

Factors influencing farmers' resilience in multi-disaster threats: A case study from Indonesia



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INTRODUCTION

- Climate and weather-related disasters have quadrupled in the past two decades (FAO, 2023)
- Globally, agriculture has suffered an approximate loss of USD 3.8 trillion in the past 30 years, with least-developed and lower-middleincome countries suffering the most (FAO, 2023)
- Countries with multiple meteorological and hydrological disasters have the highest risks, putting Indonesia at the 2nd highest disaster risk in the world (Bündnis Entwicklung Hilft/IFHV, 2023)
- In Indonesia, agriculture is the second-leading GDP contributor and source of livelihood for 27.3 million households (BPS, 2023)

METHODOLOGY

- The study will be conducted in three Provinces in Indonesia with different cultures, religions, and farming characteristics
- The study uses a mixed quantitative and qualitative method and will collect data from 750 sample households in six districts, two districts per Province. Data collection has been started since March and is to be completed by December 2024
- Elinor Ostrom's theory of collective action and Institutional Analysis and Development (IAD) will provide a solid framework to analyze the driving factors of farmers' adaptation practices
- Communities' frequent experience of disaster shocks has developed their capacity for self-recovery and adaptation to various disasters (Lassa, 2011)
- Current studies focus on single-hazard risks, leaving research gaps in investigating agricultural practices among communities confronting multiple disaster threats



 Farmers' disaster resilient analysis will use FAO's FIES Index and Resilience Indicators

STUDY AREAS



Photo 1. Map of three study Provinces, representing western, central, and eastern parts of Indonesia

PRELIMINARY FINDINGS

OBJECTIVES

- To explore farmers' coping mechanisms and adaptive practices in a post-disaster context
- To analyze the driving factors influencing their adaptive practices, most specifically the social, economic, institutional, and knowledge
- Understand the impact of farmers' adaptive practices on food security and disaster resiliency

FARMERS' ADAPTATION PRACTICE AND THEIR RESILIENCY IN A MULTI-DISASTER RISKS CONTEXT: CASE STUDY INDONESIA



- FGD was conducted with representatives of the Buleleng Farmer Association, a group representing 700 smallholder farmers in Pemuteran, North Bali, Indonesia
- Droughts, floods, and strong winds occur all year round
- Farmers changed their farming system from monocropping to crop diversification
- The main driving factors are social and economic conditions
- They also use more organic materials from their cattle farms



Figure 1. Conceptual Framework

Photo 2. Buleleng Farm Association/BFA FGD Process (left) BFA cattle farm (right)

NEXT STEPS

In the coming months, quantitative and further qualitative data collection and analysis will be conducted in Aceh, Bali, and East Nusa Tenggara provinces in coordination with the National Disaster Management Board of Indonesia and relevant stakeholders. The results will be presented to inform policymakers and practitioners of strategies to ensure farmers' food security and disaster resiliency.

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