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The Implementation of Earthquake Management Policies

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Abstract This study aims to describe the implementation of earthquake management policies in Padang. Padang is one of the cities with high susceptibility to earthquake. Therefore, disaster risk reduction is necessary. This study applies qualitative method with descriptive-interpretive approach. The data used is primary and secondary data. The data is analyzed using interactive model. The findings show that the implementation of existing disaster management policies has not been effective due to low personal ability and capacity of the policy implementers, desynchronization between related stakeholders in disaster area, the inability of the Regional Disaster Management Agency and Fire Department (BPBDPK) as a leading sector to carry out the function of command and coordination properly, and weak accountability of related Regional Working Unit (SKPD). This study concludes that the implementation of disaster management policies has not been effective due to the lack of understanding from the policy implementers, the limited human resources, and the lack of coordination between the actors of disaster management.

INTRODUCTION

Disaster has been an interesting topic to study in recent years, since the variety of unexpected disasters have forced people to acknowledge the importance of disaster management in the future. This is in accordance with Hyogo Framework for action 2005-2015, calling all countries to create disaster risk reduction mechanism by half in 2015 and having it ratified by 168 nations and multilateral agencies [1]. This conference is a continuation and evaluation of "the Yokohama Strategy" adopted in 1994, providing an opportunity to promote strategic and systematic approaches to reduce the susceptibility and risk to disaster through building the resilience of nations and communities to disaster [2].

Disaster is an occurrence, detrimental to humans, caused by natural activity. Generally, people believe that a natural disaster is a form of punishment or a warning from God to his people, as stated by Shaluf [3] that human does not have control over the natural disasters on earth because they happen according to His will. Apart from such belief, Pramusinto [2] states that Indonesia is a "disaster lab" where everyone can learn about various types of disasters and their consequences, such as earthquake and tsunami. Meanwhile, Latif [4] argues that Indonesia is a "hot spot" of the world for the source of natural disasters, particularly earthquakes and volcanic eruptions. This is because Indonesia lies on the confluence of four mega-plates and three mega-faults and has about 500 volcanoes, 128 of which are still active. In other words, Indonesia is located at "the Pacific Ring of Fire [5].

Due to such conditions, natural disasters seem never to cease hitting Indonesia. Padang is one of the cities susceptible to earthquakes. Geographically, Padang is located directly opposite the Indian Ocean and therefore at high risk of earthquake caused by Mentawai subduction. It is based on the study conducted by the Earth Observatory of Singapore (EOS) of Nanyang Technological University of Singapore and the Indonesian Institute of Sciences (LIPI) in 2005. According to the study, an estimated 200 annual big earthquakes will occur periodically in this zone. The history records that there were great earthquakes causing tsunami in Padang in 1797 and 1833. According to experts, the earthquakes striking Padang in 2007 and 2009 as well as the earthquake striking Mentawai in 2010 increasingly trigger Mentawai Megathrust, expected to have the magnitude of 8-9 on the Richter scale [6]. Therefore, Padang earthquake in 2009 should be a lesson for the government of Padang on the implementation of earthquake management policies to face the possibility of similar earthquakes in the future.

The study of public policy implementation starts to develop based on the writing by Pressman and Wildavsky [7] regarding policy implementation. Eventually, the study of policy implementation is divided into Generation I, Generation II and Generation III (Goggin, Bowman, Lester and O'Toole, Jr., 1990)[8]; (Peter and Linda, 2002)[9]. Experts of Generation I (1970-1975) used the methodology of case study (with limited cases of one or two cases). The purpose of this study is usually directed to find out the reason for the failure of an implementation. Generation II (1975-1980) understands and divides the problems of implementation into two

groups: top-down and bottom-up approach. Top-down approach uses logic to think from the highest level then works down to the mapping to see the success or failure of the policy implementation. The social experts developing this approach is Mazmanian, and Sabatier (1983)[10], Nakamura and Swallood (1980)[11], Edward III (1980)[12], and Grindle (1980)[13].

Bottom-up approach is developed by Elmore (1978), Lipsky (1971), Berman (1978) and Hjern, Hanf and Porter (1978) in Purwanto and Dyah Ratih (2012)[14]; Nugroho (2017) [15]. This approach emphasizes the importance of observing the two aspects of policy implementation, namely: street level bureaucrat and target group. Street-level bureaucrat occupies key positions that will highly determine the success of the policy implementation. The implementation will succeed should the target group be involved from the beginning of the process of policy planning to the implementation.

Generation III are the experts seeking a more scientific way for carrying out the study of implementation using quantitative research methods, requiring sufficient numbers of cases and the balance between the number of variables and cases examined. It is developed by Malcolm L. Goggin (1990)[16].

