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Article / Book Information

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## 論文要旨

THESIS SUMMARY

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Department of, Graduate major in  
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要旨 (英文 800 語程度)

Thesis Summary (approx.800 English Words )

Climate change is an inevitable global threat. Many climate change impacts and risks are unavoidable and will hit vulnerable people and populations the hardest, but adaptation could avert the worst outcome of it. Recent efforts of adaptation by the government are commonly scoped through an adaptation integration into the development plan. Since 2014, the government of Indonesia has published its Climate Change Adaptation Plan with the role of integrating and implementing given to the local government. The role of local government in adaptation planning is considered substantial because climate change emerges most tangibly in a local context. However, studies have reported that most local governments face significant challenges in addressing the issue of climate change, especially adaptation. Because of long timescales and inherent uncertainties, adaptation to climate change support requires different strategies than those based on predictability and optimality. It, therefore, raises into question how the local governments of Indonesia integrate adaptation into the development plan and whether it benefits the vulnerable population. To answer this question, this study has the following specific objectives: 1) assess how local government integrates adaptation into the development plan in Indonesia; 2) examine how adaptation integration by local government influence households' decision to adopt adaptation measure in Indonesia. To the best of our knowledge, this study represents a novel contribution that assesses adaptation planning considering the integration process, the implementation stage, and the outcome towards vulnerable populations. For objective 1, this study assessed twenty development plans collected from Semarang City, Malang City, East Java Province, and West Nusa Tenggara Province. Data was collected using a text mining method with NVivo software. For objective 2, this study purposively chooses Pedalangan village, Podorejo village, and Tanjungmas village at Semarang City as a case study. As many as 304 households were surveyed in a face-to-face manner, and statistical analysis with SPSS software was applied.

The result of objective 1 demonstrated that adaptation to climate change has been addressed and considered essential measures in the development plans of local governments. Both the medium-term and annual development plans of four local governments in Indonesia include climate change adaptation-related information, vision and objectives, and actions. The strong correlation between adaptation and climate change in the development plans suggests that adaptation is regarded as an essential measure by local governments, despite the general nature of this information. In addition, the local government's adaptation program focuses on interventions that enable adaptation but do not directly reduce vulnerability, such as socialization of climate change, socialization of adaptation, capacity-building training, coordination between stakeholders for adaptation integration, and the establishment of a climate village, in order to facilitate the adaptation of vulnerable populations to climate change. The analysis of the influence of adaptation programs to increase household adaptive capacity was then further analyzed for objective 2.

In objective 2, the type of support provided to households through adaptation programs is evaluated, and its impact on household decisions to adopt adaptation measures. Through the adaptation program, the local government has provided information, technological, financial, and capacity-building support for households to adapt to climate change. In addition, the results indicated that the number of households adopting adaptation measures doubled after they received local government

support. However, on average less than half of surveyed households receive support from the local government through the adaptation program. While in fact, almost all the survey households either agree or strongly agree that adaptation support is necessary to adopt adaptation measures effectively.

Lastly, the chi-square test and stepwise regression analysis results indicate that information support, technological support, support for capacity development, and the location where households reside are all related to their decision to adopt adaptation measures. Nevertheless, it is essential to note that most households have only employed short-term adaptation measures, as local government assistance remains extremely limited. The field surveys revealed that urban gardening and urban green space are two of the most adopted adaptation measures. Although both actions can contribute positively to climate adaptation, more concrete measures must be taken to reduce the impacts and risks of climate change. Very few households adopted measures that can directly assist them in adapting to climate change, such as rainwater harvesting or diversification of livelihoods.

This study concludes that the local government of Indonesia has integrated adaptation into the development plan and established adaptation programs that may benefit vulnerable populations. In developing nations, integrating climate change adaptation remains challenging for local governance. Therefore, local governments must collaborate with diverse stakeholders to achieve a more effective adaptation integration result.

備考：論文要旨は、和文 2000 字と英文 300 語を 1 部ずつ提出するか、もしくは英文 800 語を 1 部提出してください。

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