

COMMUNITY EMPOWERMENT ANALYSIS REGARDING ENVIRONMENTAL SANITATION IN FLOOD-PRONE AREAS

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ABSTRACT

A disaster situation is an event or event that has the potential to cause damage to environmental facilities and infrastructure, such as the provision of clean water and sanitation conditions. Diseases that have the potential to occur in such conditions are diarrheal diseases and infectious diseases that are transmitted through the 'fecal-oral route'. The purpose of this research is the analysis of community empowerment regarding environmental sanitation in flood-prone areas in Jorong Aia Taganang, Galanggang Tengah, Kenagarian Salayo, Solok Regency. The research was carried out with a qualitative approach, with a descriptive approach. , with in-depth interviews (in-depth interview) Research results in Almost all respondents said that environmental health problems are important to be available, but some say, clean water is necessary to clean, while disposal of feces is a problem, just defecate in heavy water, carry on defecating it. Meanwhile, trash is washed away when the flood comes. Suggestions are requested for the Solok Regency Government to socialize the importance of Sanitation during a Disaster. The follow-up of this research is in the form of community service regarding Community Empowerment regarding improving the quality of clean water and environmental sanitation.

Keywords: Sanitation, Disaster, Bad Health Impact

Introduction

The 2019 National Disaster Management Agency report recorded 3,814 disaster events. Hydrometeorological disasters dominate, among others, putting money in 1,387 events, forest and land fires 746 events, floods 789 landslides 719 events. The impact of the 2019 period disaster, 478 people died, 3,422 were injured, 111 people were missing and 6.1 million suffered and were displaced (BNPB, 2019).

Throughout 2019, the West Sumatra (West Sumatra) region was hit by 746 natural disasters. Floods, flash floods, and landslides evenly occurred in 19 districts and cities. 154 flood disasters, 13 flash floods, 12 earthquakes damaged houses, 8 collapsed bridges, 6 smog, 99 forest and land fires, 3 drowned people, and 36 cyclones. Meanwhile, 10 people died, 78 people were injured, and 3,026 people were evacuated. The disaster also caused 453 rice fields to be submerged, 703 houses damaged, 25 houses of worship, 22 schools, and 2 roads collapse (BPBD West Sumatra, 2019).

Solok Regency BPBD Data Throughout 2019 the disasters that often occurred in this area were landslides, earthquakes, floods, and other disasters. Conditions such as the above can cause damage to the facilities and infrastructure of the residential environment, such as damage to the clean water supply system, sewage disposal/waste management latrines, and waste disposal. Another consequence that can occur due to the disaster of food shortages, is the emergence of certain infectious diseases. People affected by disasters are generally very vulnerable to falling ill and even dying from infectious diseases, especially in a long period with poor sanitation conditions, water supply that does not meet the quality and quantity requirements, and not maintaining clean living habits. ' [1] According to Subiyantoro (2010: 13) disaster management is not the task and responsibility of the government alone but is the responsibility and obligation of the wider

community which is carried out through efforts to anticipate disasters through community-based strength, namely community empowerment that relies on the ability of human resources. local (community disaster management). Empowerment is “ *to help clients gain the power of decision and action over their own lives by the effect of social or personal blocks to exercise existing power, by increasing capacity and self-confidence to use power and by transferring power from the environment to clients* ” Moving on from the problems above, this study wants to analyze community empowerment about environmental sanitation in disaster-prone areas in Solok Regency, West Sumatra.

METHOD

This study uses a qualitative method, with a descriptive approach (John W. Creswell, 2016). The data used are primary (interviews) and secondary (documentation). The informant selection technique in this study was *purposive sampling*, namely Walinagari Selayo, Aia Taganang Disaster Preparedness Group, Galanggang Tanggah and the flood-affected community. Data analysis in qualitative research will take place simultaneously with other parts of the development of qualitative research, namely collecting data on flood disaster risk management and writing findings (Neuman, 2017).

Results and Discussion

A. Result

The results of in-depth interviews and to several informants, both the Disaster Preparedness Group (KSB) of Galanggang Tanggah, several communities affected by flooding in the Handyard and Walinagari Selayo, Kubung District, Solok Regency, are as follows: The Disaster Preparedness Group (KSB) of Galangan Tanggah was formed in 2012. The formation of the Disaster Preparedness Group (KSB) began with the frequent flooding of Jorong Gelanggang Tanggah Selayo, Kubung District, Solok Regency. The Disaster Preparedness Group (KSB) was formed from CBDRM activities (Community-Based Disaster Risk Reduction) from UNDP, accompanied by the NGO, Jamari Sakato. Assistance by the NGO Jamari Sakato in the form of training and simulations. The NGO Jamari Sakato accompanied the Selayo community for approximately 1 year, then the Disaster Preparedness Group (KSB) was formed. The scope of the Disaster Preparedness Group (KSB) consists of fields such as preparedness, public kitchens, early warning, and SAR and health. Interviews conducted with the head and treasurer of the Disaster Preparedness Group (KSB) Aia Taganang Galanggang Tanggah almost matched the answers.

