



The Role of Women in Community Development after Earthquake, Tsunami, and Liquefaction in Central Sulawesi, Indonesia

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Abstract

This study aims at identifying how women respond to uncertain situations after a disaster. Women and children are frequently in a vulnerable position due to their domestic roles. The research took place in Central Sulawesi, where the massive earthquake, tsunami, and liquefaction engulfed thousands of lives and dwellings. Despite their limitation, women have become a social catalyst in enhancing optimism among the survivors. The socio-cultural background of Central Sulawesi women is an essential factor in recovering socio-economic conditions after the disaster in Central Sulawesi. Their toughness and high social care have also facilitated extensive social and economic activities, along with women activists in civil society organizations. Several non-governmental organizations under government coordination have provided rehabilitation assistance programs. The research employed qualitative approaches encompassing in-depth interviews, focus group discussions, and field observations. The research indicates that women's greater participation in disaster recovery programs could be essential. Women also brought up people's optimism to bounce back faster from suffering a disaster.

Kata Kunci:

Bencana Palu;
Likuifaksi;
Perempuan
Tangguh;
Keruntuha Sosial
Ekonomi;
Pemulihan
Berkelanjutan

Abstrak

Penelitian ini bertujuan untuk mengidentifikasi bagaimana perempuan menanggapi situasi yang tidak pasti setelah bencana. Perempuan dan anak seringkali berada dalam posisi rentan karena peran domestik mereka. Penelitian berlangsung di Sulawesi Tengah, di mana gempa besar, tsunami, dan likuifaksi menelan ribuan nyawa dan tempat tinggal. Terlepas dari keterbatasan mereka, perempuan telah menjadi katalis sosial dalam meningkatkan optimisme di antara para penyintas. Latar belakang sosial budaya perempuan Sulawesi Tengah merupakan faktor penting dalam proses pemulihan kondisi sosial ekonomi pasca bencana di Sulawesi Tengah.

Ketangguhan dan kepedulian sosial mereka yang tinggi juga telah memfasilitasi kegiatan sosial dan ekonomi yang luas, bersama dengan aktivis perempuan di organisasi masyarakat sipil. Beberapa lembaga swadaya masyarakat di bawah koordinasi pemerintah telah memberikan program bantuan rehabilitasi. Penelitian ini menggunakan pendekatan kualitatif yang meliputi wawancara mendalam, diskusi kelompok terfokus, dan observasi lapangan. Penelitian menunjukkan bahwa partisipasi perempuan yang lebih besar dalam program pemulihan bencana bisa menjadi penting. Perempuan juga memunculkan optimisme masyarakat untuk bangkit lebih cepat dari penderitaan akibat bencana.

Introduction

The natural disaster of Central Sulawesi that occurred on 28 September 2018 is one of the unique and rare events. The magnitude 7.4 of the earthquake came along with a tsunami in the Palu bay and liquefaction that sank residential areas in Petobo and Balaroa, Palu. The affected areas include four districts, Palu, Donggala, Sigi, and Parigi Moutong. Natural phenomena that occur together are relatively rare, where large earthquakes come about in parallel with liquefaction and tsunami waves. The liquefaction disaster in Central Sulawesi is one of the biggest in the history of world disasters (Daryono et al., 2018). The impact of the earthquake and subsequent accidents attained 2,256 people died consisting of 1,703 people in Palu, 171 people in Donggala, 366 people in Sigi, 15 people in Parigi Moutong and one person in Pasangkayu. Also, 1,309 people were missing, 4,612 were injured, and 223,751 people lost their dwellings at 122 locations. Data on damage to buildings and infrastructure destroyed by the disaster include 68,451 residential units, 327 worship units, 265 school units, 78 office units, 362 shop units, 168 road points, seven bridge units damaged, and many other minor damages (Nugroho, 2018).

One of the most vulnerable groups to natural disasters is women. Their domestic role that is far greater than that of men makes women the most potential victims in natural disasters. Economically, the lives and welfare of women are even more helpless when their husbands experience disabilities or deaths due to the catastrophic collapse. When mothers who their husbands leave must try to support their children, other social problems can occur, such as extortion, early marriages, forced marriages, or victims of human trafficking (V. Gokhale, 2008; Robles, 2018). For this reason, empowering women, especially in the economic sector, is very important to reduce the number of families

vulnerable to poverty after a disaster. Women who have financial capability will secure several risks. These include the risk of children dropping out of school due to lack of funds, risk of stunting and malnutrition in children affected by disasters and risk of falling into debt traps, the world of crime, drugs, or becoming victims of human trafficking.