This study applies the opinion by L.N Gerston [20], a second generation theorist of Top-Down policy implementation. The selection of this theory is based on the factors of limited actors and accountability to the existing policy implementation, distinguishing this theory from other theories of policy implementation. Gerston [20] explains that there are four factors affecting the success of policy implementation, namely translation ability of the implementers to translate and carry out what has been decided by decision-makers; resources, particularly human resources, finance, and equipment/facilities; limited number of players to avoid confusion and unhealthy competition; and accountability of policy implementers regarding the result.

The study of disaster has been previously carried out by Bevaola Kusumasari, *et al.* (2010)[17] who see the capabilities of Bantul District, Yogyakarta, in disaster management. Herry Yogaswara, *et al.* (2012) [18] see the importance of local knowledge in disaster management. Yustiningrum (2012)[19] examines the importance of rehabilitation and post-disaster reconstruction. A study by Ruswandi (2009) shows that mitigation of coastal areas is adjusted to local conditions. Meanwhile, a study by Jufriadi, *et al.* (2012) concludes that knowledge about disaster mitigation is indispensable for disaster-prone communities. Based on the findings of the aforementioned studies, until now, no study has specifically examined the Implementation of Earthquake Management Policy. The previous studies focus more on the ability of a region in disaster management during and after disaster. Meanwhile, this study will examine disaster management as stated in the Regional Regulation of Padang No. 3 of 2008 on disaster management.

METHODOLOGY

This study applies qualitative method (Creswell, 2014) with descriptive-interpretive approach (Denzim and Lincoln). The unit of analysis is institutions. The data used is primary (observations and interviews) and secondary (documentation or literature review). The informants are selected by purposive sampling based on their knowledge about the desired information. The data is analyzed using interactive model data analysis proposed by Miles, Huberman and Saldana (2014).

RESULT AND DISCUSSION

3.1. The implementation of earthquake management policy in Padang

The success or the failure of policy implementation depends on several aspects. The aspects affecting the Implementation of Earthquake Management Policies in Padang can be explained as follows:

3.1.1. The ability of the actors to translate and understand the disaster management policy. Translation Ability [20] is the ability of the policymakers to interpret and understand the disaster management policy as well as reflect and describe it in the form of implementation. Understanding of the local regulations underlying the disaster management policy becomes the reference. The findings in the field indicate that the understanding from the administrator of disaster management policy in Padang is still partial and inclined to sectoral ego between departments of regional organizations. It seems as if the issue of disaster in the region is the sole responsibility of BPBDPK, while in fact it is the responsibility of each regional organization. Moreover, BPBDPK's understanding in disaster management is merely to the extent of policy implementation, whereas BPBDPK has more extensive power to command and coordinate disaster management policies in the region (the Regulation of the Head of Indonesian National Board for Disaster Management No. 23 of 2008).

Moreover, low institutional and personal capacity of BPBDPK is another issue. It is caused by rather fast mutation and rotation process affecting the quality of existing resources. Frequent change of staff often leads to

low capacity since the new staff needs more time to adjust. It shows that the ability and capacity of existing human resources in carrying out the policy is still low.

3.1.2. Resources (human resources and budget). Another important factor in the implementation of disaster management policies according to Gerston [20] is resources. In this case, the resources are Human Resources and Budget that can be explained as follows:

The ability of human resources determines how policies are implemented. In the context of the implementation of disaster management policies, quantitative and qualitative capacity of the implementers in the regions is crucial in transferring existing policies into the implementation. The implementers in question are the government of Padang as the element of policy maker and BPBDPK as the element of policy implementer.

Currently, the fulfillment of human resources in BPBDPK is not based on existing needs and competence. At the beginning of its formation, human resources from other agencies were placed in BPBDPK without paying attention to their competences. Therefore, the available resources are not in accordance with the capacity of the institution. Over time, BPBDPK tries to improve the personnel capacity in accordance with the existing competence. The efforts include the recruitment of new staff through the test of Candidates for Civil Servants (CPNS) by proposing scientific qualifications, namely geology, civil engineering, transportation, and spatial planning. Another way is by proposing the addition of employees needed in accordance with existing qualifications, namely for the rehabilitation and reconstruction of BPBDPK. Moreover, BPBDPK Padang also conducts education and training. Training sessions are conducted regularly and periodically, namely Water Search and Rescue (WASAR), SCUBA, and personnel capacity building training. In terms of education, the staff is given the opportunity to have further education. Thus, personnel in BPBDPK have the expected ability and capacity to be able to support the implementation of disaster management activities in Padang.

