

CLIMATE CHANGE ADAPTATION AND URBAN COASTAL DEVELOPMENT IN DEVELOPING COUNTRIES OF SOUTHEAST ASIA



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INTRODUCTION

Southeast Asia is one of the world's most vulnerable regions to climate change due to its long coastlines, high concentration of population and economic activity in coastal areas. **Climate change** has already affected the region and given significant impacts to urban coastal development, including environment and socio-economic dimensions. **Coastal cities** become the area that is **more vulnerable** to climate change impacts, such as the increase of extreme weather events.

It is estimated that **world population** who will live in the coastal cities is predicted to **increase**. Asian population growth in some coastal urban areas has already been extraordinary.

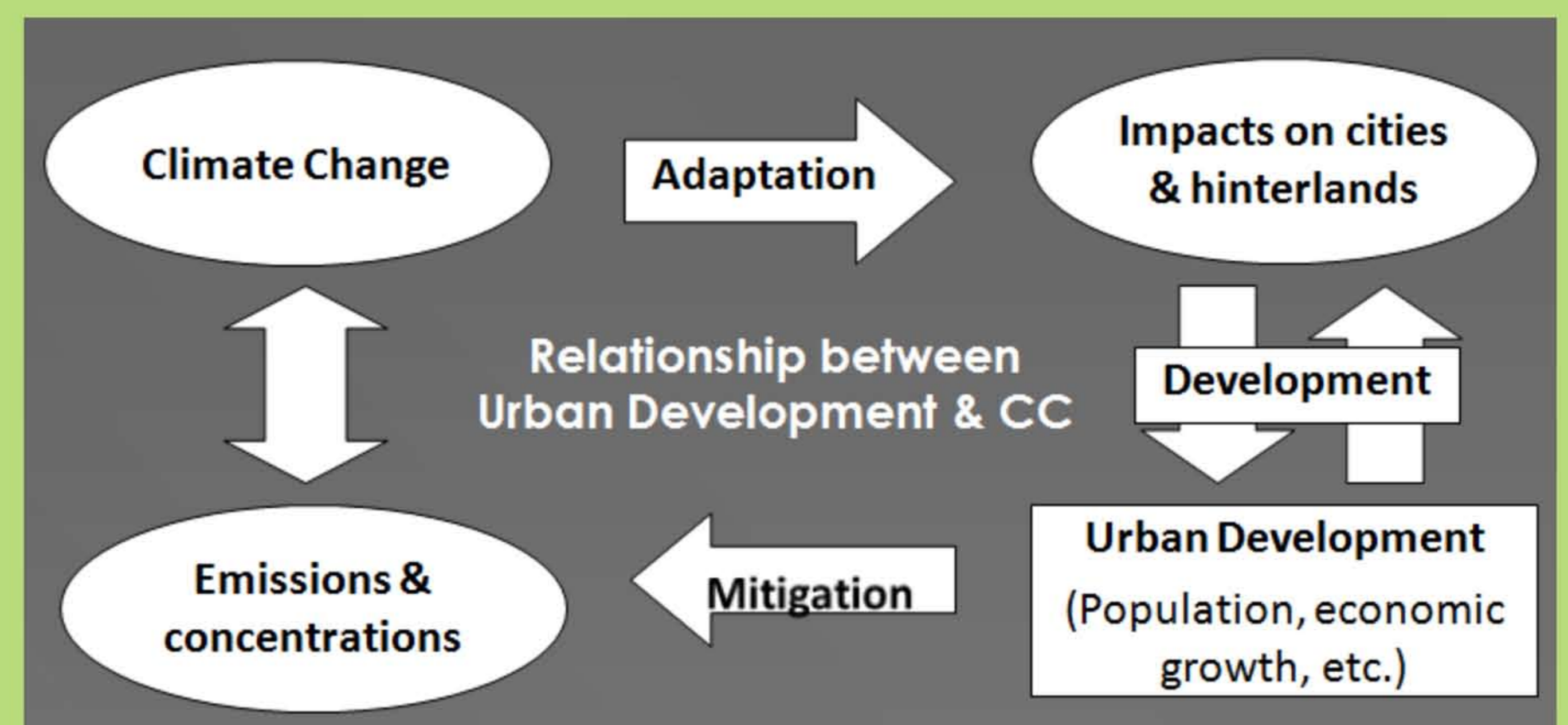
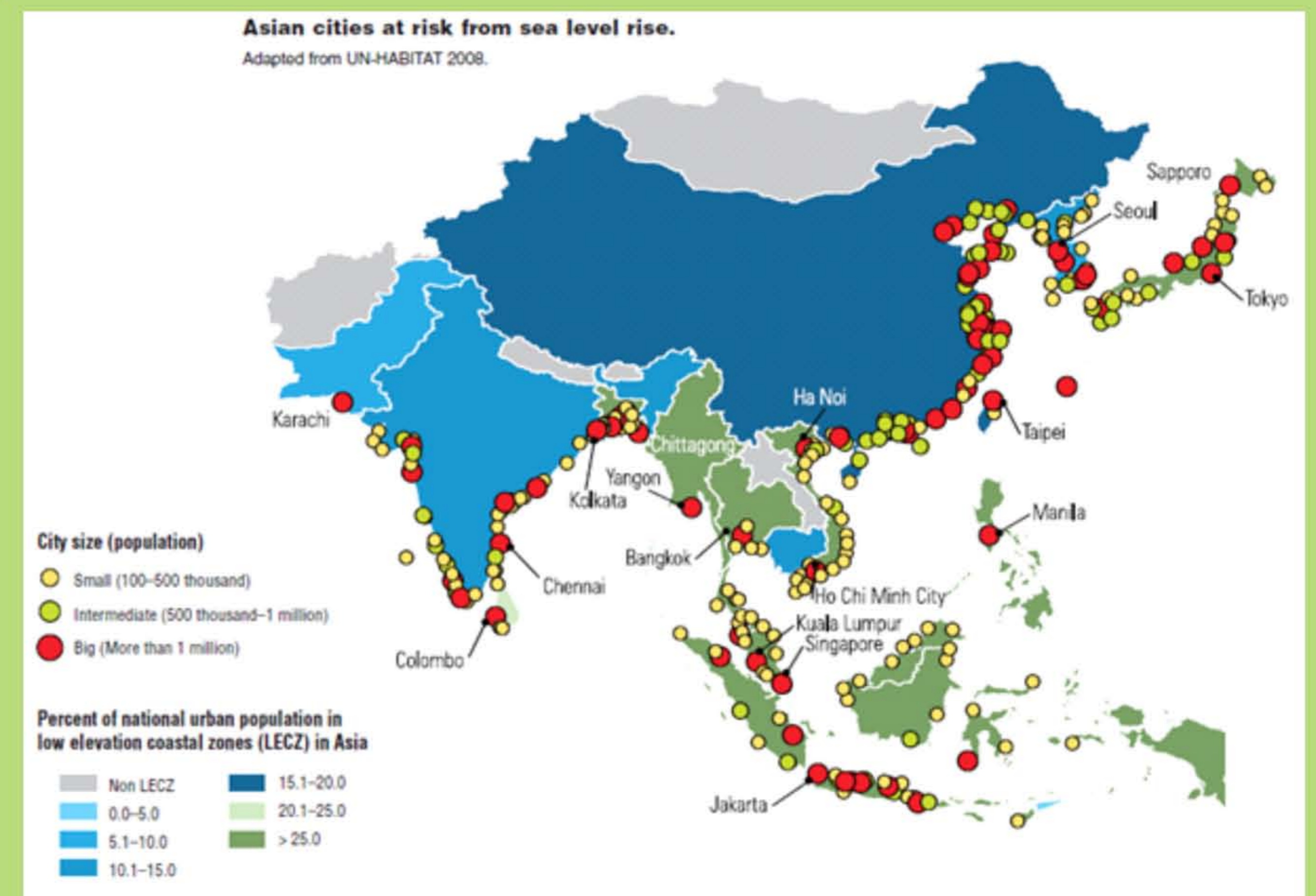
This study **examines the barriers and opportunities of the practical cases** in the adoption of climate adaptation related to urban development in Indonesia, Thailand, and Vietnam.