To reduce the risk can be conducted if women have more power and prosperity in the economic field. Economically empowered women usually have more educated and healthier children and reduce family poverty (Hunt & Samman, 2016). In several disaster locations, reports indicated the increasing number of gender-based violence in shelters between parents and among the survivors. Uncertain economic situations inflicted the psycho-sociological of survivors causing assault against women. Meanwhile, limited access to protection and health services after a disaster also worsens the situation (Sloand et al., 2015). Thus, women's empowerment is critical to encourage post-disaster bounce-backs in Central Sulawesi. The Sendai Framework for Actions and several international organizations have encouraged expanding women's role in disaster recovery programs. Women are considered in terms of their susceptibility and their potential role in enhancing resilience and accelerating socio-economic rehabilitation (Moreno & Shaw, 2018). A study of Fernando & Hebert (2011) on Asian tsunami and Hurricane Katrina survivors highlighted that women in these two different locations made strenuous efforts to survive, protect their families, and return to normal lives. There were similar characteristics of women survivors in both places. They faced the post-disaster situation encompassing the strong religious internal motivation, solidarity among friends and families, and caring for each other. The question then is, how is community empowerment after the earthquake, tsunami, and liquefaction in Central Sulawesi? The main objective of this research is to obtain a model for post-disaster women's empowerment as a series of rehabilitation and reconstruction processes.

The concept of rehabilitation has been used in various fields such as health, medicine, law, and social economy. In the field of health, rehabilitation is interpreted by the treatment of disease and pathology, to the reduction of secondary disorders due to illness or injury to minimize disability and maximize independence (McPherson et al., 2015). Rehabilitation is also defined as a process carried out to help people with disabilities to optimize their physical, sensory, intellectual, and social abilities so that they can live independently (S. D. Gokhale, 2001). The rehabilitation process is expected to improve or maintain the psychosocial and physical conditions of people with mental or

physical disabilities, and to improve their quality of life (Ojanen, 1996). In the context of disaster, rehabilitation is a process where the government faces the situation of how to restore a system that can meet the basic needs of the people so that they can return to running their lives.

Disaster rehabilitation is one of the crucial elements in disaster management practices, which can influence government decisions in preparing their priority and socio-economic programs. On the other hand, the disaster also brings psychological stress, which can lead to various dysfunctional consequences. In the implementation process, areas that are considered to have a high risk must get top priority before causing other disasters. Therefore, disaster management must include systematic and practical efforts in terms of resource use, disaster relief, rehabilitation, and long-term recovery processes (Dhameja, 2008). In Indonesia, rehabilitation and reconstruction activities are regulated in Government Regulation (PP) No. 21 of 2008 concerning the Implementation of Disaster Management. Article 55 explains that post-disaster response activities consist of rehabilitation and reconstruction. Rehabilitation is carried out to accelerate the recovery of community life in areas affected by disasters by setting priorities based on damage and loss analysis due to failures by local governments. Maarif (2012) stated that the activities carried out at the rehabilitation and reconstruction stage must include assessing damage and loss in the affected area; planning, implementing, controlling, monitoring and evaluating post-disaster rehabilitation and reconstruction, distribution of disaster funds.

It is necessary to set up community development programs in the affected area to accelerate socio-economic rehabilitation. Robinson & Green (2010) said community empowerment is a network of actors involved in community development in a location. In this sense, community empowerment focuses on social relationships determined by region, not only by community-based interests. The purpose of area-based communities is a group of people with shared interests related to an area that can affect their quality of life, such as education, environmental conditions, or employment. Besides, community development is a social process that involves public participation to improve their quality of life. In principle, community empowerment activities must be carried out inclusively with the involvement of the entire element of the community. Consequently, community development has a broader definition than the term economic development, in which the community development activities are delivered in various forms that can contribute to economic growth.

Matarrita-Cascante & Brennan (2012) defines community development as a process, including organizational activities, facilitation, and action to create an opportunity to build a better society. As a process, community development must be carried out based on a coordinated vision, planning, direction, and implementation to achieve the shared goal of improving the quality of life. As a result, actors in community empowerment activities must be able to utilize local economic, human, and physical resources to adapt to the needs and possible changes. There are three main objectives in community development activities facilitated by the state. First, community empowerment activities are carried out to manage tensions that occur within a community.

Secondly, it can also be utilized to increase local community participation and democracy, and thirdly it is a way to implement domestic policies to mobilize the necessary resources. According to (Shevellar et al., 2015), the third goal is considered the most relevant to the disaster context, which could comprise mobilizing efforts of local resources in the phase of prevention, preparation, emergency response, and recovery. Furthermore, the essential part of the community development in the disaster-affected area is to build an understanding of shared responsibility, meaning the works are not merely the responsibility of government, but also the community as the whole.

