urban-restructuring process are determined, shaping future ecological and social outcomes following disaster events (which will be discussed below). This is vital, as identifying the actors, contexts, and processes that have shaped socio-ecological and political conditions along class lines is critical to understanding the differentiated ways in which resilient disaster recovery projects have been implemented across Metro Manila, thereby answering one of the core research questions of this thesis.

\(^{58}\) To name a few of the new cities: Rockwell, Eastwood, Ayala Alabang, Filinvest Corporate City, Makati Central Business District, etc.

\(^{59}\) See also Graham (2000); Gugler (2004); Sandhu & Sandhu (2003); Shatkin (2008); United Nation Centre for Human Settlements (2001); UN-Habitat (2003).
The emergence of resilient flood infrastructure: 2010

Following the devastation of Typhoon Ondoy in 2009, infrastructure was promoted as a strategy for enhancing climate resilience (Foster, Lowe, & Winkelman 2011; Gill, Handley, Ennos, & Pauleit 2007). Consequently, with tropical storms and the floods they trigger becoming much more frequent in Metro Manila, large-scale infrastructure projects were reframed into DRRM planning for improved resilience (Kearns, Saward, Houlston, Rayner, & Viraswamy 2014). It is against this backdrop that the politics of resilient climate change plays out.

Within one month of Ondoy, the Philippine Disaster Risk Reduction and Management Act of 2010 (RA 10121) or DRRM Law was enacted requiring all local government units (LGUs) to have DRRM Councils and DRRM plans that integrate DRRM-informed land use, zoning, building codes, no-build zones, and contingency protocols to boost resilience (RA 10121 2010). Responding specifically to the increasing severity of transboundary urban flooding, the law represents a marked shift in metropolitan governance whereby decision-making power is distributed throughout the country, enhancing the participation of communities and civil society organizations at the local level (RA 10121 2010). However, under the law, LGUs participate as long as they comply with and adhere to the coordination mechanisms and standards set forth by the national government (RA 10121 2010). The funding given to LGUs for DRRM is allocated based on how these LGUs are ranked against one another based on criteria set out by the National Disaster Risk Reduction and Management Council (NDRRMC). Funding allocated to each LGU also depends on its area and population, but not on its vulnerability to natural disasters.

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60 The DRRM Act provides a formula for budgetary allocation and expenditure outlined in the Local Disaster Risk Reduction and Management Fund (LDRRMF). The LDRRMF is sourced from the General Fund income of an LGU, which varies in amount across municipalities and cities (RA 10121 2010). Of this fund, 70 percent goes to disaster preparedness programs such as acquisition of emergency rescue equipment and the remaining 30 percent is allocated to quick response during a disaster (RA 10121 2010).
Private developers have used this to their advantage (Roderos 2013), and as a consequence, resilient disaster recovery projects are often disproportionately clustered in wealthier areas and benefits are localized (Heynen, Perkins, & Roy 2006). By selecting which sectors of Metro Manila are able to partake in DRRM, the government is able to control who becomes more resilient through the planning process.

The theoretical framework outlined in Chapter Three is useful to explain the skewed urban changes in Metro Manila in the name of DRRM, by which the urban poor are increasingly marginalized either through forced displacement for upmarket resilient developments or through socio-economic exclusion from the metropolis. While rhetorically framed as an approach that empowers local communities to direct their own DRRM strategies, RA 10121 creates new conditions for the top-down control of people and urban spaces. Inter-city competition for DRRM funding has led private developers to work directly with wealthy LGUs and municipalities for better infrastructure (e.g. in the form of improved drainage and flood-control centres), which improves the relative resilience of their already wealthy clients (Mouton 2015). Resilience is thus “optimistically situated as an opportunity for innovation and accumulation that cannot only be managed, but profited on” (Emel & Huber 2008, p.1397). The implementation of resilient disaster recovery projects emerges as a way to redistribute and re-establish “the conditions for capital accumulation and restore[s] the power of economic elites” (Harvey 2005, p.19). The depoliticized presentation of land use planning in the DRRM Act may thus mask context specificities, not only with regards to the historical capacity of the state to expand territorial control (i.e. governable spaces), but also as to the socio-political causes of informal settlements in hazardous areas.
Double exposure and the contextual environment

To summarize: the Manila case has important implications for our broader understanding of the politics of urban climate adaptation planning. It shows that efforts to improve urban infrastructure are a critical element of a city’s response to climate impacts, but the response is also affected by globalization and associated neoliberal political and economic restructuring, all of which are mediated by the historical and cultural contexts. These processes also interact, reinforcing existing inequalities and leading to uneven urban climate resilience and providing an environment perfect for the emergence of a dual disaster. As will be discussed in the following section, using the case of Typhoon Ondoy’s impact on the cities of Manila and Makati, the differential effects of both the disaster and the implementation of resilient disaster recovery projects results in a further unequal redistribution of risks and shadows of resilience.

Ondoy and the floods of 2009: An official overview of the facts

According to the Philippines government, typhoons are a fixture of the wet monsoon season in the Philippines. An average of twenty storms enter the Philippine area of responsibility (PAR) annually, of which roughly eight make landfall (PAGASA 2009). In the early morning of September 26, 2009, Typhoon Ondoy was the fifteenth storm to enter the PAR in 2009 (Calonzo 2009) and the eighth to make landfall. Despite its relatively low wind speed, the storm brought heavy rain causing widespread inundation, particularly around the Marikina and Pasig Rivers (see map in Appendix B), submerging 80% of the metropolis (World Bank et al. 2010). Such a disaster was all the more incredible in light of the fact that Ondoy was not one of the super typhoons to which the region is accustomed, nor was it a particularly strong storm. Typhoon tracking and public safety systems initially did not indicate any cause for undue concern (PAGASA 2009). The Philippine Atmospheric, Geophysical and Astronomical Services
Administration (PAGASA), the state meteorological office, placed the areas south of Ondoy’s path, including Metro Manila, under Signal No. 1 (PAGASA 2009). However, the downpour triggered unusually high and extensive flooding, and districts with no living recollection of flooding were submerged under waist- and neck-high floodwaters (ISF, interview #12, 15 October, 2019). As the storm warning system did not include information on rainfall, it offered no indication of where the floods would hit, how high the water would rise, and how fast it would rise (EFCOS, interview #16, 28 October, 2019).

By September 30, 198 of Metro Manila’s 1,705 LGUs or barangays (district, village and ward levels) reported floods affecting a total of 303,104 persons (NDCC 2010). An additional 1,924,741 persons were affected by the floods in the city’s adjoining regions (NDCC 2010). Altogether 254,139 persons were temporarily sheltered in 236 evacuation centres across Metro Manila, for the most part in schools, sports facilities, and other state buildings that were ill suited to the purpose (NDCC 2009a). Combined with the damage from Typhoon Pepeng (international name: Parma) a month later, 956 died, 84 people went missing, and 736 were injured (Government of the Republic of the Philippines et al. 2011), and 91,980 homes were partially or totally destroyed (NDCC 2009b).

