Preventing post-disaster resettlement in high-risk areas of Indonesia

AN ANALYSIS OF TWO CASE STUDIES ON THE ISLAND OF JAVA, INDONESIA
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Outline

- Introduction
- Research Question
- Methodology
- Case studies
- Discussion
- Conclusion
Introduction

- **Hazards**: earthquakes, tsunamis, volcanic activity, flooding, & more
  - 5000 rivers, 30% of which flow through urban areas
  - 128 active volcanos
- **Population**: 230 million
What were the strategies used to prevent resettlement after the 2007 Solo flooding and the 2010 Merapi eruption, what were their outcomes, and why?
Literature
Significance

- Disaster cycle
- Window of opportunity
Methodology

- Primary data collection
  - Expert opinion (n=2)

- Secondary data sources
  - Analysis of literature
    - Journal articles, conference proceedings, books, and news articles
  - Pamphlet from location
Case Studies
Solo flooding, 2007

Yasan, Kota Kita, 2016

Dalley, 2016
Solo flooding, 2007
Mount Merapi eruption, 2010

Dalley, 2016

Mei, et al., 2013
Aftermath of eruption...
Results
Incentives vs. Preventative measures

Pull vs. Push
Strategies - Solo

Incentives

- Participatory approach
- Working groups
- Cash grants
- Land tenure
- Municipal services
- Citizenship

Preventative measures

- Vacant land -> community space
Strategies - Merapi

Incentives

- Resettlement near previous location
- Compensation

Preventative measures

- Legal regulation
- Not rebuilding services such as electricity, or schools
- Convert 1300 ha of land to a protected forest or national park
Outcome of Strategies

Solo
- Nearly 1000 homes were relocated
- 600 homes still located in high-risk area
- Residents generally satisfied with relocation
- One community still at risk of flooding

Merapi
- Nearly 600 families returned
- Some children unable to continue their education
- People managed to find ways to connect electricity
- Some residents satisfied with their resettlement
Factors in Outcome of Strategies

Solo
- Environmental
  - Sanitation
  - Reduced risk of flooding
  - Vacant land has a purpose, benefits community

Merapi
- Environmental
  - Fresh air
  - Cooler climate
Factors in Outcome of Strategies

Solo

- Economic
  - Livelihoods
  - Land tenure
  - Legal status
  - Compensation

Merapi

- Economic
  - Livelihoods
  - Compensation
Factors in Outcome of Strategies

**Solo**
- Social
  - Community ties
  - Governance Structure
  - Engagement in relocation process

**Merapi**
- Social
  - Perception of risk
  - Attachment to place
  - Family
  - Community
  - Cultural Beliefs
Discussion

- Preventative measures vs. incentives
  - “Push vs pull”
- Importance of environmental, economic, and social factors
  - Official disaster management framework in Indonesia tends to overlook contextual factors
- Transferability of findings
Preventing post-disaster resettlement in high-risk areas depends on the complex relationship between various environmental, economic, and social factors which have unique relevance for different communities.

Governments and communities must work together to develop a set of strategies which will contribute to a successful relocation and subsequent use for the vacant land.
Questions?