Methods

This research employed a qualitative method with semi-structured interview guidelines. The sample was determined by purposive sampling and snowball sampling techniques. To find out about the post-disaster picture, researchers interviewed officials of relevant government agencies, such Disaster Management Board (BPBD) of Central Sulawesi, Social Service Agency and Women's Empowerment and Child Protection Agency. Interviews were also conducted with Non-Governmental Organizations (NGOs) involved in disaster response to obtain triangulation about conditions on the ground. Interviews with disaster-affected communities were aimed at exploring real situations and conditions faced by the survivors. Moreover, focus group discussions were conducted in shelter locations to get more data and information from various sources.

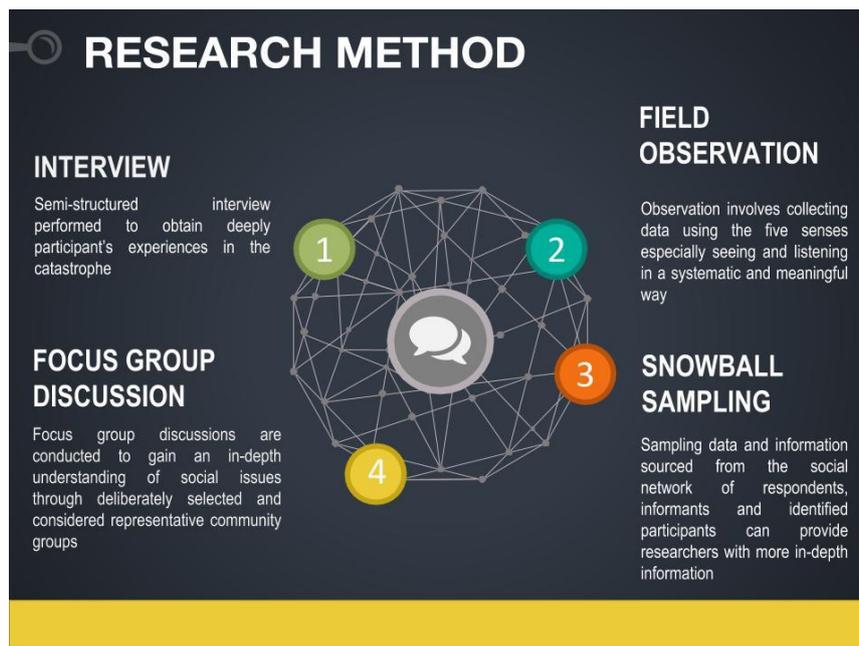


Figure 1. Research Method Employed in this Study

Data analysis in this study used data condensation techniques, data display, and drawing conclusions proposed by Miles et al. (2014). Data collected from agencies, NGOs, and communities are "compacted" by triangulating and taking information that must be repeated or contradictory between one source and another to obtain valid data and decide together. This data is then presented in written form and approved by photographs in the field while discussing how strategies can be taken to empower the economy of women in areas affected by emergencies to building resilience to disasters.



Figure 2. Participants of the Research

Results and Discussion

From a gender perspective, according to data from the Office of Women's Empowerment & Child Protection, Central Sulawesi Province, the number of women survivors reached 50,156 people in three regions, Palu, Sigi, and Donggala. This number is relatively less than the number of survivors of adult men, amounting to 87,673 inhabitants. The figure at least illustrates how the limitations of women to save themselves from natural disasters. The relatively limited disaster literacy is also the cause of many fatalities in the last natural disaster in Central Sulawesi. Total losses due to natural disasters from these four areas reached Rp 23.14 trillion. It is estimated that the amount of budget needed to rebuild Central Sulawesi reaches Rp 36 trillion. The rehabilitation and reconstruction program will cover several sectors, including housing, infrastructure, social, and economy. The Provincial Government has proposed a budget of Rp 3.5 trillion for the recovery and reconstruction process in the 2019 fiscal year.

LOCATION	ADULT		PREGNANT WOMEN / BREASTFEEDING
	MALE	FEMALE	
KOTA PALU	3,138	3,481	151
KAB. DONGGALA	21,101	20,903	235
KABUPATEN SIGI	63,434	25,772	238
TOTAL	87,673	50,156	624

Table 1. Data of Survivors based on Gender December 2018

(Source: Women's Empowerment and Child Protection Agency (DP3A) Central Sulawesi)

From the social aspect, the government distributes social guarantees to ease the burden on the lives of victims affected by disasters. According to Central Sulawesi Social Service data, the government has realized funding assistance for the 'Life Security' (*Jaminan Hidup*) program in three stages until September 2019. In the first phase, the aid realization reached 44,348 people, while in the second phase, it reached 42,082 people. In the third phase, until September 2019, the realization of new aid was carried out in Palu City as many as 4,304 people. The Life Insurance Program provided by the

government is in the form of assistance of IDR 10,000 per day per person for 60 days after the local government successfully verifies the prospective recipient. The Life Security assistance fund disbursed by the Ministry of Social Affairs has reached a total value of Rp38,334,600,000. With details, in Palu to 10,581 households (39,400 inhabitants) valued at Rp23,640,000,000. In Sigi, 4,177 households (15,191 people) were realized with a value of Rp 9,114,600,000. Then in Donggala to 1,191 families (9,300 people) with a value of Rp5,580,000,000.