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61 This is the lowest of the Philippines’ four-tier tropical-storm public warning system, which translates measured wind speeds into predefined sets of expected storm effects and standardized precautionary measures (PAGASA 2009).

62 14,836 homes were totally destroyed and an additional 77,144 homes were partially damaged as a result of Typhoons Ondoy and Pepeng (NDCC 2009b).
Uneven landscapes: The redistribution of risks and resiliencies

Infrastructure as a DRRM solution has become central to resilient intervention and as an object of governing in the Philippines. Infrastructure networks are not free from political, cultural, and symbolic representations and implications (McFarlane & Rutherford 2008; Nye 1994). They structure and delineate the experience of modern urban life and, in “subtle and powerful ways…define, shape and structure the very nature of cities” (Graham & Marvin 2001, p.30). Infrastructure emerges as both a challenge and an opportunity for the resilience of the city. The fact that Metro Manila’s resilient disaster recovery projects are only designated for flood control and management, placing resilience in the company of safety, inclusiveness, and sustainability (Parnell 2016), does not address the unequal distribution of risks or resiliencies either before or after a disaster (Fainstein 2014; Ziervogel et al. 2017).

This unevenness is magnified through the preferential treatment of elite enclaves in Makati. As highlighted in Appendix C, despite being exposed to the same hydrological conditions and land environments (i.e. located in the coastal lowland of the Southern part of Metro Manila and affected by the Pasig-Marikina-Laguna Basin), Makati was better able to respond to damage caused by Typhoon Ondoy due to its entrenchment in a longer trend of private sector-led development and enduring neoliberal governance logics, which can be linked to the country’s historical legacy of colonialism and dictatorship (see above) (Connell 1999; Garrido 2013; Michel 2010; Ortega 2012). As articulated by an official of the Manila Disaster Risk Reduction Management Office (MDRRMO): “They [Makati] will be more resilient because they are receiving more money” (interview #13, 16 October, 2019).63 Unsurprisingly, the

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63 This was also echoed in an interview with an UN-Habitat representative (interview #9, 11 October, 2019): “They [Makati] have the resources – they have money to evacuate people [and] suck the flood out immediately.”
distribution of aid in the form of resilient disaster recovery projects in Manila and Makati relied on exclusionary discourses to entrench exclusive geographies.

Following Typhoon Ondoy, the national government, with the aid of the private sector, embarked on a series of engineering projects in order to “build back better” (Government of the Republic of the Philippines et al. 2011, pp.xii-xiii). Rivers and esteros were cleared for dredging and desilting works, and infrastructure was built, repaired and upgraded: pumping stations, ripraps, revetment walls and concrete hollow-block fences were constructed along waterways, as drainage lines were installed and improved (Government of the Republic of the Philippines et al. 2011). Structural interventions under big-ticket infrastructure projects, particularly the Metro Manila Flood Management Project (MMFMP) and the Pasig-Marikina Channel Improvement Project (PMCIP), were implemented by the Metro Manila Development Authority (MMDA) and the Department of Public Works and Highways (UN-Habitat 2016). While riverine informal settlers living in “danger zones” or “no build zones” (Buban 2013, n.p.) in Manila were removed and relocated for infrastructure construction, the local government of Makati neither demolished nor evicted gated communities, condominiums or elite enclaves obstructing waterways. Rather, it built, repaired, and upgraded infrastructure. These infrastructural developments legitimize the neoliberal state’s agenda associated with privatizing urban space; a framework that inherently excludes the urban poor (Harvey 2005). Put simply, resilient disaster recovery projects in Manila and Makati moved and improved infrastructure for more valuable uses and bodies.

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64 While estero literally denotes an estuary, in everyday usage in Manila, the term refers particularly to degraded streams that are used for sewerage.
65 The state agency with primary responsibility for Manila’s development.
66 The discussion of the relocation and removal of informal settler families was also discussed in numerous interviews (Urban Planner, interview #7, 11 October, 2019; UN-Habitat, interview #8, 11 October, 2019; NDRRMC, OCD-NCR, & MDRRMO, interview #13, 16 October, 2019; Philippine Alliance, interview #17, 29 October, 2019; Intramuros Administrator, interview #18, 30 October, 2019).
While key informants from local government and member agencies\(^{67}\) acknowledged that affluent spaces in Makati were also at risk, they maintained that their residents were nonetheless more resilient owing to their socioeconomic background. Durable homes and financial resources indicated greater adaptive capacities to recover from disasters.\(^{68}\) In this sense, the flood risk of private enclaves in low-lying, flood prone areas is minimized by a resilience that is understood in terms of the architecture of homes and the social and economic capital of residents. By this logic, not only are the rich always more resilient in relation to the poor – they are naturally resilient, too. While this is true, it is important to be wary of these generalizing claims that can miss extremely important context specificities. It is not just the rich who are resilient. Shadow(s) of resilience in the form of informal settlements near the central business district (CBD) of Makati also benefitted from the spillovers of improved infrastructure (Appendices D and E). This is why a comparative assessment (looking at both Manila and Makati) is especially useful to capture variegation and to show that what might seem as counterintuitive results at a particular time within one particular economic context, are actually the products of complex interactions between the broader whole and specific localities (Burawoy 2000). As mentioned above, DRRM funds are distributed based on a city’s population and ranking – i.e. its attractiveness to attract global capital (Peck & Tickell 2002; Shatkin 2005). This is, arguably, why these shadows have remained in Makati. For instance, the lack of global investment and international firms has pushed Manila to remove informal settlements in order to attract ever-larger private megaprojects and planning, perpetuating a vicious cycle (Shatkin 2008). By contrast, Makati,

\(^{67}\) As highlighted in the operational guidelines of the National Technical Working Group on Informal Settler Families (ISF-NTWG) (2014), an inter-agency committee headed by the Department of the Interior and Local Government (DILG), and supported by interviews with the Asian Development Bank (ADB) (interview #1, 4 September, 2019), The Philippine Red Cross (Office of Disaster Management Services, interview #3, 7 October, 2019), UN-Habitat (interview #8, 11 October, 2019; interview #9, 11 October, 2019).

\(^{68}\) See Footnote 67.
which has historically benefitted from privatized planning, benefits from existing spatial patterns
which generate enough revenues for DRRM and future urban interventions. Conflating affluence
with resilience not only displaced techno-managerial formulas and notions of risk, it also
differentially negotiated the flood risks of the poor and the rich prior to and in the aftermath of
Typhoon Ondoy. Regardless of whether official hazard maps demarcated both informal
settlements and subdivisions as highly susceptible to flooding (Appendix F), middle- and upper-
class spaces (and the informal settlements around them) evaded the “danger zone” label (Buban
2013, n.p.), for they were merely regarded as areas with high flood risk, as crucially, this risk did
not portend danger.

