



Resilience of Natural Disaster Victims Based on Social Capital Community Recovery Strategy for Flash Floods in Ladang Rimba

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Abstract

Flooding is a natural phenomenon caused in areas where many rivers flow. This research intends to describe, analyze and reveal the flash flood disaster in Ladang Rimba in 2023. In its development, this method uses environmental history by utilizing sources obtained, both written and oral, which are related to the topic of discussion. The results of this research show that after the 2023 Ladang Rimba flash flood disaster, it was a sad story for all the people living in the flood area. Severe damage due to flash floods in Gampong Ladang Rimba in Central Trumon District still leaves mud sediment with a thickness of up to 120 cm. still covering residential areas, residents' houses and various infrastructure. The impacts of flash floods in Ladang Rimba include: experiencing levels of damage to infrastructure, including housing, roads, bridges and utilities, loss of livelihoods, business closures, and impacts on local industry, social and psychological impacts on individuals and communities, including trauma, problems mental health, and community cohesion, the level of community involvement in the recovery process and empowerment of local residents. For this reason, a comprehensive review is needed that involves collaboration between various stakeholders, including government agencies, non-government organizations, community representatives and academic researchers.

Keywords: disaster, flash flood, jungle farm

1. INTRODUCTION

Every individual in the process of life will definitely continue to experience changes even though it is limited by a scope that is not too broad. Changes that occur in society can affect social values, social norms and human patterns and behavior. Apart from this, the needs and interests of individuals as a society continue to develop continuously until fundamental changes and interests are needed. Changes do not only indicate progress but can also be interpreted as a setback in certain areas of life. Many factors cause social change. One of them is the environmental factor that generally causes social change is natural disasters. Natural disasters cause physical damage and loss of life. Apart from that, natural disasters also have an impact on the community's economy. On a certain scale, disasters can paralyze the economy by destroying infrastructure, disrupting communication networks, disease outbreaks, crop failure and so on. Natural disasters that cause physical damage and direct loss of life can result in a decline in regional economic performance.

Disaster is an event or series of events or a series of events or series of events that threaten and disrupt people's lives caused by natural factors and/or non-natural factors as well as human factors, causing human casualties, environmental damage, loss of property and objects and psychological (Isa, 2016) One of the interesting natural disasters recently is the flood disaster, a flood disaster is an event or activity that can disrupt life and threaten human life and the environment caused by overflowing river water caused by natural factors due to damage to the

buffer zone in the upper area. DAS (river watershed). This causes human casualties, damage to environmental development, loss of property and psychological impacts (Hermon, 2012: 36). Flooding is excess water that flows normally over dry land (Djimesah et al., 2018), for example when rainfall exceeds the soil's ability to absorb it. This results in serious impacts on the environment (Nwachukwu et al., 2018). Small to large scale natural disasters always have an impact on communities throughout the world.

In fact, disasters have an impact on material losses and from an economic aspect they will reduce the value of growth. In Izevbuwa's (2015) research, flood victims experienced a loss of up to 79% of their income, while they only received compensation from the government for 13% of the total loss. Mwape's research (2009) states that floods have a damaging impact on infrastructure.

This article discusses flash floods in Ladang Rimba, taking into consideration that the Trumon Area flood area is a fairly significant flood event. In the last 10 (ten) years, there have been 18 (eighteen) flood events in Trumon District. Flooding in the Trumon area is not only due to the high intensity of rain in the area but also due to overflows in the upstream areas of the river. Factors causing flooding in the Trumon Area are:

1. Due to high rain intensity
2. Low area elevation
3. Rain upstream of the river
4. Water overflow from upstream of the river

These floods can be handled with short-term countermeasures, medium-term countermeasures and long-term countermeasures. Rahardjo, 2016, flood disasters based on the length of time they occur can be divided into 3, namely, slow-onset floods which occur in a matter of weeks or months and rapid-onset floods which occur in one or two days, and floods. flash floods that occur in a matter of minutes or hours. Styawan 2017 The causes of flood events are divided into, floods caused by direct rainwater (which cannot flow), floods caused by river discharge from rain, floods caused by river discharge from the collapse of natural or artificial dams, floods due to rising sea levels and tides due to storms and flooding due to tsunamis.