The government and women activists in Central Sulawesi identified three main problems related to the condition of women after the disaster in Central Sulawesi. These three issues include increasing the number of child marriages, violence against women and children, drug problems, and health problems. Some informants argued that the number of child marriages in Central Sulawesi was still relatively high, especially after the disaster. Central Sulawesi ranks third nationally on child marriage cases according to the 2015 National Socio-Economic Survey (Susenas) data. The latest data from the Central Sulawesi Office of Women's Empowerment and Child Protection (DP3A) shows that child marriages have reached 81 cases during January-September 2019. This number increased significantly compared to previous years.

One of the most feared due to early marriage is the educational consequences, where most of these cases generally experience school dropouts. Usually, psychologically, after they get married and contain them, they worry that they will become the talk and teasing of their friends and neighbors. The government has been periodically conducting socialization about some of the impacts that underage marriages can cause. The most significant losses include the risk of giving birth to stunted children, financial instability, dropping out of school, vulnerable to domestic violence, to the danger of death. Women who conduct child married can experience the possibility of complications in pregnancy, difficulties in childbirth to cause death or congenital disabilities. Meanwhile, they also face a high risk of domestic violence due to significant differences in age and strength (Schlecht et al., 2013). On the other hand, early marriage is considered a trigger for the demographical problem due to the significant increase in birth rates.

Dewi Rana Amir, a woman activist in Central Sulawesi, explained that the post-disaster situation contributed to the increase in the number of pregnancies outside of marriage and the economic vulnerability of the community. This situation, of course, also

has implications for parents' decisions to marry off their children so they can be independent. Also, some are motivated because their parents died due to natural disasters. Kumala Dewi's study (2019) reinforces these findings that child marriages can increase significantly during a humanitarian crisis. For example, the 2004 tsunami struck Indonesia, India, and Sri Lanka, where their families forced many girls to marry widower victims of the tsunami. Some even marry their children to get help and financial support for themselves and their families. Despite being one of the unique concerns in the framework of global human rights enforcement, the phenomenon of increasing numbers of child marriages after disasters has not been much studied and tends to be ruled out. Indonesia needs much more data and studies of these phenomena since the country will face another possible disaster.

The second major problem is the increasing number of violent cases against women and children. Based on the official data collected from 12 women and children shelters, the number of violence against women and children reached 105 occurrences in the January-September 2019. Ihsan Basir, Head of DP3A Central Sulawesi, explained that the number of gender-based and sexual violence experienced an increase after the natural disasters, caused mainly by stress factors, economic pressures, and other factors. This social phenomenon reinforces the findings of several studies related to gender relations and disasters in various countries, which conclude that gender-based and sexual violence tends to increase after natural disasters. In Sri Lanka, after a tsunami hit the country, Medica Mondiale, an organization that provides assistance and advocates for women's rights, received reports from various parties about women who were raped by their rescuers and others who took advantage of their helpless situation. Moreover, sexual harassment also occurred in refugee camps, as reported by several women's organizations such as the Asia Pacific Forum on Women, Law, and Development or the Internal Displacement Monitoring Center (Felten-Biermann, 2006).

According to Dewi Rana Amir, Director of LIBU Perempuan Central Sulawesi, one of the local NGOs that takes serious attention to the women's empowerment program, explained half of the cases of sexual harassment found in refugee camps were cases of peeking at women bathing. It occurred because, in normal situations, women are relatively vulnerable to the stigmas attached to their bodies, physical bodies, and themselves. Meanwhile, in the refugee camps do not provide adequate private spaces for the privacy activities of women survivors. It happened since the development of

temporary shelters did not pay much attention to the daily aspects of women. Consequently, the available temporary shelter did not provide adequate private space for women.

The availability of breastfeeding space in temporary shelters is also considered a fundamental requirement to provide women-friendly temporary shelter. In an emergency, such as natural disaster, women might face the trauma that could inflict the productivity of their milk. Furthermore, conditions in refugee camps that are not friendly to women and children also aggravate these conditions. There are 600 pregnant and breastfeeding women in temporary shelters, Palu, Sigi, and Donggala. The Social Workers team also confirmed under the Social Service Agency that many breastfeeding mothers had difficulty giving milk to their babies after the disaster due to trauma and stress factors. So there is no choice for them except to give formula milk to avoid their babies from starving.