The distinction between high-risk and danger is key to understanding how risks were
*redistributed* following Typhoon Ondoy, because each category implies particular relationships,
interventions, and outcomes that create unequal spaces based on class (Collins 2009, 2010;
Mustafa 2005; Saguin 2017). These parallel categories evoke specific ideas and effects. The
danger zone label recalls the messy informality and spatial illegality of the urban poor. Danger
was coded according to the visual appearance of the informal settlement (Ghertner 2011): the
decrepit and fragile appearance of shanties in degraded waterways signalled a potential hazard,
activating a territorial stigma (Slater 2016) that justified eviction as a logical and humane DRRM
and urban resilience intervention. By contrast, the idea of a high-risk area suggests a neutrality
that fails to convey the same urgency of danger and therefore demands a nuanced approach to
thinking about and relating to risk. Thus, as informal settlements in “danger zones” (Buban 2013,
n.p.) were demolished, subdivisions in high flood risk areas were invested with resilience.
Consequently, in clearing waterways to make way for new spaces of accumulation, the state is
explicitly contributing to a future dual disaster (Hyndman 2011). Metro Manila produces
narratives of risk and risky landscapes through its practices of mapping and identifying danger areas, setting the table for future problems when the power of the state is exercised in the name of building resiliency.

The decision to divert water flows to protect the urban centre is another example of the way resilient DRRM policies and programs materialize in the “danger”/“high-risk”-zone binary. In the event of a flood, the MMDA is instructed to divert water inland to the nearest river (often inhabited by informal settler families - ISF) where it will be redirected to Manila Bay (Appendix G) (MMDA, interview #14, 22 October, 2019). Despite a commitment to “in-city” relocation for the victims of floods (Government of the Republic of the Philippines et al. 2011, pp.23-24), informal settlement conditions persisted amidst the promises of “safe futures” (Intramuros Administrator, interview #18, 30 October, 2019). Vulnerable ISF the state “re-places” (Rademacher 2009, p.522) away from danger to construct parks, access roads, and flood-resilient infrastructure, are faced with ongoing destitution. Power and urban governance are now understood as the ability to define what is and what is not at risk, who is and is not responsible for them, and what counts as proof of risk and the consequences and the forms of action to be taken in response to these risks.

Boundary-making around geographically-defined “dangerous” (Buban 2013, n.p.) areas creates “governable spaces” within which the national government can directly manage people and spaces, and the relationships between them (Watts 2004, p.53). Through infrastructure projects, urban spaces are “re-imagined” (Watts 2015, p.217) as sites for flood protection and resilience discourses are mobilized in such a way that they obscure the political and economic agency of state actors in the exploitation of the urban poor and ecologies. Furthermore, these discourses portray populations as passively experiencing stresses, as opposed to experiencing
outright onslaughts on their livelihoods, as in the case of land clearances perpetrated by the national government (Harvey 2004). Slater (2014, p.1) calls this the “resilience of neoliberal urbanism,” which operates as an “alias to dispossession and territorial stigmatisation.” As highlighted by two officials from the MDRRMO and the Office of Civil Defence of the National Capital Region (OCD-NCR) (interview #13, 16 October, 2019, emphasis added): “After clean up [e.g. the implementation of flooding solutions, such as the dredging of esteros], we remove the informal settlers on the vicinity to protect the place to be maintained properly…So, for the next disaster they [i.e. those who have legal, private tenure] will be more resilient.”

The reclassification of urban spaces through myth-making activities has enabled the Filipino state to “reclassify the meanings” of citizenship whereby resilience discourses are “narrowly tailored to refer to securing certain processes and population in certain places and excluding others from these same places” (Samara 2010, p.651). This is in keeping with the concept of dual disasters (where crises of conflict intersect with environmental disasters) (Hyndman 2007). The negative impacts of flooding frequently affect the people and areas hardest hit by human-made disasters, and conversely those who are positively affected by natural disasters are often also likely to accrue the benefits of human-made disasters.

Conclusion

Experiences in Metro Manila attest to the complexities and tensions inherent in responding to the demands and political exigencies of typhoon flooding and DRRM in a deeply unequal, at-risk city. Evictions in the name of improvement have long been a feature of life in Manila, but the language of resiliency and risk management has allowed governance to take on new forms. As demonstrated in the cases of Manila and Makati, the casualties caused by Typhoon Ondoy are dispossessed rather than displaced. To confront this distinction
acknowledges the weaponization of climate change and natural disaster against the urban poor and recognizes the political expediency of flooding, disaster, climate risk and resilience as a vehicle of exclusionary urban transformation and governance. With the respective historical and socio-political comparison in mind, this thesis now turns to Chapter Five in order to understand the how DRRM and resilient disaster recovery projects are (re)shaped through global resilience discourses.
Chapter Five

Urban Resilience as a Discourse

With an understanding of the historical, socio-economic, and political environments of the Philippines in place, and armed with insights into how resilient disaster recovery projects in Manila and Makati following Typhoon Ondoy in 2009 have been utilized as a new mode of governing on the national scale, Chapter Five builds upon the previous chapter to investigate how global urban resilience discourses developed by major development organizations such as the World Bank are implemented on the ground in Metro Manila. To do so, it concentrates on the variegated power of global urban resilience discourses and how these, in turn, impact resilient disaster recovery projects in Metro Manila. This chapter analyzes how global discursive frames interact with national and local realities (Sassen 2007; Sayer 2000). In doing so, it provides an opportunity to examine the influence of key development organizations over urban resilience policies and practices, as well as the processes involved in resilience as myth-making. That is, this chapter reveals how urban resilience has been transformed into a discourse with the concept of resilience and the systems of power governing its practice becoming entangled in shaping social reality (Escobar 1995).

To date there remains a lack of understanding of how the concept of resilience has become a discourse. As Anderson (2015, p.65) notes: “[w]e do not know what resilience is and we do not know what resilience does.” This chapter attempts to fill this void by investigating three components that aid in its construction and promotion across variegated scales of resilience governance. As discussed in Chapter Three, these scales of resilience governance entail: a network of key organizations; measurement, assessment, and institutionalization techniques and procedures; and discourses and practices that seek to marketize resilience. By mobilizing these
three components, this chapter reveals how city actors have engaged with, responded to, and
reworked global urban resilience discourses at the national level into strategies for territorial
transformation and control. Specifically, the government of the Philippines has appropriated
resilience and disaster risk reduction and management (DRRM) concepts from global
institutions, such as the World Bank, both as a means to attract funding, but also to further
control their own people and productive urban spaces, even at times employing coercion or
violence to do so. As a result, this chapter reveals how resilient policy decisions at the global
level have had negative, counter-productive outcomes for the urban poor who inhabit Manila’s
informal city spaces. Resilience emerges as a new mode to render policy issues governable.