The chronology of the flash flood incident in Ladang Rimba, began with high intensity rainfall again pouring down on the South Aceh region on Tuesday (21/11/2023). This meant that the flood persisted and even spread to 14 sub-districts and affected 3,999 families. A total of 251 residents are still staying in refugee camps because their houses are still submerged in flood waters as deep as one meter as of Friday (24/11/2023). The Regional Disaster Management Agency (BPBD) of South Aceh Regency together with a joint team have prepared evacuation posts and shelters at three points including the Lhok Raya Brimob Company, Lhok Raya Shelter and Cot Bayu Shelter. As for the details, 140 people are in the Brimob Company refugee post, consisting of 82 adults, 46 children and 9 elderly people. Meanwhile, six people took refuge in the Lhok Raya Shelter, 90 people in the Cot Bayu Shelter, and 20 other people took refuge in the homes of their closest relatives. (Sumber: <https://nu.or.id/daerah/banjir-aceh-selatan-berdampak-ke-3-999-kk-di-14-kecamatan-AiR20>).

Considering the impact of flash floods that occurred in Central Trumon District, specifically in Ladang Rimba, integrated handling between villages is needed. Therefore, there is a need for long-term review efforts and future strategies. Based on this background, the author is interested in conducting research with the title "*Overview of Long-Term Post-Disaster Impacts and Community Recovery Strategies*". It is hoped that this research can provide information and recommendations for the people of Trumon District and can be used as reference material for future researchers

THEORY

1. Community Development Paradigm

Global community development can be seen from the consequences of the social reform movement in England and North America around the end of the mid-18th century. Community development was initially a program of the British colonial government which was applied to countries in the third world as a part of the decolonization process. It was only around 1950-1960 that community development, which at that time was still called "*community organization*", was

applied to urban and remote (rural) areas in America. Community Empowerment in the Development of North Tlogoweru Village (Smith, 1979). As a consequence, programs characterized by community development have increasingly emerged since around 1960-1970 through development activities driven by anti-poverty government programs, both in developing and developing countries which is developing.

The use of the term community development began to be used generally for the first time in the world of community development as a broad national program of the British colonial government as a replacement for the term "*Mass Education*" which was previously applied to all colonial countries in around 1948. The promulgation of the use of the term "community development" was officially announced as a result of a series of conferences held by the British Colonial Administration Office during the summer when they discussed the problem of improving the administration of their colonial countries in Africa. The understanding that community development is development that arises from community initiatives was finally further emphasized by Arthur Dunham (1958) who stated that community development is: "*organized efforts to improve the conditions of community life, and the capacity for community integration and self-direction. Community Development seeks to work primarily through the enrollment and organization of self-help and cooperative efforts on the part of the residents of the community, but usually with technical assistance from government or voluntary organizations.*"

Meanwhile, according to John Oliver (1980) defines disasters as part of environmental processes with a frequency and magnitude that is greater than expected and causes "human difficulties in dealing with significant damage." The classical era is clearly reflected in this definition, but the critical issue of the dangers of environmental cyclical processes also arises. Susman, Okeefe, and Wisner (1983) were closer to the view of traditional geographers when they defined disasters as "the relationship between extreme physical events and vulnerable human populations." Hewitt (1998) outlined a view of disasters as events in which "physical agents define the problem." In 1983 he argued that disasters can be seen as unexpected and unprecedented impacts that "derive from the natural course of events" (Hewitt, 1983) (Bakic, H., & Ajdukovic, D, 2021) (Morgado, 2020). Each of these definitions emphasizes the traditional focus of disaster researchers on the factor-hazard cycle in the disaster perspective.

