

## The Functions of Socio-Economic System in Natural Disaster Management in Janeponto Regency

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### Abstract

Natural disaster management requires a holistic approach that understands the complexity of socioeconomic systems within communities. This article explores the importance of socioeconomic systems as a key foundation in disaster management efforts. Through in-depth analysis, it identifies the socioeconomic system as a key driver of community vulnerability, provides a rich understanding of inequality, and highlights the potential for community empowerment. Qualitative methods are used to investigate the dynamic relationship between social and economic aspects of disaster management. This approach provides space to understand the local context, consider community diversity, and identify critical factors that influence community resilience. In the process, the linkages between socioeconomic systems and aspects of sustainable development become clear, suggesting that disaster management cannot be separated from an inclusive development agenda. The analysis highlights the central role of the socioeconomic system in Jeneponto District in enhancing the community's capacity to cope with natural disasters. The resilience of the community's socioeconomic system is recognized as a key element for building effective and sustainable solutions. Thus, the integration of socioeconomic systems in disaster management strategies not only reduces acute impacts but also forms a solid foundation for building resilient and sustainable communities in the face of natural disaster challenges.

**Keywords:** *Jeneponto Regency, Natural Disaster Management, Socio-Economic System.*

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### INTRODUCTION

Natural disasters are unavoidable events that often leave significant impacts on human life and various social and economic aspects. Handling natural disasters is not only the responsibility of the government but also requires the full involvement of the community and the economic sector. In this context, the socio-economic system plays an important role as one of the main pillars in natural disaster management efforts.

The socio-economic system refers to a framework that involves the interaction between social and economic aspects in a society. In the context of natural disaster management, this system includes various aspects such as social structure, economic resilience, wealth distribution, and access to resources (Sirajuddin, et al., 2022). The role of the socio-economic system is not only limited to the post-disaster phase but also has a significant impact on mitigation, response, and recovery efforts.

Natural disaster management with a socio-economic systems approach embodies the principle that community resilience to disasters is not only determined by physical infrastructure but also by social and economic capacity. Therefore, disaster resilience development should embrace these aspects, with attention to community empowerment, poverty

alleviation, and improved access to economic resources.

The importance of involving socio-economic systems in natural disaster management is also related to the inequalities that can be exacerbated by disasters. Communities that are more socially and economically vulnerable are often more exposed to risk and have a harder time recovering after a disaster. Therefore, disaster management policies need to be designed inclusively, taking into account the needs and capacities of different community groups.

In an increasingly complex global context, understanding the dynamics of socio-economic systems is becoming increasingly crucial. The integration of social and economic aspects in natural disaster management strategies can create sustainability, build strong resilience, and bring long-term positive impacts to affected communities. Therefore, research and policy implementation that integrates social and economic aspects is a must to achieve holistic and sustainable natural disaster management (Danhassan, et al., 2023).

According to the Aqueduct Global Flood Analyzer, Indonesia ranks sixth as the country with the most flood-affected population in the world, reaching approximately 640,000 people. Information obtained

from the National Disaster Management Agency (BNPB) shows that flooding is the most frequent type of disaster in Indonesia, recording as many as 1,250 events each year (Hakim, et al., 2023). Natural disasters are one of the elements that can cause damage to the ecosystem. When looking at the root causes, natural disasters can be divided into three main categories, namely geological, climatological, and extra-terrestrial. Natural disasters refer to an event or series of events triggered by various factors, including but not limited to earthquakes, tsunamis, mountain eruptions, floods, droughts, hurricanes, and landslides. On the other hand, non-natural disasters occur due to events or a series of events that are not of natural origin, such as technological failures, unsuccessful modernization, disease outbreaks, and epidemics (Kadir, et al., 2019).

The fact that floods are the most common disaster with more than 1,250 occurrences per year points to the need for effective risk management and mitigation. The above highlights the urgency to develop better disaster management strategies and more proactive prevention efforts. Furthermore, realizing that this data comes from a reliable source such as BNPB emphasizes the need for inter-agency cooperation and community participation in facing the flood challenge. The implementation of climate change-responsive policies and good spatial planning can be key steps in reducing the negative impacts of flooding in Indonesia.

Janepono District is an integral part of the social diversity of communities in South Sulawesi. It not only witnesses the history of cultural development but also faces complex challenges, including the threat of natural disasters. Janepono District's diverse geography and natural environment place it in a strategic position to design and implement an effective disaster management system. To protect and strengthen its communities, the social systems of Janepono District's communities become a critical foundation in responding to, mitigating, and recovering from the impacts of natural disasters.