This chapter is organized into four sections which capture how the discourse of urban
resilience emerges, gains power, and is eventually adopted as a global policy solution for cities,
such as Manila and Makati, seeking to adapt to unexpected environmental shocks and stresses,
particularly those associated with flooding. Section One outlines the key actors and networks
involved in the creation and promotion of the urban resilience discourse. As “plans, images, and
narratives [of urban resilience]…circulate beyond what is actually built on the ground”
(Rapoport & Hult 2017, p.1781), identifying multi-scalar “network formation” is integral to
demonstrating how resilience planning is both globalized and localized through the work of
specific institutional actors and flows of “capital, knowledge, and influence” (Goh 2019,
p.2229). Section Two identifies the power hierarchies behind resilience initiatives, enabling a
certain predictability in how resilience is rolled out. Specifically, this section looks at the leading
role of the World Bank and its 2019 *Lifelines: The Resilient Infrastructure Opportunity* policy
paper in presenting resilience as a technocratic discourse far removed from history and the social
realities of those who are marginalized. Like outsourcing, the urban resilience discourse
circulates “endlessly repackaged and rebundled projects, services, and functions, [or]…configurations of hybrid and boundary-spanning activities that in practice morph and meld into an array of other industries, organizations, occupations and systems” (Peck 2017, p.95). This leads us to Section Three’s examination of four organizations – The World Bank, the Asian Development Bank (ADB), UN-Habitat, and the Philippine Red Cross – which have implemented resilient disaster projects in Metro Manila, specifically with regards to flooding. Finally, Section Four pulls the various streams of analysis together by highlighting the effects of the above in Manila and Makati.

**The actors and networks of global resilience**

The global urban resilience discourse is constituted by an interconnected web of actors and networks. These include a shifting mix of multinational and multilateral institutions, non-profit and philanthropic organizations, private and public sector actors, and interurban networks (Borie, Pelling, Ziervogel, & Hyams 2019). Made up of many of the expected global environment development actors, the discourse is also supported by local non-governmental organizations (NGOs) such as disaster relief agencies. The original proponents of urban resilience emerged from networks of actors and institutions that sought to address wide-ranging urban environmental issues. Interurban networks such as C40 (a network of megacities committed to taking action on climate change; see C40 2020) and ICLEI (Local Governments for Sustainability) (see Brugmann 2012; ICLEI 2019) played an early role in the promotion and dissemination of the resilience paradigm. The concept began to gain traction globally in policy on climate change and international development following the first World Congress on Cities and Climate Change in 2010, and international agencies and multilateral development banks

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69 Renamed the Global Forum on Urban Resilience and Adaptation in 2012 (ICLEI 2019).
and funds have emerged as an influential network in mobilizing and circulating knowledge about resilience and how best to achieve it. With their links to other contemporary governance agendas, such as the Sustainable Development Goals, the Paris Climate Agreement, and the UN New Urban Agenda, these institutions embody the organizational reach of the resilience discourse and its ability to internalize, link to, and evolve from pre-existing socioenvironmental agendas, including sustainability and climate change mitigation.

The World Bank has emerged as the pedagogical centre for the global resilience discourse. This organization is particularly important in shaping this manifestation of the resilience discourse in urban spaces as it is able to extend its reach into diverse cities, create a variety of tools for realizing resilience, and leverage expanded private-sector investment (World Bank 2015a, 2018a). At the heart of the World Bank’s resilience framework is a series of connections between urbanism, climate change, and infrastructure in cities of the Global South and the types of interventions this confluence demands. Because cities are viewed by the World Bank as “hubs of economic activity,” losses associated with climate change threaten to “reverse hard-won development goals” (World Bank 2015b, p.43, 15). Maintaining development gains in cities depends on access to infrastructure, which is seen as a neutral and apolitical object. Financing infrastructure that is resilient to shocks and stresses is, therefore, “one of the most urgent challenges in development” (World Bank 2015b, p.43). As global temperatures increase and extreme weather events become more regular, damage to urban water, energy and transport infrastructure will degrade the services these systems provide (Hallegatte 2019; World Bank 2018b, 2019a). As a result, both the capital and operating costs of infrastructural investments are expected to increase, especially if proactive investments and strategic planning are not pursued

70 These organizations are discussed in more detail in Chapter Two (Literature Review).
Hallegatte, Rozenberg & Fay 2019). The Bank’s narrative for justifying urban resilience unfolds as follows: investing in urban resilience, and particularly resilient infrastructure, will abate losses from climate change and enhance development outcomes (Hallegatte 2019; World Bank 2019a).

Wheeling out urban resilience: A useful ambiguity

Resilience is not a fresh idea, but one recycled from past neoliberal development iterations. The World Bank (2015b, p.19) takes resilience to be “the ability of a system, entity, community, or person to adapt to a variety of changing conditions and to withstand shocks while still maintaining its essential functions.” Such language offers a loosely structured way to make sense of, and to respond to, the consequences of multiple crises. It’s vagueness means that the concept can be defined in different ways to suit those deploying it (Havice & Iles 2015), enabling it to travel through the vast policy networks of propagating development institutions. For example, the dominant understanding of resilience offers the added benefit, from the perspective of international organizations, of delineating solutions which are not threatening to the existing structures of capitalist societies. A social policy based on building the resilience of the poor (or of the most vulnerable) is certainly less challenging to capital’s accumulation than one based on the defence or the extension of the universal public provision of social security and the public services needed to satisfy human needs following a disaster event. Indeed, locally embedded and powerfully positioned urban actors, including local government officials and landowner interest groups, are able to engage in selective uptake of the discourse, whereas marginal actors remain excluded. For example, although Manila is experiencing an affordable housing crisis, like so many megacities in the Global South, local anti-eviction and housing
activists such as the Philippine Alliance\(^1\) have not been invited to stakeholder meetings, suggesting that they lack the power to bring the issue of affordable housing for the urban poor, and their proposed solutions to it, to the table where Manila’s urban resilience agenda is crafted (Philippine Alliance, interview #17, 29 October, 2019). Resilience policy’s focus on immediate solutions rather than on the structures that are producing risk may relegate analyses of vulnerability to the background or dispense with that work entirely (Cannon & Müller-Mahn 2010; Ribot 2011).

This is especially clear in the most recent World Bank 2019 *Lifelines: The Resilient Infrastructure Opportunity* policy document\(^2\) which continues to present infrastructure as an economic opportunity; only now, it is capitalizing on the ubiquitous discourse of resilience. In *Lifelines*, World Bank economists (2019a, p.xiv) make the case for investing in “resilient infrastructure,” that is, infrastructure that is supposedly “better able to deliver the services people and firms need during and after natural shocks.” “There is no time to waste,” argues World Bank CEO Kristalina Georgieva, “with rapidly changing climate…invest[ing] in resilience should be an urgent priority…we can provide critical infrastructure services – lifelines that will spur sustained and resilient economic development” (World Bank 2019a, p.xiv). The quote drives home the points that prevention is cheaper than the cure and that disasters cause huge economic losses. That, it seems, is the heart of the report: in order to build resilience to deteriorating, unpredictable environmental conditions we must, as an aid community, invest in infrastructural development and prevention (World Bank 2019a). However, this operates by identifying risky

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\(^1\) The Alliance itself is a partnership between five organizations: Homeless Peoples Federation Philippines Inc. (HPFFPI), Philippine Action for Community-led Shelter Initiatives Inc. (PACSII), Technical Assistance Movement for People and the Environment Inc. (TAMPEI), Community Resources for the Advancement of Capable Societies (CoRe-ACS), and LinkBuild (interview #17, 29 October, 2019).