Then emphasized by the *United National Development Program (UNDP)*, a disaster is an extreme event in the natural or human environment that harms/affects human life, property or activities to a level that causes a disaster. Another definition of disaster as stated in Law of the Republic of Indonesia no. 24 of 2007, a disaster is defined as an event or series of events that threatens and disrupts people's lives and livelihoods caused, either by natural factors and/or non-natural factors or human factors, resulting in human casualties, environmental damage, loss of property and psychological impact. Disasters can be classified into three, namely natural disasters, non-natural disasters and social disasters (Law 12 of the Republic of Indonesia No. 24 of 2007).

2. Types of Disasters

According to Ramli (2010), disasters are classified into 3 types as follows:

a. Natural disasters.

Namely disasters that originate from natural phenomena such as volcanic eruptions, floods, global warming, landslides, earthquakes and tsunamis. Ramli (2010) states that natural disasters occur almost throughout the year in various parts of the world, including in Indonesia. There are many types of natural disasters, including the following: Earthquakes are natural events that cannot be predicted so they can cause material losses and claim human lives (Ayub et al., 2020). Tsunamis are thought to occur due to the movement of water bodies caused by sudden vertical changes in sea level caused by various factors, due to earthquakes centered under the sea, underwater landslides (Ramli, 2010). Volcanic eruptions are caused by magma deposits in the bowels of the earth which are pushed out by high pressure gas. Magma is an incandescent liquid found in the layers of the earth with a very high temperature, which is estimated to be more than 1,000C.

Floods are the most predictable natural disasters. Because it is related to large amounts of rainfall. Floods generally occur in low-lying areas and in the downstream parts of river basins. Generally in the form of delta or alluvial. Landslides are part of natural phenomena to achieve conditions of regional stability. Like floods, land movement is actually a natural disaster whose arrival can be predicted, because it is related to the amount of rainfall. Thus, this paper focuses on the type of natural disaster in the category of flood eruption.

b. Non-Natural Disasters

It is a disaster caused by an event or series of non-natural events, including technological failure, modernization failure and disease outbreaks. Floods are generally classified as natural disasters. Usually caused by natural events such as heavy rain, storm surges, or overflowing rivers and lakes. These events are part of natural processes and cycles in the environment. However, certain human activities can exacerbate the severity and frequency of flooding, leading to disasters that may be considered non-natural or anthropogenic in aspect.

c. Social Disaster

Is a disaster caused by an event or series of events caused by humans which includes social conflict between groups or between communities and terror. Floods are not usually classified as “*social disasters*” in the traditional sense. However, the impact often has a significant social dimension.

2. RESEARCH METHODS

This research is qualitative research using a descriptive analytical approach. Data collection is based on a naturalistic approach, which focuses on the situation and conditions of the research setting, events that occur to research subjects (individuals/groups) based on the personal or group background (history, biography and relationships) that exist.

3. RESULT AND DISCUSSION

Flash floods are natural disasters that come suddenly and are caused by blockages in rivers or deforestation along rivers, thereby destroying people's houses and causing loss of life. The flood disaster in Bima Regency hit six sub-districts and resulted in the death of two people. The research results show that the factors causing flash floods in Bima Regency cannot be separated from environmental changes. Environmental changes can be seen in this area, mostly converting protected forests into production forests.

The flash flood disaster that devastated South Aceh Regency, specifically Gampong Ladang Rimba, Central Trumon District on Tuesday (21/11/2023) caused heavy damage to the economic and social sectors of the community. Apart from crippling the economic sector, this hydrometrological natural disaster caused several infrastructure networks to be seriously damaged, it was observed that until the 11th day after the disaster, mud material still covered most of the settlements and vital objects, such as schools, markets and clean water facilities in the sub-district. Severe damage caused by flash floods in Gampong Ladang Rimba in Central Trumon District still leaves mud sediment with a thickness of up to 120 cm still covering settlements, residents' houses and various infrastructure. (Sumber: <https://www.larasnews.com/news/pasca-banjir-bandang-butuh-biaya-besar-untuk-proteksi-bencana-di-aceh-selatan/index.html>)

Apart from flash floods, the flood disaster caused by the overflow of the Lae Soraya river until Saturday (2/12/2023) or the 14th day was still submerging residential areas in East Trumon, Central Trumon and Trumon subdistricts, resulting in residents being forced to flee to a number of places.

