

Risk Perception and Responses of Coastal-Flood Prone Community on Sea Level Rise



—Case Study of Bontang Kuala Fishermen's Village, East Kalimantan Indonesia—

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Introduction

IPCC (2007) notices that coasts are already subjected to adverse change linked to climate and sea level. Coastal flooding that is caused by tides and human activities such as mangrove deforestation, withdrawal of groundwater and extreme land use in coastal areas, have been exacerbated by the damming effects of human-induced sea-level rise. Even not very severe at present, the increasing frequency of coastal flooding events may bring damage and disrupt livelihood of the inflicted people. This would increase the vulnerability of coastal communities in the coming decades.

History shows that humans for centuries have lived side by side with disasters and have made various adaptation efforts to protect themselves. Many factors influence the ability of a community to adapt to the changing climate. Nevertheless, understanding risk perception is also important since it determine people's behavior towards risk and to take preventive measures (Plapp&Werner, 2006).

Research Site



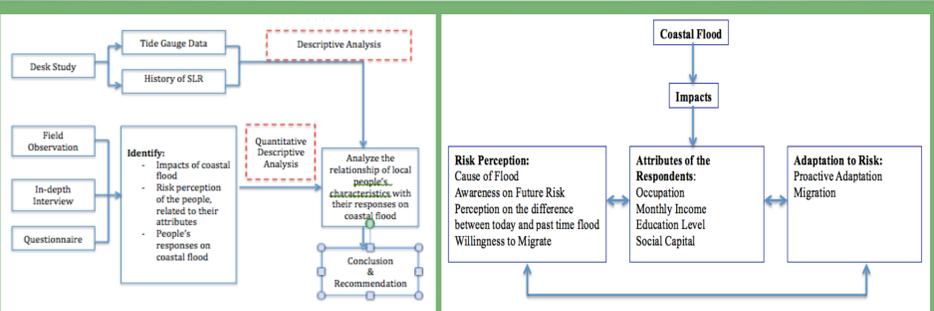
Location:
Bontang Kuala Fishermen Village,
East Kalimantan, Indonesia
117°26'34.86" East-Longitude
0°4'7.34" North Latitude
directly adjacent Makassar Strait
Land Area : 22.35 hectares
Population : 2,166 people (714 HH)

Objectives

The research attempts to:

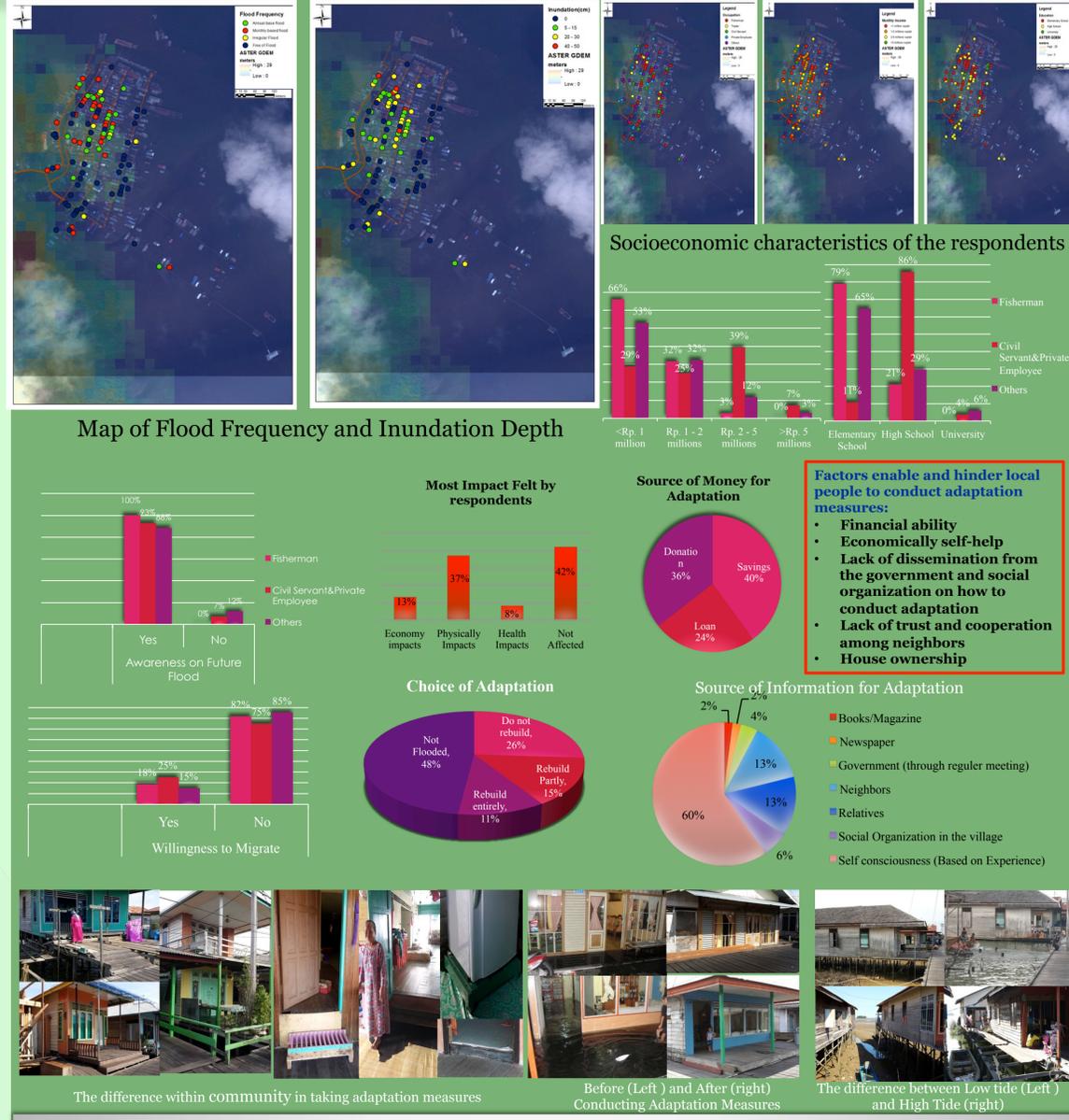
1. Identify physical and economic impacts of coastal flood in the village.
2. Identify local people's perception on risk posed by coastal flood and their response to it.
3. Identify factors enable and hinder local people to conduct adaptation measures.

Research Frameworks



Based on Field Observation and 100 returned questionnaires.
GIS-based map of inflicted respondents

Results



Conclusions

- The impacts are spatially non-uniform in Bontang Kuala fishermen's village depend on the level of the floor's house compared to seawater table, and has disrupted livelihood of villagers.
- Most villagers, irrespective their education level, have been well aware on risk posed by coastal flood, refer to their experience and personal observation.
- Migration is not considered as coping mechanism due to several reasons: family ties, proximity to workplaces and financial constraints.
- There is lack of collective adaptation measures conducted in the village.

Recommendations

- There is need for government's involvement for house reconstruction of impacted people and help for income diversification & skills training to add their expertise.
- There is need for training and education to do better adaptation measures.
- Improvement of road access to outside of the village and bridges in the village.
- Involving community in designing, implementing, and monitoring adaptation programs.
- There is a need to share responsibility and resources and to enhance cooperation among households, community organizations and local authorities in providing assistance and disaster relief efforts and to enhance social capital in the village.

References

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