\(^2\) This chapter will refer to the World Bank 2019 policy document as *Lifelines* for simplicity purposes.
potential future outcomes and converting them into opportunities for profit maximization, creating a new engine for growth and stimulating an industry focused on providing security in an indeterminate future. The World Bank’s political and economic response to risk utilizes the crisis of a disaster to promote the legitimacy of economic and market functions, while also warding off threats to its legitimacy more broadly. While the World Bank (2019a, p.10) claims that “resilient infrastructure assets pay for themselves” – they don’t. The urban poor, as was the case in the city of Manila, pay for them through their dispossession. The World Bank’s solutions are presented as apolitical and economically viable whilst obscuring the underlying structural, political, and historical complexities which remain unaddressed (Oliver-Smith 2015).

*Implementing urban resilience in Metro Manila*

The World Bank is “a facilitator of capital” (World Bank 2018c, p.3), leaving decisions about which urban resilience investments go ahead – likely those with the highest and most secure returns– and the form of those projects to private actors. This chapter now explores the implementation of resilient disaster recovery projects in Metro Manila by analyzing specific examples.

While building resilience is a task advocated by the World Bank (2019a), it is not necessarily something the Bank wants to do itself. Rather, it relies on transnational and private agents to package, circulate, and import both urban resilience policies and specific tools and technical devices (Borie et al. 2019). In fact, quite different entities can build resilience (as will be discussed below). Resilience is not an intrinsic quality, nor is it eternal: it can be created by external interventions and it can be lost. The discourse of resilience is made actionable in Metro Manila through a vast web of initiatives conducted in partnership with the ADB, UN-Habitat, and the Philippine Red Cross. Special lectures on *Leveraging Technology and Innovation for*
Disaster Risk Management and Financing at the 3rd Asia Finance Forum (ADB 2019); UN-Habitat Philippines’ *Urban October* event series; and the Philippine Red Cross’ new technologies for data collection and processing to assess the damage of cities and support the prioritization of investments following a disaster event (Philippine Red Cross Office of Disaster Management, interview #3, 7 October, 2019; World Bank 2019, p.176) help propel the discourse of urban resilience centred around the marketization and institutionalization of risk management measures for infrastructure resilience. This specific agenda builds on a neoliberal discourse to promote solutions that are presented as simultaneously bankable and beneficial for economic growth, even though, as discussed in Chapter Four, this research shows that this is contested and contingent on the ground.

Drawing on these partnerships, the national government of the Philippines is able to engage in selective uptake of the World Bank’s agenda by relying on the discourse of urban resilience to advance and legitimize pre-existing initiatives. For example, UN-Habitat, along with other international NGOs, complied with government requests to relocate ISF in hazardous areas following Typhoon Ondoy (interview #8, 11 October, 2019; interview #9, 11 October, 2019; UN-Habitat 2004, 2019b). Climate change adaptation and urban resilience narratives had a natural compatibility with government proposals for relocation, especially as UN-Habitat advocated for hazard-based demarcation of “no build zones” soon after the disaster (Buban 2013, n.p.; UN-Habitat, interview #9, 11 October, 2019). UN-Habitat’s focus on DRRM and adaptation encourages conceptual frames which interpret relocation proposals as “build back better” measures (Government of the Republic of the Philippines et al. 2011, pp.24, 58, 63; UN-Habitat

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73 Every October UN-Habitat and partners organize a month of activities, events, and discussions on the topic of urban sustainability (UN-Habitat, interview #2, 18 September, 2019). The theme for World Cities Day (the final *Urban October* event hosted on October 31st, 2019) was “Building Sustainable and Resilient Cities” (UN-Habitat, interview #2, 18 September, 2019).
2019b, n.p.). In this way, UN-Habitat works as an appendage of the state through the implementation of relocation projects in order to protect against future disasters and control human mobility.

The case of Metro Manila illustrates the translation of international recommendations to reduce risk through infrastructure planning into national plans for relocation and prohibition of informal settlements (as outlined in Chapter Four). This process involves more than inevitable sharpening of policy as standards become plans. The transition from international standards to national planning involves a transformation of meaning across various scales of governance (see the second core research question in the Introductory Chapter), as government actors and development agents interpret international standards through self-validating programs and processes of the state. Rather than detract from state sovereignty, resilience techniques for redistributing state power actually serve to strengthen it (Gregory & Vaccaro 2015). Such processes enable the state to extend the reach of its governing apparatus, without requiring the direct use of force. Resilient disaster recovery projects project a state that is capable of responding to disaster risks. Yet, the Philippines’ national government filtered their interpretation of resilience through core positivist beliefs in the capacity of the state to control the urban poor and provided a means for evading culpability to those responsible for population displacement. This once again demonstrates the prevalent myth of creating good development (e.g. increasing the activities around the production and exchange of commodities to achieve economic growth and prosperity) (Rist 2008; Watts 2015), which downplays its potential harms such as the relocation of the urban poor following a flood.

Among the priorities for resilience identified by the National Disaster Risk Reduction and Management Council (NDRRMC) are “ensuring adequate DRRM finance and investment
particularly for local levels of government, better use of risk transfer strategies such as insurance, harnessing of science, technology and innovation, and more resilient infrastructure and agriculture” (Philippine Delegation 2015, p.2). According to the World Bank (Hallegatte 2019), these priorities can only be achieved with direct development assistance from private investment. Strongly reminiscent of earlier structural adjustment policies (SAPs), the urban resilience discourse does not come with the threat that, if unfulfilled, bailouts will be withheld (Swaroop 2016). Instead, the Bank is the herald of investors, bearing the message that if cities are not reformed in investor-friendly ways, those cities will be cut off from access to the $106 trillion in global capital markets (World Bank 2015b). Access to private capital is portrayed as critical, not only for development but for social, economic, and environmental resilience in the face of natural disasters, the cost of which far exceeds existing, or even reasonably foreseeable sources of public funds (Hallegatte 2019). Unsurprisingly, the national government has appropriated and applied resilience terminology to its disaster recovery projects to attract private funding while hiding the intended project aims (i.e. the forced removal of the urban poor).

The concept of myth-making, as articulated by Watts (2015), is useful in the context of Metro Manila because it allows us to understand how resilience discourses have been used to maintain a balance between capital accumulation and political legitimation. The national government is not a passive victim of large-scale resilience interventions; rather, it makes the necessary changes in legislation to facilitate them. In other words, the role of the state is to create and preserve an institutional framework appropriate to such practices (Harvey 2007). The language of resilience has been increasingly used by development organizations and government agencies in Metro Manila since the implementation of the DRRM Law (RA 10121) in 2010 following Typhoon Ondoy. However, there still remains confusion surrounding the concept of
resilience, stemming from a lack of consensus and a fuzziness around its meaning. One government administrator in Manila stated that: “We don’t have that yet [a definition of resilience or a way to measure the success of resilient disaster recovery projects]. Honestly, for the last forty years of the existence of this agency, there is really no plan with respect to resilience or DRRM” (interview #18, 30 October, 2019). Beyond a universal understanding that resilience is something desirable, government officials’ lack of clarity of what resilience is, and how it is achieved, is confirmed in interviews with development professionals who tend to use resilience and resilient as indisputably positive concepts when discussing development and adaptation. For example, within the higher levels (e.g. National Headquarters) of the Philippine Red Cross, the concept is regarded as enabling communities to develop the capacity to “bounce back” and quickly overcome the adversities of a disaster (Office of Disaster Management Services, interview #3, 7 October, 2019). Flowing from this definition, the role of the Red Cross should primarily be to provide emergency relief, and to do so as effectively as possible. At the organization’s management level (known as a Chapter), the view is that much of this “bouncing back” should come from within the communities themselves, and that the Red Cross should help strengthen those capacities (Philippine Red Cross Manila Chapter, interview #4, 9 October, 2019; Philippine Red Cross Marikina Chapter, interview #10, 15 October, 2019). Additionally, at the Chapter level, there is a developmental orientation towards communities’ dual capacity to avert disaster situations and to “bounce back better,” recovering in a way that their proneness to disasters reduces (Philippine Red Cross Manila Chapter, interview #4, 9 October, 2019).