“...Formation of Aia Taganang Disaster Preparedness Group (KSB) at the initiative of UNDP's CBDRM (Community-Based Disaster Risk Reduction) activity accompanied by the NGO Jamari Sakato...”

Furthermore, from the interview, it was also known that the Secretary of the Disaster Preparedness Group (KSB) did not yet have a fixed place. Meanwhile, cross-sectoral involvement has not been so real, but since 2019 it has shown its roles, such as the Nagari Government, District, Social Service, and BPBD. Meanwhile, regarding environmental sanitation, which was asked both to the Management of the Disaster Preparedness Group (KSB) and to the community affected by the disaster, the answer was slightly different in view of the sanitation problem as revealed in in-depth interviews. The management of the Disaster Preparedness Group (KSB) views clean water, the informants view it as very important. Clean water and drinking water are both very important during a disaster. It is difficult to get clean drinking water. If it is possible, the government or those who help, help us with clean water. With what our community will get water. Our stove is all wet, it can be all wet. Plenty of water but not suitable for toilets. While we are under siege, we also need to do activities, so our community really needs water.

“...The management of the Disaster Preparedness Group (KSB) views clean water, the informants view it as very important. Clean water and drinking water are both very important during a disaster. It is difficult to get clean drinking water. If it's possible, the government or those who help, help us with clean water...”

But the community has a different view of Clean Water/Drinking Water, the informants view it as very important. Clean water and drinking water are both very important during a disaster. It is difficult to get clean water and drink only the available water that we drink. But we can still use our wells, when the flood is over, we can use them immediately. However, not all community informants said that there were still 2 informants who said that if our wells were entered by floodwater after the flood the waters receded without us cleaning it first, our water could not be used. So if possible, the Puskesmas / Health Office of Sokok Regency could kill the germs that entered our well. *‘...regarding Clean Water/Drinking Water, the informant views it as very important. Clean water and drinking water are both very important during a disaster. It is difficult to get clean water and drink only the available water that we drink. But we can still use our wells, when the flood is over, we can use them right away...’*

Meanwhile, it was revealed from the informants that the management of the Disaster Preparedness Group (KSB) almost all said the problem of excreting feces. They said that when it was flooded, a lot of it was scattered about because the toilets and septic tanks were full, of course, the feces in them would come out. If possible, after the Septic flood, our community's houses could be vacuumed.

‘...The Disaster Preparedness Group (KSB) almost all said about the matter of excreting feces. They said that when it was flooded, a lot of it was scattered about because the toilets and septic tanks were full of course the feces in them would come out...’

If their community informants agree that there is no problem with defecating during a flood, we just defecate where the water is heavy, then the feces will disappear as well.

“... If their community informants agree that there is no problem with defecating during a flood, we just defecate where the water is heavy, the feces will disappear too...”

Regarding waste disposal due to flooding and waste disposal, the management of the Disaster Preparedness Group (KSB) said that it would not be a problem, if there was a lot of garbage in the flood, we just had to carry out the same thing as the community informants said.

“... Garbage disposal and waste disposal are not a problem, if there is a lot of garbage in the flood, we just have to shake it up...”

B. Discussion

a. Handling of Clean Water Quality and Sanitation

Clean water As it is known that water is the main need for life, as well as refugee communities, must be affordable by the availability of adequate clean water to maintain their health. When clean water and sanitation facilities are available, it is necessary to monitor and improve the quality of clean water and sanitation facilities. At the initial stage of a disaster or evacuation, the availability of clean water needs attention, because without clean water it greatly affects hygiene and increases the risk of transmission of diseases such as diarrhea, typhus, scabies, and other infectious diseases. The main purpose of water quality improvement and monitoring is to prevent health risks from using water that does not meet the requirements

b. Dirt disposal

If there is a flood disaster and no evacuation occurs but the facilities are flooded so that they cannot be used, mobile latrines or emergency collective latrines must be provided by using drums or other materials. However, when an evacuation occurs, the steps needed are as follows: 1) at the beginning of an evacuation, it is necessary to build a public latrine that can accommodate the needs of some refugees. Examples of latrines that are simple and can be

provided quickly are latrines with trenches, collective latrines (plural latrines), collective latrines using used drums, and mobile latrines (can be drained).