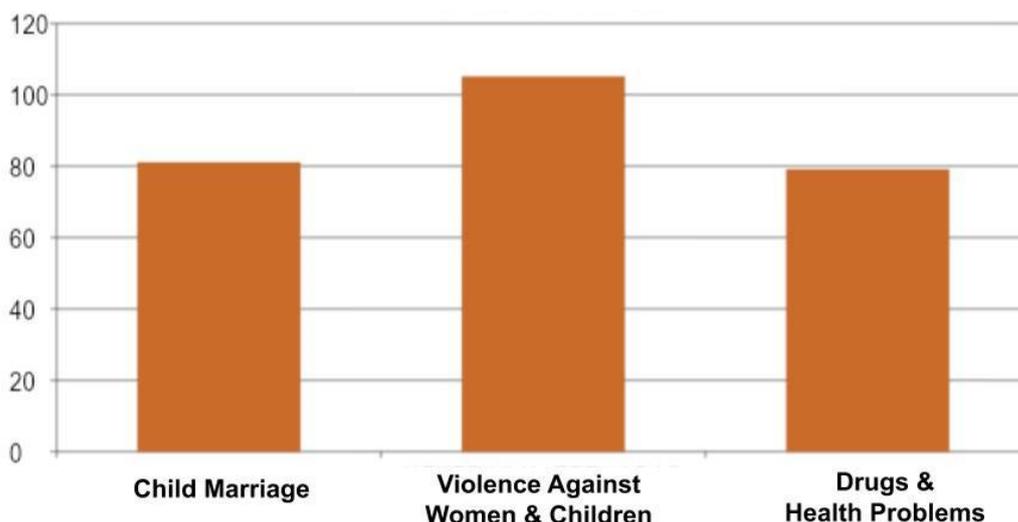


Figure 3: Post-Disaster Social Issues Jan-Sept 2019

(Source: Women's Empowerment and Child Protection Agency (DP3A) Central Sulawesi)

Psychosocial recovery after the disaster has been carried out by almost all women's organizations in Central Sulawesi. Psychosocial recovery activities are carried out through ethical approaches to motivate the survivors not to give up and keep making efforts. Asria Samaila, the Chairwoman of Muslimat NU in Central Sulawesi, said that the women's faith-based organization regularly holds prayers in several shelters. This program is not only for assisting in the form of staples, such as rice, sugar, and cooking oil, but also to build optimism and eliminate the trauma among the survivors. A similar

program is also conducted by Aisyiyah, who became a particular forum for Muhammadiyah women. According to Indah Ahdiah, Aisyiyah activist in Central Sulawesi, Muhammadiyah and its affiliate organizations have committed to organizing aid and empowerment support through the Muhammadiyah Disaster Management Center (MDMC).

1. Social Modalities of Women in Central Sulawesi

According to the Head of the Regional Disaster Management Agency (BPBD) in Central Sulawesi, the incident occurred before the Maghrib Prayer when most men worshipped to the mosque, and women guarded their children at home, and some others guarded their kiosks. Many women and children victims could not be found, especially in Balaroa, Petobo, Jono Oge, and Sibalaya. He further added that in the history of Kaili, the oldest tribe in Central Sulawesi, the liquefaction had ever occurred before, and they named it as *Nalodo*. At the same time, 28 September 2018, the district administration held a cultural event, namely Palu Nomoni Festival, involving many women and children to support the annual program. This tourism strategy had earned positive responses, including from the Tourism Ministry that ranked the festival at the Top 100 Wonderful Event Indonesia 2018. Nobody thought that a tsunami wave would hit Talise Beach in Palu due to its geographical factor. It was also some reason why Palu had never planned preparedness for an evacuation route of a tsunami. As a result, many women and children victims could not save themselves from the tsunami waves that hit Talise Beach.

Based on various interviews involving prominent women social activists in Central Sulawesi, several general characteristics could describe a typical picture of Central Sulawesi Women. First, Central Sulawesi women have a high caring character with each other. For instance, a woman survivor in Jono Oge helped liquefaction victims despite her physical injuries and separated from her children. Hajalia Somba, Coordinator of the Central Sulawesi Women's Equality Struggle Group (KPKST), shared stories from survivors who are now joining a socio-economic empowerment group managed by her organization. One of them is Lilik Ernawati, a female survivor of liquefaction victims in Jono Oge. Even though she was already bleeding at the liquefaction incident and was separated from the children, Lilik still tried to help the other victims. The situation of panic and no uncertainty for that did not reduce Lilik's concern for the victims.