While the lack of a concrete definition of resilience may first appear surprising given the fact that resilience policy documents and disaster recovery projects in Manila have resilience at their core, the term’s definitional vagueness is useful in that it allows the national government to
simultaneously manipulate the design and implementation of disaster recovery projects in order to enforce the production of “governable spaces” (Watts 2004) and to steer (or govern) socio-ecological relations crucial for the reproduction of the hegemonic structures of capitalist societies. In doing so, resilient disaster recovery projects support geopolitical arguments that shape the physical realities of power and place by effectively re-territorializing urban areas according to international and domestic accumulation interests (Watts 2004). At the same time, resilience interventions aim “to align the aspirations of free and autonomous individuals […] with those of government in such a way that their self-fulfilments coincide with the fulfilment of government goals” (Davoudi & Madanipour 2015, p.83). From this perspective, resilience is sold as a strategy of empowerment because it offers affected populations the “free” choice of how to invest in resilience. However, climate change is an enduring force and acts of nature will always occur, so there is no free choice in a world striving for resiliency. With reference to the Philippine Red Cross’ interpretation of resilience above, the “resilient subject” is conceived as resilient to the extent it adapts to, rather than resists, the conditions of its suffering (Reid 2012, p.76). Consequently, the resilience discourse can become defined by a set of socio-scientific knowledges that reduce the political to the policing of change (Escobar 1995), diverting attention from questions of power, justice, or the types of (socio-natural) future that can be envisaged. These findings further highlight the importance of analysing the dual strands of the urban resilience discourse (see Chapter Two) in tandem since the existence of one is usually inseparable from the existence of the other.

In order to understand how the urban resilience discourse takes form on the ground, the next section looks at two distinct landscapes, the cities of Manila and Makati, where resilient disaster recovery projects have been implemented in order to understand their specific outcomes.
and their diverging impacts (inclusion vs. exclusion, destruction vs. preservation) (Zoomers 2010) on the people most directly affected by them.

Differentiated responses at the local scale: Manila and Makati

In the logics and practices of the urban resilience discourse, not all cities are equally investable, nor do they all promise lucrative returns. As outlined in Chapter Four, the national government justified its privileged treatment of Makati prior to and post-Ondoy on the grounds of increased profit opportunities founded on reducing, removing, and redistributing risks. Capital lends the state its liquidity, and the state vests in capital its monopoly on the use of force, through instruments of violence and legality that legitimize spatialities of exception and exclusion in urban neoliberalization (Alsayyad & Roy 2006; Blomley 2003; Doshi 2013). This is seen most clearly in post-Ondoy Manila, where a handful of corporations and developmental organizations have been given advantageous positioning on rehabilitation operations. In Manila, the enactment of restrictions on residential use of lands deemed unfit for human habitation (i.e. “danger zones” and “no build zones”) (Buban 2013, n.p.) was followed rapidly by a rush by capital for land conveniently laid open for commercial investors (Klein 2007). Informal or traditional property tenure systems in this context were ignored, and natural disasters subsequently became a pretext for removing ISF and turning land over to the private sector as part of resilient disaster recovery initiatives. Using the dual disaster framework, the original displacement is caused by the typhoon, but it is the state in conjunction with private actors who utilize the urban resilience discourse to prevent the urban poor from rebuilding their homes.

In Intramuros, for example, 2,200 slum-dwellers displaced by “conservation management projects” for “disaster resiliency” following Typhoon Ondoy were moved to

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74 A district within the city of Manila.
relocation sites provided by the National Housing Authority (NHA), which is in strategic alliance with the World Bank (Intramuros Administrator, interview #18, 30 October, 2019). It is worth noting the fact that emergency housing units provided in relocation sites are located far from places of work and must still be paid for in amortizations often far in excess of what families without stable wages can afford (ISF, interview #12, 15 October, 2019; Philippine Alliance, interview #17, 29 October, 2019). Conditions in relocation sites are in many ways no different from the slums they were evicted from. In addition, these relocation sites are located on the cheapest possible land. Once the value of the land begins to rise these sites once again become targets of urban resilience/dispossession (depending on the class of actor accessing the space), or are converted to other uses (Urban Planner, interview #7, 11 October, 2019). In any case, government policy centred on urban resilience often results in cycles of eviction and resettlement, while neglecting the structural poverty and landlessness that are the root causes of urban slum growth.

Concurrently, the national government, in partnership with development agencies, ensures the protection of middle- and upper-class residents endangered by annual flooding, through the implementation of infrastructure projects and “disaster scenario training” (Intramuros Administrator, interview #18, 30 October, 2019). Under the discourse of urban resilience, the removal of the urban poor is combined with the sanctioning of protecting infrastructure. This is echoed in an interview with the ADB (interview #1, 4 September, 2019) where it was noted that “emergency response loans or grants” provided by the ADB have “infrastructure recovery plans or rehabilitation plans” as the core rationale for the loan or grant.

75 Training was provided by the Metro Manila Development Authority (MMDA) and Philippine Red Cross. However, it was not provided at the barangay level (i.e. the smallest political-administrative units in the Philippines) or to community members (Intramuros Administrator, interview #18, 30 October, 2019).
The result is haphazard resilience projects whose costs are externalized and borne disproportionately by the urban poor (Mathur & Marsden 1998). In Manila, the outcome cultivates new social and political terrains of territorially (i.e. governable spaces) (Watts 2004). In Makati, by contrast, the urban poor inhabiting informal enclaves or shadow(s) of resilience within the city, benefit from the spillover of resilient disaster recovery projects. Despite a shared colonial history, the cities of Makati and Manila point to the variegated pathways of neoliberalism (Brenner & Theodore 2002), whereby the urban resilience discourse takes on new forms according to the historical and socio-political contexts of each city. This is important as it highlights how particular localities are different expressions of multi-scalar interrelations (Sassen 2007) and helps answer the question of who has become more vulnerable and who has remained or become resilient in Manila and Makati.