METHODOLOGY

This study applies a case study approach and comparative analysis. Lesson learned is reviewed from the International Climate Initiative Project on Vulnerability and Adaptation to Climate Change for Water Resource.

The specific analysis to investigate the barriers is conducted for Indonesia's case. Semi-structure questionnaire is done with key informants. Four categories of barriers are investigated, which are: 1) Institutional and managerial, 2) Financial and economic, 3) Social and behavior, and 4) Knowledge and Information. A Weight Average Index is used to measure the degree.



THE FINDINGS

From the result of ICI SEA Project, it has been identified that most potent forms of impacts are **flood, drought, salt water intrusion, coastal erosion and storm surges**; most vulnerable sector and communities are those dependent on natural systems, such as agriculture, aqua-culture, and tourism industry.

Absence of plans and policies in the local governments and **the lack of implementation** of existing policies have been found to be the institutional risks that further challenges adaptation to climate change.

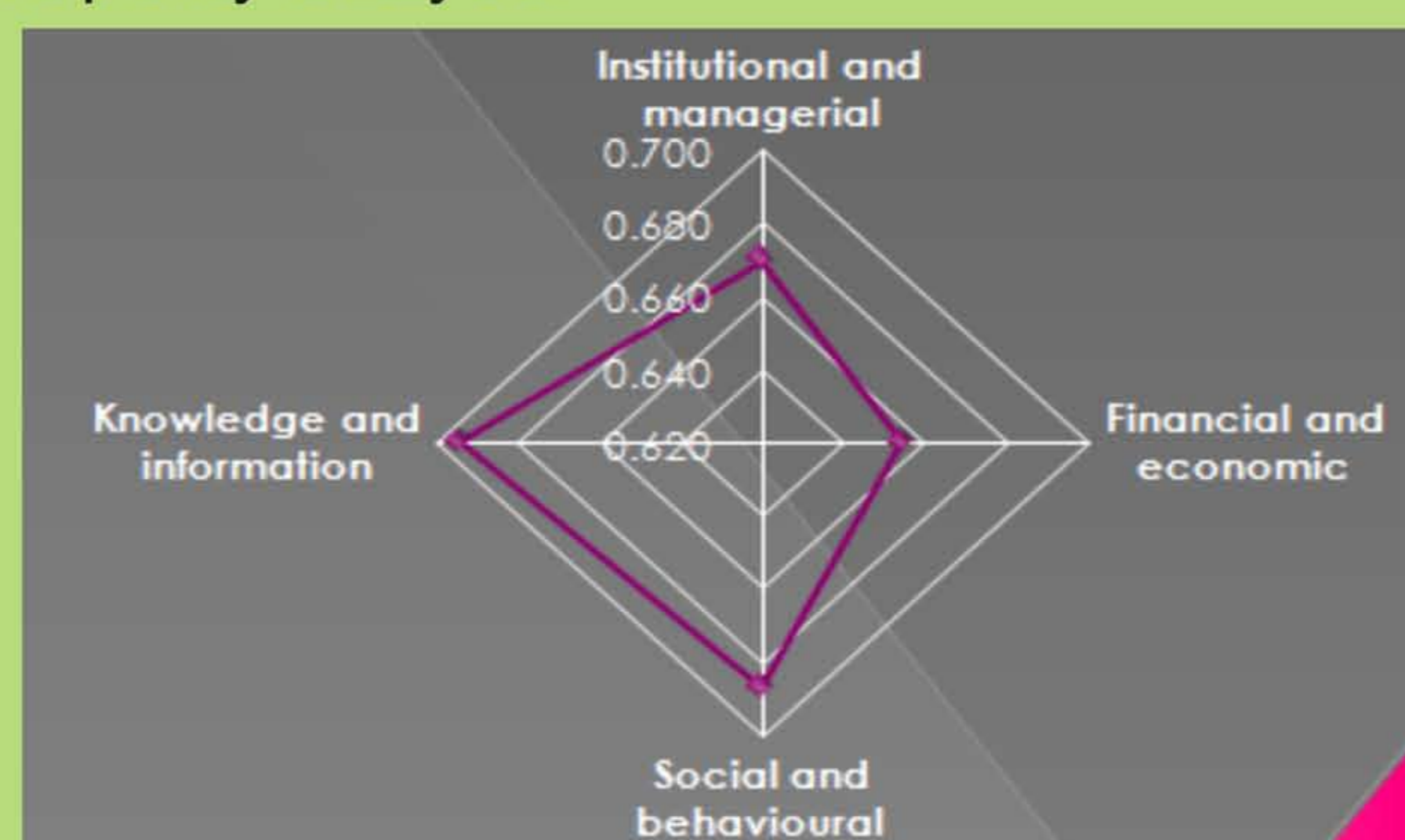


THE BARRIERS FOR INDONESIA'S CASE

Overall barriers are categorized as a high score. The barriers are mainly related to knowledge and information concerns. However, social and behavioral barriers are also significance.

Strategies to overcome the identified barriers are recommended, most importantly the need for building the capacity to all stakeholders, increasing a better understanding and awareness of municipality authorities, and getting acceptance and participation from the public on related issues into development of planning, policy and program.

The need to understand the barriers is essential in order to enhance the effectiveness and improvement in the context of decision making and policy analysis.



OPPORTUNITIES AND BARRIERS FOR ADAPTATION

Opportunities: Awareness have been found to be one of the key drivers present among the major stakeholders which would facilitate adaptation in future. National action plans for adaptation to climate change have been set up, although with minimum implementation. There are also existing strategies. These strategies can be considered as opportunities for providing further improvisation and alignment by building on integrated programs. Strengthening of local government institutions, which play significant roles and responsibilities in the aspects related to climate change, can be considered as an opportunity. Targeting critically exposed communities in the form of grassroots/ local level engagements could be an important opportunity. Introduction of methods of co-benefits in cooperation with the local communities could be a potential opportunity for developing on the existing practices.

Barriers: Minimum knowledge of local government institutions in many of the study areas appear as a huge constraint. In addition, lack of secondary data have been found as yet another constraint. In developing countries, governments are often more interested in spending on infrastructures and on building face value of the city with minimum consideration for environment. Lack of political will and subsequent interest and priority leads to lack of enough funding for technical support and implementation for adaptation practices to climate change induced impacts.

CONCLUSION

This study contributes to a strengthened focus on integration to successful implementation. The study also calls attention to hitherto unexplored factors and the stakeholders involved. It may also serve as a guide for policymakers in the design and implementation of new policy measures for CCA and urban development.

