

論文の内容の要旨

論文題目 Challenges to Disaster Risk Governance in Rapidly Developing Megacities:
Risk Perceptions of the Middle-Class and Coastal Informal Settlements in
Metro Manila, Philippines

(急成長するメガシティにおける災害リスクガバナンスの課題:
フィリピンメトロマニラの中流階級と沿岸不法占拠民によるリスク認知)

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Seventeen of the world's megacities (urban areas with more than 10 million in population) are in the Asia-Pacific Region, and this is projected to rise to 22 by 2030 (UN-Habitat and UNESCAP, 2015). Most of these densely populated urban areas are situated along the coast, and because of rapid urbanization, settlements and economic assets are intruding into the coastline, exposing them to natural hazards and the consequences of climate change (Kron, 2013; Neumann et al., 2015). Due to the combined effects of high exposure to natural hazards and a rapidly growing population (especially in developing countries), Asia saw an increase in disasters in the region (Guha-Sapir et al. 2017; Douglass 2016). However, this has not deterred cities from continuing to reclaim land from the sea, and there has been an increase in mega-reclamation projects in Asia (Martín-Antón et al., 2016).

Studies on the impacts of disasters and climate change on society have focused mainly on how it affects the poor. However, urbanization has led to a growing global middle class that the UNDP is projecting will comprise half of the world's population by 2030 (UNDP, 2013). While the global middle-class has grown exponentially due to globalization and urbanization, unplanned rapid development in developing countries has also given rise informal settlements that are highly vulnerable to extreme weather events (Revi et al., 2014). The interaction and consequences of the perceptions of risk to urban areas of members of these two social classes is the primary focus of this thesis.

Essentially, the present PhD thesis aims to elucidate how urban dweller's perception of risk and resilience in a megacity interacts with urbanization and its manifestations. This is done by using land reclamation as a tangible and visible form of urbanization, which is a divisive topic in policy and academia. Understanding this allows to discuss why traditional engineering-based approaches to disaster risk reduction have failed in keeping up with the increasing complexity and uncertainty in urbanizing Asia (Miller & Douglass, 2016), and outline possible solutions to such problems.

To analyze such issues the thesis will use as a case study the experiences of a Southeast Asian megacity on disasters and rapid urbanization. Metro Manila is constantly at-risk to natural hazards and the persistent threat they pose to daily life influences the public perception of how the city should grow, alongside other issues such as population growth and rising inequality. Megacities in highly exposed developing countries are

often leaning towards traditional physical infrastructure-based solutions to prevent disasters (Miller & Douglass, 2016). However, rapid urbanization and climate change adds complexity and uncertainty that may lead to severe disasters in the future (Field et al., 2012; Revi et al., 2014). These makes it a challenge for megacities in developing countries to keep up with the growing complex socio-economic issues in their rapidly urbanizing regions (Miller & Douglass, 2016).

The research looks at risk perception of the middle-class urban dwellers and residents of an informal settlement living on reclaimed land. This is done through an online survey of 425 middle class respondents all over Metro Manila and a household survey of 102 families in BASECO Compound, an informal settlement in reclaimed land. The research then compares, contrasts, and connects such perceptions to understand how risk narratives interact with urban development. The study found that there is a difference in perspectives of risk and preparedness between the different social classes. The middle-class are wary of the future, while informal settlers are more concerned of the present. The middle class are more active in evacuation drills and are more knowledgeable on hazards, and yet the poor are more prepared to respond to disasters. There is a social amplification of disaster risk by the middle class, who also perceive the poor to be less resilient. This dynamic allows and enables elitist policies on disaster risk that eventually legitimizes the use of disaster risk to evict the poor from the city.

The dissertation calls for an increased understanding of the nature of disaster risk and how it coalesces with the issues of rapid urbanization and sustainable development. The research finds that while disaster risk reduction programs often benefit the poor, the growing middle-class poses a challenge to this by shifting the government's focus from the vulnerable to appeasing the needs and wants of the middle-income bracket. The potential pathway to a solution is to engage the middle classes' high consciousness of environmental issues and integrate social equality discourses that explain the intricacies of poverty and inequality and vulnerability. While the research investigated risk perceptions of the middle-class and the poor regarding disaster risk, climate change, and a growing megacity, it also calls for the need for more research on the potential effects of a growing middle-income group to the core concerns of sustainable development.

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