Community involvement is a process that provides empowerment to them to overcome various problems faced and encourages them to participate in natural disaster management efforts. In addition, the city/regency government also holds the responsibility and authority by Regional Regulation No. 9/2011 article 4 paragraphs (1) and (2) in managing natural disasters (Hakim, et al., 2023).

Natural disasters are a real threat that can result in huge losses of both material and human life. Therefore, there is a need for a solid and integrated framework to face this challenge. In the context of Janepono District, located in South Sulawesi Province, the community's social system plays an important role in coping with natural disasters. Active involvement and cooperation among citizens, local government, non-governmental organizations, and the private sector are key to creating a disaster-resilient environment.

Some disasters cannot be avoided, but the impact can be minimized through disaster risk reduction efforts carried out through disaster risk management. The disaster management cycle consists of four stages, namely prevention/mitigation, preparedness, emergency response, and post-disaster rehabilitation and reconstruction. At the mitigation stage, measures are taken to prevent or reduce the impact of a disaster. The focus at the mitigation stage is on long-term actions to reduce disaster risk (Raharja, et al., 2016).

This article describes the social system of the Janepono Regency community in the context of natural disaster management. An in-depth analysis of how cultural values, social structures, and communication between community members can form the basis for successful disaster management strategies. In addition, this introduction will discuss how local government policies and programs interact with the community's social system, creating an effective synergy in dealing with disaster risks.

The people of Janepono understand that there are prohibitions related to environmental damage, where actions such as logging and destroying trees in the forest as well as stone mining activities can cause them to face consequences in the form of disturbances from *jurigans*. In addition, Janepono's knowledge also includes folklore that predicts future changes in nature. The elders of Janepono Village state that one day there will be a union of two mountains, which will then form a river in the middle. The formation of the river was interpreted as a sign that the land around where people lived was highly saturated with water, increasing the risk of landslides. This prophecy was used by the Janepono elders to guide people's behavior to be more careful and protect their environment more effectively.

The knowledge possessed by a community such as farmers, especially those living in a specific regional environment, is usually acquired through the inheritance of experience from generation to

generation. Farmers' practical knowledge of local ecosystems, natural resources, and the complex interactions between them is reflected in their farming methods and skills in managing natural resources. This local knowledge, which has seeped into belief systems, norms, and culture, is reflected in the traditions and norms that the community has upheld over a long time and is known as local cultural wisdom (Zamzami, 2014).

In addition, the Janeponto community's understanding of prohibitions related to environmental damage reflects an awareness of the importance of preserving nature and ecosystems. Actions such as tree felling and stone mining are haunted by the consequences of *jurigan*, creating an understanding that maintaining the balance of nature is an important step in the sustainability of their lives. Folklore held by the people of Janeponto also serves as a source of knowledge passed down from generation to generation. Prophecies about the merging of two mountains and the formation of a river as a sign of water-saturated soil conditions created awareness of the risk of landslides and motivated them to be more careful in protecting the surrounding environment.

The use of divination by Janeponto elders to guide people's behavior shows the role of local culture and traditional wisdom in shaping mindsets and actions in the face of natural threats. Thus, respect for local traditions and knowledge is integral to maintaining environmental sustainability in the Janeponto community. By understanding the role of the Janeponto community's social system in the context of natural disaster management, it is expected to formulate more targeted recommendations and strategies to increase community resilience and resilience to disaster threats. Through this approach, Janeponto Regency is expected to become an example for other regions in building a disaster management system based on local wisdom and active participation of all levels of society.

In this context, the social system of Janeponto Regency plays a crucial role in the prevention and management of natural disasters. Success in dealing with these threats depends not only on the availability of infrastructure and government policies but is also greatly influenced by the extent to which local communities understand, participate, and respond to these threats. How does the social system of the Janeponto Regency community play a role in natural disaster prevention and management efforts? What are

the social factors that can influence the level of community participation in natural disaster management programs?

## METHODS

This research was conducted for two months in Janeponto Regency, which is a disaster location. The research method used was qualitative, with data collection through interviews, direct observation, field notes, personal documents, and other official documents (Ningi, 2022). The analyzed data were explained qualitatively to describe the situation at the research location based on facts related to community resilience and post-flood counseling in Janeponto Regency.

The main source of information was obtained through interviews with informants, namely residents who were directly affected by the flood disaster in Janeponto Regency. Secondary data was obtained from documents, reports, and other written information. The data collection process involved data analysis with three steps, namely data reduction, data presentation, and conclusion drawing. First, data reduction was done by selecting responses from the interviews to keep them focused on the research. Interviews used the same pattern of questions to elicit appropriate responses. Second, data presentation involves organizing the reduced data into pictures, notes, and interview results, which are then explained in descriptive text systematically to help readers understand the research findings. Third, the final step involves checking the data and drawing conclusions, which is drawing conclusions based on the data obtained to solve the research problem.