Based on data from BPBD South Aceh, currently the number of residents affected by flooding in South Aceh has reached 15,052 people or 4,543 heads of families. Meanwhile, the total number of evacuees due to the overflowing Lae Soraya River in the Trumon Raya area has now reached 669 people or 116 heads of families. The flood caused by Lae Soraya in Gampong Lhok Raya on the 14th day still reached 45 to 90 cm, in Cot Batu 60 to 120 cm and Padang Harapan 100 to 200 cm.

The flash flood disaster in Trumon Raya was completely paralyzed, logistics transport vehicles were piled up at several points due to the submergence of the national road, submerged up to 50 cm, not flooded as is commonly reported. This situation makes handling worse amidst the threat of indications of increasing prices of basic commodities due to minimal supplies due to natural disasters. Communities affected by disasters, both flash floods and Lae Soraya overflows, are facing conditions of prolonged stress, psychological trauma, and even depression if they are not immediately given treatment after the loss of their property by the disaster. On the economic side, society is also facing conditions of limited productivity, finances and indications of rising prices of goods. These two problems certainly require serious handling by the government to anticipate the emergence of long-term social problems.

Referring to this problem, it is hoped that the presence of the Aceh Provincial Government will be present to alleviate the problems and indications that will arise after the natural disaster. The flash flood disaster is not an ordinary natural disaster, this is the most devastating disaster in the South Aceh Regency area in recent decades. The Aceh government was asked to make the status of the South Aceh flood disaster a regional disaster to speed up handling in order to minimize the extent of the impacts felt. (Sumber: <https://www.larasnews.com/news/picu-dampak-ekonomi-dan-sosial-provinsi-diminta-tetapkan-status-banjir-trumon-sebagai-bencana-daerah/index.html>).

Flash floods can have significant long-term impacts on the environment and communities affected. The following are some of the long-term impacts of flash flood disasters: Infrastructure Damage: Flash floods can cause severe damage to infrastructure such as roads, bridges, buildings and utilities. Repair and reconstruction of these structures can take a long time and require significant financial resources. Economic Impact: The economic impact of flash floods can have long-term impacts. Businesses may be forced to close temporarily or permanently, resulting in job losses and a decline in local economic activity. Recovery and rebuilding costs can burden local and regional economies.

Loss of Life and Displaced Persons: Flash floods can result in loss of human life and displacement of communities. Recovering from loss of life is emotionally challenging, and refugees may face long-term challenges in finding a new home and rebuilding their lives. Environmental Degradation: Flash floods can cause soil erosion, ecosystem damage and loss of biodiversity. Sedimentation in rivers and streams can impact water quality and aquatic habitats. Long-term ecosystem recovery may take years, and some areas may never return to their original condition.

Water Quality Problems: Flood water can carry pollutants and contaminants thereby affecting the quality of water sources. This can cause long-term water quality problems, impacting human health and ecology. Contaminated water sources may require extensive remediation efforts. Community Resilience and Preparedness: Flash floods highlight the importance of community resilience and preparedness. In the long

term, affected communities can invest in infrastructure improvements, early warning systems, and disaster preparedness programs to reduce the impact of future events.

Psychological and Social Effects: Individuals who experience flash flood trauma may suffer long-term psychological impacts such as post-traumatic stress disorder (PTSD) and anxiety. Rebuilding social structures and community ties may also take time. **Government Policy and Planning:** Flash flood disasters can prompt governments to reassess and update policies related to land use, building regulations, and emergency response. Long-term impacts may include changes to zoning regulations and the construction of more resilient infrastructure.