Second, Central Sulawesi women have strong souls, never give up, although they are not in normal conditions, sustainability is still being fought for. Hayati, one of the survivors from Loli Dondo Village, Donggala Regency, is a woman who is brave and persistent to fight for the fate of her fellow victims, especially women. Hayati is the only woman who dares to fight with the men for logistical assistance at the port the day after the incident. Hayati struggles to get logistical support for her family and survivors, especially women who tend to be powerless and intimidated by men in situations of uncertainty.

Third, Central Sulawesi women tend to not depend on their husbands by maximizing the resources and abilities, as do the women of disaster survivors. Hajalia KPKST also added that women survivors are trying to help the family economy by forming small business groups that can increase family income. The livelihoods of husbands and men were partially paralyzed due to the earthquake and tsunami disasters, such as fishing, farming and livestock activities. At the time of the incident, even some of the community's farms and farms had entered harvest time. For this reason, women from Central Sulawesi have the spirit not to depend on their husbands even in a disaster emergency.

The story of women sellers at the traditional market who refused their fear to return to selling precisely a week after the disaster is clear evidence of the unbeatable spirit of Central Sulawesi women. Indah Ahdiah, a lecturer at the Faculty of Social and Political Sciences at Tadulako University, the administrator of the Aisyiyah region in Central Sulawesi, recounted the search for her missing parents after the tsunami hit Palu City. According to Indah, the atmosphere of panic, fear and uncertainty after the incident made many people try to save themselves by looking for high places, including their parents, who several relatives rescued in the hills. One of the most memorable memories during the search, continued Indah, was the return of women's activities selling in the market after seven days of the disaster. Even though victims' trauma and evacuation are still ongoing, these market women are not afraid to continue their business activities.

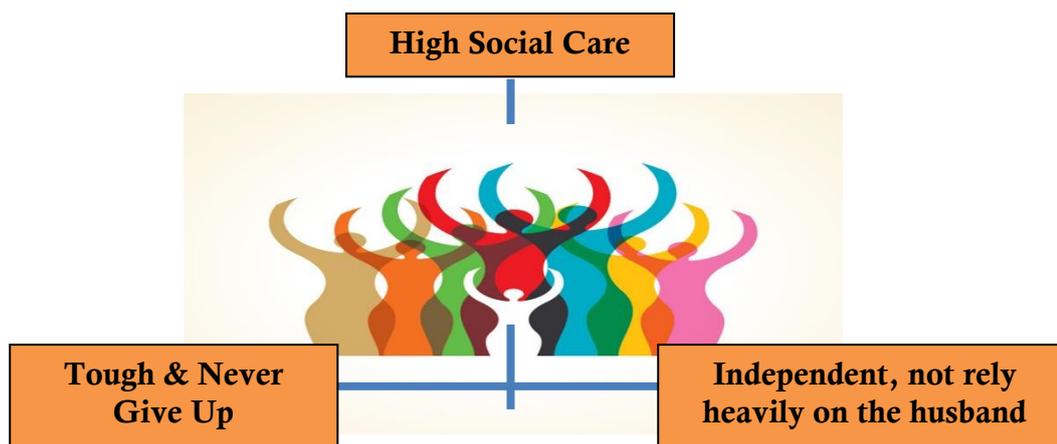


Figure 4. Social Characteristics of Women in Central Sulawesi

This finding is of course, in line with the culture of the Kaili Tribe, which highly values the values of brotherhood and solidarity, among others. The cultural values of the Kaili Tribe that have been widely known include the Kitorang brothers (brotherhood), Toraranga (reminiscing each other), and Rasa Roso Nosimpotobe (one heart, one mind, setopangan and sesongsongan) (Tumanggor, 2007). Not only that, in the historical myth of the Kaili Tribe, women have a place of honor that gives women space to play an essential role in the decision-making process.

The history of the Kaili tribe is largely derived from an oral culture, stories, or narratives (*lolita*) from some elder people (*totua*) whose numbers diminish as they get older. On the other hand, some young people who know the stories and historical myths have not put much in writing that can be used to analyze the position and role of women in the Kaili tribe. According to a Kaili myth, story of *to manuru* is associated with the origin of the leaders of the Kaili tribe. *To manuru*, the human incarnation of heaven, is believed to be the forerunner to influential leaders or rulers in Kaili history. She married a powerful male ruler of the group called in Kaili as *tomalanggai*. This marriage then gave birth to offspring who became rulers in several kingdoms in the Kaili tribe. The presence of *to manuru* as a wife is believed to have a major influence on the change in the figure of *tomalanggai*, including his wise and prudent attitude (Ahdiah, 2017).