## RESULTS AND DISCUSSION

### The Role of Socioeconomic Systems in Natural Disaster Management

This research reveals the key role of social structures in guiding and supporting natural disaster management efforts in Janeponto communities. Some significant findings involve social hierarchies, the role of customary institutions, and local organizations, which together form an important dynamic in addressing disaster impacts.

Social hierarchy refers to a system that organizes or groups individuals or groups in levels or strata based on the status, power, or influence possessed by each entity in a society. The social structure of the Janeponto

community in natural disaster management efforts refers to the hierarchical order that exists in the community. In this context, social hierarchy includes the organization and division of roles that play a key role in coordination, decision-making, and resource allocation during the response to natural disasters. This hierarchy reflects the social structure that shapes interaction patterns and dynamics in addressing the challenges posed by natural disasters in Janeponto.

Janeponto's traditional institutions play an important role in regulating local norms and providing a framework for disaster response. Decisions and policies are made with local traditions and values in mind. These institutions also play a role in communicating important information to the community, facilitating coordination, and supporting collective decision-making processes. In addition to considering technical aspects, it is also necessary to pay attention to local socio-cultural aspects in the decision-making process related to disaster mitigation efforts.

Traditional institutions in Janeponto play a central role in natural disaster management. They not only maintain local norms and ethics but also organize special rituals to invoke spiritual protection and support. As the main conduit of information, adat institutions effectively communicate early warnings and safety measures to the community. In addition, they serve as mediators that bring communities, government, and aid agencies together, facilitating coordination of disaster response. Customary institutions also manage local traditions and wisdom as a source of knowledge in the response. By encouraging community participation, they empower individuals to be involved in decision-making. Moreover, they provide psychosocial assistance and emotional support to those affected, creating a platform for them to share their experiences and gain mental support. As such, customary institutions in Janeponto are not only concerned with the physical response to disasters but also upholding local wisdom, cultural values, and community sustainability in the face of crisis.

Local organizations including volunteer groups and charities, serve as the spearhead in the implementation of disaster response. They not only provide direct assistance to disaster victims but also serve as a bridge between communities and authorities.

The process of identifying community leaders is crucial in carrying out response efforts. Having well-

defined roles in each social group, such as age groups, religious groups, or tribal groups, helps to understand how responses to disasters can be best harmonized. Leaders at the local level can be agents of change and coordinators in directing collective efforts.

Through a deep understanding of social structures, this research provides insights into how aid and resources can be effectively distributed. Customary leaders and institutions play a role in identifying immediate needs and planning the allocation of resources to meet those needs. This ensures that aid and resources not only get to where they are needed but are also distributed fairly and efficiently.

Social capital refers to the relationships and norms that shape the quality of social relations within communities and can be seen as the social glue that keeps community members collectively united. The transfer of social capital occurs through various cultural mechanisms, such as religion, tradition, or historical heritage (Azis, et al., 2022).

### **The Socio-Economic System of the People of Janeponto Regency**

Muttalib (Sakdiah, & Mauliza, 2023) notes that the term social refers to community relations that play a role in supporting development. On the other hand, the word economy comes from a word that refers to household rules. Nonetheless, in a broader context, it can be interpreted that economics involves various human activities to fulfill practical needs in their lives. Asdak (Shofwan, (2023) explains that the concept of social sustainability focuses more on improving quality rather than growth in terms of quantity. Social system sustainability can be realized if community participation is high and implemented systematically. On the other hand, economic sustainability is defined as the process of managing resources efficiently and responsibly, to create positive social and environmental impacts in the long term.

Society and culture, which can be referred to as socio-cultural life, are concepts and categories that are routinely discussed in social and cultural disciplines such as sociology, social and cultural anthropology, political science and government, philosophy, psychology, history, literature, and linguistics. In these discussions, social systems are often considered separate from cultural systems, although the two cannot be strictly separated. In people's lives, social phenomena and cultural phenomena are almost always or even always interrelated and influence each other, so

social phenomena and habits cannot be separated from cultural phenomena and habits, and vice versa. In fact, it is often difficult for people to distinguish whether a symptom or event is social or cultural. Social systems cannot be separated strictly from cultural systems, so conceptual questions about social systems and cultural systems are better explained in a unified discussion so that we can recognize social-cultural systems (Kistanto, 2008).