Conclusion

The evidence provided in this chapter shows that the discourse of urban resilience is mobilized differently in Manila and Makati. While research at the national level allows us to see the interactions between the global and the national, a more locally-based ethnographic approach is necessary in order to deal with particular context specificities. This chapter outlines how the discourse of urban resilience has been justified at global and national scales and its materialization in Manila and Makati. As political interests in managing populations and environmental disasters increase, so does the strength of urban resilience narratives to justify particular disaster recovery projects. As a result of the ambiguity and vagueness of the concept of resilience, the discourse of urban resilience provides flexible frames to give the same intervention many different meanings depending on the purpose of the actors using the narrative. In the context of Metro Manila, this means attracting private investment for infrastructural
development in order to legitimize the national government’s agenda of privatizing urban space and subsequently relocating the urban poor. What results is a spiral of structural violence, limited only by the extent to which the urban poor are able to carve space for themselves against ongoing threats of eviction and marginalization.

This thesis now proceeds to provide its concluding remarks.
Chapter Six

Conclusion

This thesis has endeavoured to answer the following research questions: First, how might we understand the power and politics in resilient disaster risk reduction and management (DRRM) and disaster risk recovery projects in Metro Manila? Second, how might we understand the role of state agencies – at various scales of governance – in facilitating and legitimizing resilience as the key framework in mitigating and managing flood risk? Third, how might we explain historically the differentiated ways in which resilient disaster recovery projects have been implemented in the cities of Manila and Makati? And, fourth, who has become more vulnerable and who has remained or become resilient in Manila and Makati, and why?

The short answer to these questions is that resilient disaster recovery projects in Metro Manila have been deployed by state agencies – at various scales of governance – to justify the expansion of territorial control over urban spaces following Typhoon Ondoy in 2009. Drawing on the global discourse of urban resilience – which locates the roots of the current socio-environmental crisis in technological insufficiency – this research has shown that political authorities have manipulated and legitimized resilience interventions that serve to remove and relocate the urban poor to their detriment. Moreover, the construction of resilience to floods through state myth-making activities is shaped by the socio-political contexts of Manila and Makati and intersects with a long history of development interventions that redistribute risks and produce vulnerabilities unevenly over space and across axes of class. The historical pathways of these two cities, and the state-society interactions that occur within each, have evolved in distinctly different directions; these evolutionary variations are key to explaining their divergent outcomes following Typhoon Ondoy. The ways in which people are affected by environmental
Creating spaces of inclusion and exclusion

As this research has shown, the way in which certain phenomena are framed in terms of resilience is deeply political. As a result, it is necessary to go beyond an analysis that refers to an objective reality of resilience, and to instead examine how the very enunciation of this concept organizes social relations. This work has examined the disproportionate impacts of Typhoon Ondoy on the cities of Manila and Makati and has shown how resilience framings have been deployed via state myth-making activities (Watts 2015) to determine who can access and remain in particular urban spaces and for what purposes. The idea that cities should be spared and protected against typhoon floods, and that resilience should be granted for the most economically profitable has its roots in the history of urbanization in the Philippines, characterized by colonial-era underdevelopment and the concentration of economic power in the hands of private developers in Metro Manila (Magno-Ballesteros 2000; Michel 2010; van den Muijzenberg & van Naerssen 2005). The result has been the proliferation of resilient disaster recovery projects unevenly clustered in wealthier areas such as Makati (Heynen et al. 2006). Resilient disaster recovery projects depend on mechanisms of inclusion and exclusion, on social relations, and differentiations within communities, and – crucially – on power relations (Zoomers 2010). Moreover, they selectively and intentionally determine who becomes more resilient through the planning process.
In line with the literature on urban political ecology, which draws on the concept of “governable spaces” (Watts 2004), this research has demonstrated how the national government attempts to reconfigure power over space, and the people and resources encapsulated within it through boundary-making, zoning, permitting/excluding, and regulating resilient flood infrastructure inside a geographically-defined area. As a case in point, under the Metro Manila Flood Management Project (MMFMP) and the Pasig-Marikina Channel Improvement Project (PMCIP), informal settler families (ISF) were to be moved to in-city or off-city relocation sites in the urban periphery, deemed necessary for the protection of residents endangered by annual flooding (ISF-NTWG 2014). The subtext of this framing is that the resilient class (e.g. those living in elite enclaves in Makati) had the right to remain in transgressive property and to amass both new and revitalized resiliencies in the form of improved drainage and flood-control infrastructure. Risks are redistributed and the urban poor are not simply displaced by rising waters or similar climate impacts; their displacement is not so much due to the devastation brought about by disaster events – rather, it is attributable to government policies and practices in anticipation of and mitigating crisis and catastrophe.

What the cases of Manila and Makati illustrate is how the discourse of urban resilience has been utilized materially and discursively to advance changing political agendas and market demands. Analysing the discourse of urban resilience is not only necessary to understand multiple justifications of DRRM, but it is also essential when analysing the impacts of resilient disaster recovery projects on displacement patterns in the aftermath of typhoon flooding. As the research has illustrated, environmental destruction and dispossession cannot be solely attributed to a single DRRM or resilient disaster recovery project. Rather, the outcomes of particular interventions are better explained as a result of more complex historical discursive mechanisms.
occurring at the landscape level and beyond. What determines whether resilience interventions aimed at environmental protection or economic development will succeed is largely dependent upon whether capital accumulation or social and environmental welfare are prioritized. This reminds us that while disasters (and DRRM as policy and resilient disaster recovery projects in practice) may offer windows of opportunity, those windows are often tinted – shaded and darkened – by structural inequality and the political economy dynamics and power relations of the actors.

**Implications**

The findings of this research point to several implications for research and for policymaking. For researchers, this study highlights the importance of cross-disciplinary and comparative work as well as the insights that are to be gained by situating oneself at the boundaries of two fields: namely the DRRM field and the urban political ecology field. It was through a continuous conversation between these bodies of work that this thesis’ propositions, questions, and research were formed, and through which connections were ultimately made.

Theoretically, in order to achieve this, the dual disaster framework drew on perspectives from urban political ecology, which has long provided alternative frameworks through which the links under study could be analysed.

It is in their fusion, and not their isolation, that the analysis of this research was able to proceed. The methodology used in this research consisted of a qualitative, multi-scalar, and comparative approach that aimed to bridge the macro-perspective with the micro-perspective and vice-versa. Furthermore, drawing on qualitative research conducted in the Philippines in 2019, this approach enabled the thesis to embed environmental change, DRRM, and the discourse resilience in a historical perspective, while also capturing the variegated tendencies that these
forces have followed, and – importantly – the reasons for this variegation. Although this theoretical and methodological process does not come without its limitations and complications, a positioning that aims to bridge the past with the present and the local with the global can allow us to see the broader implications of the interrelations under study and to better locate points of contention and contradictions.

Finally, the creation and use of the concepts of risk redistribution and shadow(s) of resilience are beneficial for future research on dispossession at the urban scale as they can help provide a contextualized understanding of urban spaces prior to change and account for the complex ways in which the socio-spatial realities of urban residents are altered due to the overlapping of natural and human-made disasters. Such theoretical concepts could also form the basis for powerful urban ethnographies, counter-mapping, and counter-histories by the urban poor.