One of the important factors in the implementation of earthquake management policy is budget. Budget always becomes a classic issue for local governments. Most local governments consider the lack of budget as the cause of poor policy implementation. All this time, disaster budget from the local governments is still limited to unexpected funds. The budget is used for post-disaster emergency response. With the issuance of Government Regulation No. 22 of 2008 on Funding and Management of Disaster Aid, disaster budget is more comprehensive. Disaster budget of Padang has been budgeted in the annual State Budget (APBN) of Padang. Based on the data on the field, the budget has increased from year to year, namely 1 billion for 2015 and 2 billion for 2016. However, the amount is still insufficient because the budget is not only specified for earthquake, but also for the entire disasters occurring in Padang. Therefore, to cover the shortage, the government of Padang can overcome it through the coordination between BPBDPK and other related agencies. Thus, the existing disaster budget should not be included in the budget of BPBDPK, but can also be included in the related SKPD. BPBDPK's task is to communicate with related SKPD regarding the work program that will be carried out related to disaster. Thus, the existing budget in each SKPD can be optimized.

3.1.3. Policy implementers/stakeholders of disaster. There are three actors or elements involved in the framework of comprehensive disaster management, namely the government, private sector, and the community. Their involvement is an important issue. As stipulated in Law No. 24 of 2007 Article 16 Paragraph (3), the activities of preparedness are the responsibility of the Government and local government and implemented together by the public and private sectors. Meanwhile, the Government Regulation No. 21 of 2008 on the Implementation of Disaster Management mentions that the implementation of disaster management is a series of efforts covering the determination of development policies at risk of disaster, the activities of disaster prevention, emergency response, and rehabilitation.

In the implementation of disaster management in a region, multi stakeholders are involved, both from the government (from the lowest to the highest level of government, from the village to the center), the legislature, Non-Governmental Organizations (both local and foreign), and private sectors. Institutional institutions formed in the context of disaster risk reduction in Padang are well defined and complete because mostly all institutions engaged in the field of disaster are available in Padang. In this case, BPBDPK as the leading sector should be able to manage existing institutions.

Each actor carries out their respective functions yet still in touch with other organizations. The role and function of BPBDPK to command and coordinate the implementation of disaster management in this case is to mobilize these institutions in order to work together in the implementation of disaster management in Padang so that the activities carried out are expected to connect and give great effect and stimulation to the whole activities of disaster management. The findings of the study in the field show that BPBDPK of Padang has been unable to carry out their functions properly, because the function of implementer is more dominant. In fact, with great

potential and existing authority, BPBDPK can encourage related SKPDs to carry out their activities to actualize the synchronization of activities between one SKPD and other SKPDs.

The participation of several related SKPDs in the activities of disaster management that can be coordinated by BPBDPK are: Department of Public Works can construct and complete the Evacuation Line for Earthquake and Tsunami; Social Agency can help providing logistics for the refugees; Department of Education can socialize and implement a curriculum of disaster in schools; Department of Spatial Planning and Building Management can establish the rules regarding building and construction in the red zone; Regional Development Planning Agency can plan the budget and review the safe Spatial Plan against earthquake; and Health Department can carry out a training of medical personnel.

3.1.4. The accountability of the implementers of disaster management policy. BPBDPK as a public institution has to be accountable to the Mayor as its direct superior and the community as the recipient of the service. In terms of the implementation of the basic tasks and functions of BPBDPK, the accountability to the Mayor is carried out in the form of documents of program implementation reported once a year and staff meetings held once a month.

The staff meeting is attended by the Mayor and all heads of SKPDs. It is also a form of accountability of BPBDPK in reporting its activities regarding the extent of the achievement of the activities. Meanwhile, BPBDPK's accountability to the community is in the form of information about the activities or programs carried out in order to mitigate the earthquake.

CONCLUSION

The findings of the study show that the implementation of earthquake management policies based on disaster mitigation in Padang has not been effective due to the poor understanding and coordination between the policy implementers in the field. Moreover, the availability of resources with the capability of disaster, including financial and information, is still limited, leading to the obstacles in the activities of disaster management. No synchronization between policy implementers in the field leads to the assumption that the activities are running without clear support and command from related parties (BPBDPK), so that the function of BPBDPK is not optimal because it only functions as the implementer, while it has other functions to command and coordinate. In addition, the accountability has not been carried out politically, yet administratively and vertically to the Mayor.

Therefore, it is recommended for the government as the related institution to create a significant breakthrough by providing freer space for BPBDPK to carry out its three functions to allow the existing management policies to work well.

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