

## 主 論 文 の 要 約

論文題目 Urbanization and Disaster Risk Reduction in Urban China:  
The Social Vulnerability Perspective  
(中国の都市における都市化と災害リスク軽減：社会的脆弱性の観点)  
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The rise of social vulnerability is a dynamic process that is closely interconnected to the sustainable development of today's world. Growing populations and industrial development lead to increased energy consumption, and climate warming and environmental degradation become irreversible trends. In recent years, hazards such as floods, droughts, earthquakes, tsunamis, and diseases have impacted vulnerable populations more frequently, wreaking havoc on the environment and society's equilibrium. Many disaster studies in the social sciences have so far pointed out that contemporary urbanization catalyzes the transformation of actual and potential risks into disasters. But the more serious issues are that environmental and climate issues are not being given as much attention as the economic benefits of development; And compared with the greater attention paid to the losses of disasters, there is inadequate recognition of the roles of deep-seated social factors in addressing environmental changes and risks.

This research examines societal vulnerability in the context of contemporary urbanization and climate change scenarios using quantitative and qualitative methods. The first chapter addresses the current state of urbanization and climatic challenges. The environmental harm induced by global urbanization and climate change which is defined by warming poses a threat to all parts of the world. Especially urban areas become hotspots of disaster risk. Unprecedented extreme weather and climate events have a disproportionate impact on human society. Developing countries and vulnerable groups suffer the brunt of the negative consequences. In the past few decades, the developing countries represented by China have greatly increased social vulnerability. The internal structural factors of this society play a decisive role in the extent to which its populations are affected by disasters and their ability to respond to disasters.

The second chapter is the literature review and theory of vulnerability. This chapter

reviews vulnerability definitions and components, as well as paradigms for analyzing vulnerability in prior researches. It also summarizes the significance and insufficiency of the existing vulnerability models, extracts a vulnerability analysis strategy suitable for the Chinese context, which provides a theoretical basis for the empirical analysis of this dissertation. It is also found through bibliometrics that the current disaster research in China is still concentrated on natural sciences, and there are very few discussions about social vulnerabilities have paid attention to China.

Understanding vulnerability in a specific social context (China) requires a comprehensive understanding of the history of its social development. The third chapter describes the unique process of China's urbanization. The government dominates urbanization decisions including urban expansions, rural-urban migration, and resource allocation (housing, education, social security, etc.). Policy priorities lead to discrepancies between regions in China as well as between urban and rural areas, and the emergence of vulnerability in China's urban areas is intimately related to the historical process of urbanization. The current marginalization problems are connected with economic poverty, sustained exclusion, and social inequality under state-managed urbanization.

Based on the above background and theories, chapters 4, 5, and 6 of this dissertation respectively analyze the vulnerability of cities from three perspectives: national, regional, and local. Research results from the national perspective show that China's rapid urbanization has created marginalized groups and marginalized spaces, producing socio-spatial heterogeneity. With GDP as the yardstick, the government, driven by economic interests, requires cheap labor for economic production in order to generate high economic returns at low cost; on the other hand, it continues to demolish urban villages for urban expansion, which squeeze the living space of low-wage workers in cities. The process has generated urban poverty, migrants, and socially and geographically marginalized groups, who face difficulties in housing, education, and livelihood stability. Urbanization-induced marginalization has adverse impacts on structural resistance to external pressures such as natural disasters.

From a regional perspective, as the nation of China is undergoing rapid urbanization, land expansion has created different types of communities within and around the urban areas. The results found that the vulnerabilities of different types of communities in the same region are significantly different. Among them, the collective vulnerability of urban villages is the highest, especially for high exposure and high sensitivity. Identify the most vulnerable

groups by focusing on the characteristics of social vulnerability. The high-vulnerability population is the group most likely to be affected by disasters in the future, and they are disadvantaged in terms of education, health, income, social security; The medium-vulnerability population is easy to be at risk once health and livelihood stability is threatened. In the comparison between the urban population and the rural floating population, it is found that the rural vulnerable population has a higher proportion.

From a local perspective, interacting persistent urban growth and hazard risk accumulation have ratcheted up negative impacts on immigrants. With the development of urbanization, large-scale population movement, and disintegration of the traditional communities, the disaster-related social vulnerability in China's coastal village is presenting new features. The results showed that immigrants are more vulnerable than locals. In urbanizing coastal villages, social stratification is evident between inland migrants and locals due to differences in social resource appropriation. Immigrant households' socioeconomic status influences the level of their vulnerability. In addition, the institutional arrangement has the most significant policy implications in producing their vulnerability. Their vulnerable position is further exacerbated by high resource dependence and weak social networks.