For the maintenance and utilization of mobile latrines, collaboration is carried out between the District/City Health Office and the Sanitation Service/Public Works Service, especially in draining latrines when necessary. At the beginning of the evacuation 1 (one) latrine was used by 50-100 people. Maintenance of latrines must be carried out and monitored closely and disinfect the area around the latrine using lime, Lysol, and others; 2) On the following day after the emergency period ends, the construction of emergency latrines must be carried out immediately and 1 (one) latrine is recommended to be used by no more than 20 people. It is recommended that latrines be built in refugee locations: 1) have separate designations for men and women; 2) the location is a maximum of 50 meters from the refugee tent and a minimum of 30 meters from the water source. 3) the minimum distance between the latrines and the location of the clean water facilities is 10 meters; 4) the construction of the latrine must be strong and equipped with a lid on the latrine hole so that it does not become a breeding ground flies, cockroaches, and other nuisance animals. In addition, it must also consider the groundwater level, season, and soil composition; 5) the construction of latrines must be adapted to the social, cultural, beliefs, and habits of the refugees by taking into account the number of refugees and their distribution as well as the availability of local materials.

c. Sanitation of waste management

The composition of waste in refugee camps generally consists of waste generated by refugees (domestic waste) and health service activities (medical waste). Wastemanagement in refugee shelters must receive attention from all parties, considering the risks that can arise if it is not managed properly, such as the emergence of flies, mice, odors, and can contaminate existing clean water sources/supplies. In waste management in evacuation centers, cooperation between refugees, district/city health offices, district/city cleaning services must be carried out for the process of collecting and transporting waste to the final disposal site.

Activities carried out in sanitation efforts for waste management include 1) waste collection; a) the waste generated must be accommodated in the family or group of family trash bins; b) it is recommended to use a trash can that can be closed and easy to move/lift to avoid flies and odors. For this reason, pieces of drums or plastic trash bags with the size of 1 MX 0.6 m for 1 – 3 families are recommended; c) placement of trash cans a maximum of 15 meters from the place of residence; d) the garbage in the trash can for a maximum of 3 (three) days must have been transported to the final disposal site or temporary collection point. 2) waste transportation; Garbage can be transported using a garbage cart or by a garbage truck to be transported to the final disposal site. 3) final disposal of waste; Final disposal of waste can be carried out in several ways, such as burning, stockpiling in dug holes or trenches with a size of 2 meters deep, 1.5 meters wide, and 1 meter long for the needs of 200 people. It should be noted that the final disposal site must be far from residential areas and a minimum distance of 10 meters from water sources. 4) vector supervision and control. Various types of vectors such as flies, rats, and mosquitoes can develop from improper waste management in refugee sites. Efforts are made in the form of a) proper disposal of waste/food waste; b) if necessary can use insecticides; c) maintain personal hygiene while in the refugee location; d) provision of proper wastewater disposal (SPAL) and waste disposal facilities

d. Supervision and security of food and beverages

In the management of food and beverages in disasters (for the consumption of many people), must pay attention to food and beverage sanitation hygiene rules (HSM), to avoid the occurrence of foodborne diseases including diarrhea, dysentery, cholera, hepatitis A and typhoid, or food and beverage poisoning, based on WHO guidelines Ensuring food safety in the aftermath of natural disasters, among others, namely: 1) all food and food ingredients to be

distributed must be suitable for human consumption both in terms of nutrition and culture; 2) the food to be distributed should be in dry form and the recipient knows how to prepare the food; 3) stock should be checked regularly and separate the defective stock; 4) food preparers must be trained in hygiene and the principles of safe food preparation; 5) staff preparing food should not be sick with the following symptoms: jaundice, diarrhea, vomiting, fever, sore throat (with fever), infected skin lesions or discharge from the ears, eyes or nose; 6) cleaners must be trained in keeping public kitchens and surrounding areas clean; 7) water and soap are provided for personal hygiene; 8) food should be stored in containers that protect it from rodents, insects or other animals; 9) in flood-affected areas, whole foods should be moved to dry places; 10) throw away damaged, or leaky canned food; 11) inspect all dry food for physical damage, mold growth from vegetables, fruit and dry cereals; 12) clean water for preparing food

Conclusion and Suggestion

1. In general, environmental health problems in flood conditions need to be considered considering the impact that occurs can cause various kinds of diseases and can even cause death if not handled quickly.
2. In general, the informants said it was important to provide clean water when a flood-hit, especially if the flow of clean water was disrupted.
3. An informant said that the disposal of feces is not very important because if a flood comes we can still defecate in the floodwater, but the informant said otherwise if the septic tank floods the house is also submerged so that a lot of feces are scattered, and this also causes problems when it floods.
4. There is an informant who said that waste management and waste management do not need to exist when there is a flood, because they can be cleaned by the flood. While others say that real estate will be clogged when the flood comes,

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