2. Collaboration between Government and Community

The government facilitates post-disaster community development in Central Sulawesi and involves many community organizations, including international organizations. Office of Women's Empowerment and Child Protection (DP3A) as a

leading government agency in the Women's Rights Protection Sub-Cluster and the Japan Center for International Cooperation (JICA) Tokyo Center facilitated technical assistance programs, including training on making handicrafts and building culinary centers in Balaroa. DP3A also cooperates with Tokopedia and Go-Jek to support the marketing of products produced by female survivors. Tokopedia will help in marketing and sales aspects, while Go-Jek will assist in supporting in terms of transportation.

Meanwhile, religious-based women's organizations also play a significant role in economic empowerment programs. Muslimat NU and the Indonesian Food Service Employers Association (APJI) and the Indonesian Women Entrepreneurs Association (IWAPI) provided training programs and skill development assistance for women survivors. They train the women survivors to make cakes and other snack foods that enable them to earn additional income. According to Asmartati Tombolotutu of APJI Central Sulawesi Province, one of the biggest cake processing businesses in Central Sulawesi, survivors are assisted in processing cakes. They also help sales through their cake outlets, where profits and sales results are mostly returned to the survivors, as the organization's commitment to helping each other. Moringa leaf tea, among other products facilitated by APJI, made by one of the survivors of the Sigi shelter, has attracted the domestic market and foreign buyers throughout the international exhibition.

Muhammadiyah has relatively similar activities to empower women survivors in several locations in Central Sulawesi. According to Indah Ahdiah of Aisyiyah Central Sulawesi, fundamental elements of Muhammadiyah organization have committed to distributing aid and empowerment support through the Muhammadiyah Disaster Management Center (MDMC). Aisyiyah that has long been managing early childhood education and kindergarten assigns their teachers to help the psychological recovery of children affected by disasters. Simultaneously, MDMC and Aisyiyah collaborated to facilitate community empowerment activities, such as increasing their essential ability to prepare themselves to face if disaster resurfaced again. The Aisyiyah women's empowerment program includes providing capital support and micro-business development, such as making fried onions, tortilla chips, banana chips, and shredded fish that are quickly processed and using local raw material sources. Siti Marhamah, MDMC Program Coordinator, said that although this community empowerment program was not specifically targeting women, in its implementation, almost 90% of the beneficiaries were women with a focus on fostering micro-scale businesses.

DP3A and several non-governmental organizations that focus on empowering women have indeed conducted various training and assistance to disaster survivors in Central Sulawesi. LIBU Perempuan and KPKPST (Central Sulawesi Women's Equality Struggle Group) are among several community organizations that have actively provided training and mentoring skills to women disaster survivors. Dewi Rana Amir, Director of LIBU Perempuan Central Sulawesi, said that her organization had facilitated women disaster survivors with a community garden where the survivors will share and utilize the available land together. In this community garden, each will take turns to grow vegetables and fruits, which will later be used for their own needs and partly sold to the survivors. Buying and selling activities eventually took place among the survivors hoping that they could help accelerate their socio-economic recovery.

Furthermore, to overcome the limited capital that the survivors need, LIBU formed a cooperative that provided opportunities for women to help each other and build solidarity among them. In this cooperative, members are asked to save Rp. 2,000 per week with the aim of joint savings that can be used as the capital when needed. Savings can be used to open micro-businesses or finance the need for equipment and supplies needed for production activities. Hajalia Somba of KPKPST also intensively carried out social-economic empowerment for the women survivors. The KPKPST assistance program is not limited to providing adequate production equipment. Still, it has reached training in group business management, financial coaching, and others, even though it has not involved all group members. Additionally, since October 2018, the KPKPST regularly conducts life skill training activities in 6 women and children friendly shelters to motivate them to be more creative, employing available local sources to generate income.



Moringa leaf tea hand made by Nirmala, a woman survivor in Sigi's temporary shelter with APJI that was packaged using an iron because her equipment was damaged after the disaster

Figure 5. A Product Made by a Woman Survivor

3. Build Back Better

Building Back Better is one of the approaches used in developing frameworks and strategies in the post-disaster rehabilitation and reconstruction process. This approach focuses on reducing social, economic, and physical vulnerability in the future. In principle, disaster risk reduction efforts must be integrated with sustainable development plans. However, the build back better approach does not mean to talk a lot about aspects of macroeconomic development, but rather focus on ensuring the results of rehabilitation and reconstruction activities are sustainable safety so that people are increasingly resilient. The chief goal of post-disaster recovery is to improve the resilience of the nation and society by integrating disaster risk reduction measures into the process of restoring physical infrastructure and social systems, and into revitalizing livelihoods, the economy and the environment (“Reconstructing after disasters: Build back better,” 2015).

