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

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Abstract

Disaster is a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic, and environmental losses and impacts. In the past two decades, climate and weather-related disasters have quadrupled, impacting the agriculture sector and increasing vulnerability to agriculture communities. Located in the Ring of Fire of the World and globally known as the ‘supermarket of disaster’, Indonesia ranks 2nd among the highest disaster-risk countries in the World. For an archipelago country where agriculture is the second contributor to GDP, it is crucial to ensure community resilience towards disaster for its agriculture communities.

Disaster risk reduction (DRR) is the process of reducing the impacts of disasters by identifying, assessing, and reducing the risks of disasters. Meanwhile, farmers’ resilience to disaster will be reflected in their continuous adaptations to agriculture practices in a post-disaster context. The adaptation capacity of farming communities in Indonesia is dynamic as the communities face frequent disasters from both geological and hydrological hazards. Understanding their adaptation practices would be an effective tool in disaster recovery, rehabilitation, and preparedness work in disaster-affected regions, especially those with most agriculture-based communities.

However, current studies primarily focus on single-hazard risks like volcanic eruptions or floods, leaving research gaps in investigating agricultural practices among communities confronting multiple disaster threats. There is also a crucial need to assess the applicability of resilience frameworks in Indonesia’s unique context as a multi-hazard archipelago. In addition, the current emphasis on capacity-building for preparedness in DRR policies lacks integration with risk reduction in the agriculture sector.

Therefore, this study aims to explore the community’s adaptation practices in agriculture in the post-disaster context in Indonesia: resources needed, the benefits, and the enabling and limiting aspects and how these contribute to resiliency. This study will show the importance of local actors and social governance in achieving community resiliency in disaster and climate change. It will open a dialogue for further research to fine-tune and improve DRR work in the increasingly challenging climate.

Keywords: Agroecology, Likert scale, livestock, perception, participatory workshop