Community recovery after a flood disaster requires a comprehensive and coordinated strategy involving various stakeholders, including government agencies, non-profit organizations, local communities and the business world. The following is a general framework for post-flood community recovery:

1. **Immediate Response and Security:** Ensure the safety and well-being of affected residents by providing immediate assistance, including rescue operations, medical care, and emergency shelter. Communicate important information to the public regarding evacuation procedures, emergency services, and available resources.
2. **Damage Assessment:** Carry out a comprehensive assessment of the level of damage to infrastructure, housing and the environment. Evaluate the economic and social impact on society, including the number of refugees, affected businesses, and disrupted public services.
3. **Coordinate Relief Efforts:** Establish a centralized coordination center to manage and streamline relief efforts. Collaborate with local, regional and national institutions, as well as non-governmental organizations (NGOs), to ensure an integrated and effective response.
4. **Providing Basic Needs and Temporary Housing:** Guarantee access to essential services such as clean water, food, medical care, and sanitation facilities. Establish temporary shelters for displaced individuals and families.
5. **Psychosocial Support:** Offers psychosocial support services to help individuals and communities cope with the emotional and psychological impact of flooding. Provide counseling and mental health services to those affected.
6. **Recovery Planning and Stakeholder Engagement:** Develop a comprehensive recovery plan with input from community members, local authorities, and experts. Involve stakeholders in the planning process to ensure that diverse perspectives and needs are considered.
7. **Infrastructure Rehabilitation and Reconstruction:** Prioritize the repair and reconstruction of critical infrastructure, including roads, bridges, utilities, and public buildings. Implement resilient and sustainable design practices to reduce vulnerability to future disasters.
8. **Housing and Livelihood Support:** Assist in the reconstruction of damaged homes and provide support for those who are homeless. Implement programs to restore and support local businesses, agriculture and livelihoods. **Environmental Restoration:** Implementing measures to restore and rehabilitate the natural environment, including riverbanks, wetlands, and other ecosystems impacted by flooding. Promote sustainable land use practices to mitigate future risks.
9. **Education and Awareness:** Conduct public awareness campaigns regarding flood risk reduction, emergency preparedness, and resilience building. Integrate education on disaster risk reduction and climate change adaptation into the school curriculum.
10. **Policy and Governance Reform:** Evaluate and update land use planning, building codes, and zoning regulations to increase resilience to future flooding. Strengthen

institutional capacity and coordination for disaster management at the local, regional and national levels.

11. Monitoring and evaluation: Establish a system to monitor and evaluate the progress of recovery efforts. Use feedback from the community to adjust strategies and address emerging needs.

Community recovery is a complex and ongoing process that requires collaboration, resilience, and commitment to building a more resilient and sustainable future. Successful recovery efforts involve active participation from affected communities, local governments, non-governmental organizations, and other stakeholders. In summary, the long-term impacts of flash flood disasters have many aspects and can impact various aspects of society, the environment and the economy. Building resilience, implementing effective policies, and fostering a culture of preparedness are critical to minimizing the long-term consequences of these events.

4. CONCLUSION

Flash floods are a serious problem that must be addressed because they often cause losses to areas affected by flooding. The losses incurred can include loss of life, loss of property such as houses, schools and workplaces, as well as psychological impacts on people living in areas affected by flooding. Flash floods in Ladang Rimba have an impact on various people's lives. Floods cause economic and social impacts. In terms of economic impact, flooding causes damage to various public facilities, such as roads, bridges, water embankments, educational facilities such as school buildings, office buildings and also PDAM water channels which disrupt the flow of clean water for Ladang Rimba residents. The large number of victims caused encouraged the government and the people of Ladang Rimba to respond to the disaster suffered by the disaster victims.

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