Beyond academic considerations, the findings of this thesis point to the urgency for policymakers to engage with critical questions of resilience at the moment the concept is invoked in practice. As this thesis has demonstrated, it is precisely the partially empty content of the signifier resilience which makes it a very useful language for the reproduction of the structures of capitalist societies. This research has demonstrated the importance of designing resilient disaster recovery projects that take into consideration the underlying social, historical, political contexts and economic forces behind policy interventions, if these mechanisms are to be more than the purely technical and incremental fixes that have done little to stop the disproportionate impacts of typhoon flooding to date. Without this, government interventions in the name of resilience can lead to further injustices whereby the most vulnerable, who are not only the least responsible for, but also the most affected by environmental change, become the front-line
victims of environmental and resilient DRRM policies. The people most affected by disasters, such as typhoon flooding, never choose to be victims, but the policy mechanisms the DRRM community adopts next could be critically important for their wellbeing.
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# Appendix A

## Interview list

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<th>#</th>
<th>Interviewee</th>
<th>Date</th>
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<tr>
<td>1</td>
<td>Asian Development Bank (ADB)</td>
<td>14 September, 2019</td>
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<td>2</td>
<td>UN-Habitat</td>
<td>18 September, 2019</td>
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<tr>
<td>3</td>
<td>Philippine Red Cross Office of Disaster Management Services</td>
<td>7 October, 2019</td>
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<td>4</td>
<td>Philippine Red Cross Manila Chapter</td>
<td>9 October, 2019</td>
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<td>5</td>
<td>Baseco Barangay leaders and Philippine Red Cross 143 volunteers</td>
<td>9 October, 2019</td>
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<tr>
<td>6</td>
<td>R. Papa Secretary</td>
<td>9 October, 2019</td>
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<td>7</td>
<td>Urban Planner</td>
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<td>Philippine Red Cross Marikina Chapter</td>
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<td>11</td>
<td>Emergency Centre supervisor</td>
<td>15 October, 2019</td>
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<td>12</td>
<td>Informal settler families (ISF)</td>
<td>15 October, 2019</td>
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<td>13</td>
<td>National Disaster Risk Reduction Council (NDRRMC), Office of Civil Defence of the National Capital Region (OCD-NCR), and the Manila Disaster Risk Reduction Management Office (MDRRMO)</td>
<td>16 October, 2019</td>
</tr>
<tr>
<td>14</td>
<td>Metro Manila Development Authority</td>
<td>22 October, 2019</td>
</tr>
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<td>15</td>
<td>University of the Philippines Resilience Institute</td>
<td>23 October, 2019</td>
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<tr>
<td>16</td>
<td>Effective Flood Control Operation System</td>
<td>28 October, 2019</td>
</tr>
<tr>
<td>17</td>
<td>Philippine Alliance: Community Resources for the Advancement of Capable Societies (CoRe-ACS), Homeless Peoples Federation Philippines Inc. (HPFPI), LinkBuild, Philippine Action for Community-led Shelter Initiatives Inc. (PACSII), Technical Assistance Movement for People and Environment Inc. (TAMPEI)</td>
<td>29 October, 2019</td>
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<tr>
<td>18</td>
<td>Intramuros Administrator</td>
<td>30 October, 2019</td>
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<tr>
<td>19</td>
<td>Chulalongkorn University (Bangkok, Thailand)</td>
<td>4 November, 2019</td>
</tr>
</tbody>
</table>
Appendix B

Location of Metro Manila with maximum flood inundation depths during Typhoon Ondoy

Source: Gilbuena, Kawamura, Medina, Amaguichi, & Nakagawa (2013b, p.33)
Appendix C

Conditions of flood disasters caused by Typhoon Ondoy in 2009 in Manila City and Makati City

<table>
<thead>
<tr>
<th>LANDFORM</th>
<th>FLOODING</th>
<th>DAMAGE</th>
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<tbody>
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<td></td>
<td>Related Water Bodies</td>
<td>Predominant Type</td>
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<td>Coastal Lowland comprised of the Southern Part of Metro Manila and the Pasig-Marikina-Laguna Basin</td>
<td>Pasig River, Urban Drainage</td>
<td>Inner Flooding (i.e. urban flooding)</td>
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*Flooding period inferred from NDCC Report No.14 (2009a)
*Damage inferred from NDCC Report No. 48 (2009b)
Appendix D

Distribution of informal settlers within Metro Manila 2014

*Note the frequency of ISF in the Manila area and the relative underrepresentation of informal settlements in the Makati area

Source: Singh & Gadgil (2017, p.16)
Appendix E

Note the higher concentration of high dense and pocket ISF in the City of Manila as compared to Makati City.

Source: Singh & Gadgil (2017, p.22)
Appendix F

City of Makati, Metropolitan Manila Flood Hazard Map

*Note the low risk of flooding in the centre of Makati compared to its borders and surrounding areas.

Source: LiPAD (2017)

*Low, Medium, and High refer to flood risk.
Appendix G

Map of catchment areas of pumping stations in North Manila area

*Informal settlement not marked on original MMDA map

Source: MMDA (interview #14, 22 October, 2019)
Appendix H

August 16, 2019

Ms. Ashley Clark
Master's Student
Department of Global Development Studies
Queen's University
Kingston, ON, K7L 3N6

GREB Ref #: GDEV5-056-19; TRAQ # 6027269
Title: "GDEV5-056-19 Disaster-Related Displacement: The Politics of Vulnerability and Risk"

Dear Ms. Clark:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GDEV5-056-19 Disaster-Related Displacement: The Politics of Vulnerability and Risk" for ethical compliance with the Tri-Council Guidelines (TCPS 2 (2014)) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405.001), your project has been cleared for one year. You are reminded of your obligation to submit an annual renewal form prior to the annual renewal due date (access this form at [http://www.queensu.ca/traignon.html](http://www.queensu.ca/traignon.html) click on "Events," under "Create New Event" click on "General Research Ethics Board Annual Renewal/Closure Form for Cleared Studies"). Please note that when your research project is completed, you need to submit an Annual Renewal/Closure Form in Romans/Iraq indicating that the project is 'completed' so that the file can be closed. This should be submitted at the time of completion; there is no need to wait until the annual renewal due date.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one-year period (access this form at [http://www.queensu.ca/traignon.html](http://www.queensu.ca/traignon.html) click on "Events," under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example, you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application by at [http://www.queensu.ca/traignon.html](http://www.queensu.ca/traignon.html) click on "Events," under "Create New Event" click on "General Research Ethics Board Request for the Amendment of Approved Studies." Once submitted, these changes will automatically be sent to the Ethics Coordinator, Ms. Gail Irving, at University Research Services for further review and clearance by the GREB or Chair, GREB.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

Chair, General Research Ethics Board (GREB)
Professor Dean A. Tripp, PhD
Departments of Psychology, Anesthesiology & Urology Queen’s University

c: Dr. Suzanne Soederberg, Supervisor
Dr. Suzanne Sooderberg, Chair, Unit RIB
Ms. Barbra Lalonde, Dept. Admin.