The term 'build back better' became widely known during the rehabilitation and reconstruction process of Aceh after the 2004 Indian Ocean earthquake and tsunami. In its development, the spirit of building back better is institutionalized in the Hyogo Framework for Action (HFA), which mandates that the recovery and rehabilitation process in the aftermath of a disaster must also reduce disaster risks in the long run. Thus, post-disaster programs must be utilized to increase community capacity in various matters related to disaster management (UNISDR, 2017). Sustainable development can be achieved by creating reconstruction and recovery strategies that make communities more resilient to disasters. For this reason, a shared commitment is needed to facilitate technical and financial resources that can be used for planning, implementation, and performance management activities. At the national level, the government must have the capacity to develop policies and mechanisms that ensure the integration of disaster risk reduction in rehabilitation and reconstruction activities.

Some conditions are necessary for the successful rehabilitation and reconstruction process, including high-level political commitments and robust institutional frameworks, which provide more significant opportunities to promote risk reduction and build resilience effectively and efficiently. Hence, the Post-2015 Framework for Disaster Risk Reduction, called the Hyogo Framework for Action 2, emphasizes the principle of build back better as the primary goal in the post-disaster rehabilitation and reconstruction process. Several essential things can be taken as guidelines in preparing post-disaster recovery and reconstruction programs from these explanations. First, better rebuilding

activities mean that assets that are repaired or replaced must be more robust. Second, the rehabilitation and reconstruction program must be carried out shorter and more efficiently in addition to more resilient facilities and infrastructure. Third, none should be left behind in the recovery process, so the rehabilitation and reconstruction program must be inclusive (Hallegatte et al., 2018).

Conclusion

Thus, this research identifies several things that can be used as alternatives to building a community that is more resilient to disasters, especially in the context of Central Sulawesi and may be carried out in several other places, as follows:

1. Building Back Stronger: Clusterization of Post-Disaster Communities

The spirit of this clustering is to facilitate interventions and empowerment models that are as needed so that post-disaster rehabilitation and reconstruction can be carried out more quickly and effectively. Clustering will create groups with the competencies needed to accelerate the recovery process. These groups or clusters can involve volunteers from affected citizens and faith-based community organizations that have broader access and network of organizations. Grouping will be based on clusters, including such as:

Health Cluster: Volunteers who join this cluster can help the health recovery process by providing training and health emergency response competencies.

Psychosocial Cluster: Volunteer cadres who join this cluster can help speed up the recovery of the community's psyche, especially women after the disaster

Home Industry Cluster: A group of volunteers prepared to help train women's economic empowerment.

Education Cluster: A group of volunteers prepared to help in the education sector after a disaster. At least, the volunteer in this cluster must be ready to provide services in the field of education with limited facilities and infrastructure.

Logistics Cluster: Aid distribution is one of the critical factors in post-disaster recovery assistance activities. The disaster of Central Sulawesi 2018 was a valuable lesson in which some people, including the state civil servants, decided to go out from Palu experiencing fear and trauma. As a result, the availability of human resources is minimal, so we need volunteer workers ready for distribution to remote areas when required after a disaster.

2. Building Back Faster: Participation of Religious-based Organization and Utilization of Technology 4.0

Social Recovery activities can be accelerated by involving religious-based community organizations. The people of Central Sulawesi include a cultural community that highly respects religious leaders. In this case, we could take one example when people of Sigi Regency decided to stay in a panic and uncertain situation because Habib Sayyid Saggaf bin Muhammad Aljufri remained in his residence. Additionally, religious-based organizations generally have a broader network and organizational representation so that the government could involve them in post-disaster social-economic recovery activities. Also, a significant number of cadres from each of these religious organizations will greatly assist disaster preparedness and response activities. Economic recovery activities can be accelerated by facilitating economic activities based on e-commerce that can help expand market access and accelerate the flow of goods traded by survivors. In this case, training is not only given to improve product quality but also marketing strategies, especially by utilizing information technology. This economic empowerment model can also simplify aspects of supervision, effectiveness, and time efficiency.

3. Building Back More Inclusively: Aid and Recovery Assistance Program for All

The story of a married couple who are old enough on the outskirts of the Balaroa liquefaction site should be anticipated so that it does not happen again. Segregation of migrants in terms of distribution and post-disaster social-economic assistance can lead to several other problems, such as horizontal conflict and prolonged poverty. Therefore, the participation of social network, namely religious leaders and social activists in the monitoring and distribution of post-disaster assistance is very much needed, especially in the context of the delivery of aid to areas unreachable by the government and the distribution of aid to communities with special needs such as persons with disabilities. Their involvement will help determine the types of assistance and strategies appropriate to accelerate the post-disaster recovery and reconstruction process.

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