Discussions about society and culture, or culture and society, often spark debate, especially in sciences related to humanity, human relationships, and the relationship between humans and society, as well as their culture. This happens both in disciplines such as sociology, social anthropology, and cultural anthropology, as well as in various other branches of socio-humanities, including in the fields of biology and systems ecology. This situation is realized because there continues to be interaction, dialogue, and reciprocal relationships between society and its culture, or culture and society, which takes place continuously according to its characteristics and dynamics. Therefore, there is a process of thesis and antithesis that always produces a temporary synthesis. In addition, this phenomenon is also caused by the continuous changes and transformations in society and in cultural practices. Therefore, from time to time and from era to era, the understanding, understanding, and concept of society and culture become topics of discussion that receive attention (Kistanto, 2008).

A community's social system refers to the structural and functional framework that governs social interactions between individuals, groups, and institutions within a given community. It involves the patterns of relationships, norms, values, and institutions that form the basis of living together in a society. A community's social system not only details how the community functions, but also includes how the community responds and adapts to changes and challenges that arise in everyday life.

Social systems can exist on a very broad scale, encompassing large entities such as nations, cultural communities, social communities, or society in general. In a narrower context, social systems can also consist of small human units, such as groups or organizations. Social interactions and relationships among community members promote cognitive and emotional development. This motivates the environment to implement new reforms, although this requires

leadership within the framework of the social system. The importance of effective communication is also highlighted, not only through verbal expression but also through nonverbal communication (Ayuna, 2023).

A social system can be defined as an arrangement or model of social relationships that exist and develop in a particular society, functioning as a functional vehicle in that society. In this general sense, any society, social organization, or group, wherever and whenever it is, can be considered a social system. In this context, social systems can include social subsystems and have very diverse systematic patterns. As part of a society, the social system is a structure that becomes a container for all relationships between individuals and between groups, with the aim of meeting needs, and maintaining, and developing life according to their respective functions. Individuals and human groups that exist in the social system, each have boundaries and territorial linkages, and develop elements of their culture, including institutions such as social organizations and rules that are both written and unwritten (Kistanto, 2008).

#### **Natural Disaster Management**

A disaster is an event that occurs suddenly, at a very fast tempo or time, resulting in damage, loss, suffering, death, and even extinction of humans and the natural environment. This event can be triggered by certain critical conditions, natural events, or the accumulation of irresponsible human behavior towards nature and the environment. The impact of disasters includes widespread and prolonged suffering, creating stressful situations felt by both individuals and certain groups or communities (Sulistiyani, et al., 2023).

This coping approach asserts that communities have significant resources and social capital in dealing with disasters, including local wisdom as a form of resilience. Resilience is defined as the ability to adapt, learn, and reorganize after a disaster. Efforts are needed to build synergistic relationships between various actors in achieving disaster resilience (Sulistiyani, et al., 2023). Socio-cultural and economic aspects have a significant impact. A lack of community understanding of the environment, which is part of local knowledge, can reduce their independence and resilience. In addition, communities that receive recovery assistance from other parties tend to have stronger personal networks, as well as higher levels of social capital, which results in a faster recovery process. The community's ability to return to work, level of



individual welfare, access to livelihoods, and socio-physical resilience also influence the level of disaster resilience (Gunawan, 2023).

These strategies will greatly contribute to managing vulnerability and reducing the impact of disasters on lives and social systems. In such contexts, ethically informed decisions may have a significant and lasting impact on the communities served. Information management between various stakeholders in natural and human-induced disasters is fundamental to effective mitigation and disaster relief operations (Darmadi, 2021).

### CONCLUSION

In natural disaster management efforts, the role of the socioeconomic system has proven itself to be a critical factor that cannot be ignored. An in-depth analysis of the social and economic dynamics of communities brings a better understanding of vulnerability, inequality, and the potential for empowerment. As a framework, the socio-economic system offers a holistic view that embraces various aspects of community life, both at the mitigation, response, and post-disaster recovery stages.

The importance of socioeconomic system integration can be seen in its ability to direct attention to the most vulnerable groups in society. In developing response policies, socioeconomic analysis enables the identification of these groups, ensuring that response efforts not only mitigate the acute impacts of disasters but also strengthen the capacity of communities to deal with future threats.

In addition, understanding the linkages between socioeconomic systems and aspects of sustainable development emphasizes that disaster management should not be separated from inclusive and sustainable development efforts. Measures taken in addressing the impacts of disasters can be a momentum to improve the overall quality of life of communities, reduce poverty levels, and create stronger local economies. As such, the socio-economic system is not just a support, but the main foundation in creating communities that are resilient to natural disasters. Careful and wise integration of social and economic aspects in every phase of the response will bring long-term positive impacts, creating a strong foundation for building communities that can face the challenges of natural disasters with resilience and sustainability.

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