

# Disaster Regime Character: A Study of Disaster Risk Reduction at Merapi Volcano Eruption in Sleman District

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## ABSTRACT

This research analyses how the existence of the character occurred in one of disaster management phases which is an emergency response. In addition, it aims to discuss and see the relationship between authority institutions in the disaster management which are Kesbanglinmas & PB Kab. Sleman, Muhammadiyah Disaster Management Centre (MDMC), and Merapi Circle Information Network (JALIN MERAPI). This research uses qualitative method. The data about the policy and survivor handling are got through interviews with representatives from Pakem, Turi, and Cangkringan. They are head of sub districts, head of villages, and head of country-sides. The findings of this research show that the disaster regime character is fatalist-individualist and the authority relation is substitution (acts as a substitute). Therefore, humanity-based point of view is important to see the risk. It will empower the capacity of government institutions. The last, involving civil society (CSO) is also significant to streamline the role of disaster management regime guide. Therefore, the synergy between government and CSO will easily be achieved to implement Community-Based Disaster Risk Management (CBDRM). CSO is the government's partner to reduce disaster.

*Key words: volcano disaster risk management, disaster regime character, authority relation between formal and informal institutions.*

## ABSTRAK

Penelitian ini hendak menganalisis bagaimana watak/karakter yang muncul saat

penanggulangan bencana fase tanggap darurat berlangsung. Selain itu penelitian ini bermaksud mengkaji hubungan antara relasi kuasa yang terjalin diantara Dinas Kesbanglinmas & PB kabupaten Sleman, Muhammadiyah Disaster Management Centre (MDMC) dan Jaringan Informasi Lingkar Merapi (JALIN MERAPI). Penelitian ini menggunakan metode kualitatif. Data terkait kebijakan dan penanganan pengungsi, diperoleh melalui wawancara dengan perwakilan di tiga wilayah yakni Pakem, Turi dan Cangkringan. Mereka adalah Kepala Kecamatan, Kepala Desa & Kepala Dukuh. Selanjutnya pada penelitian ini ditemukan hasil akhir bahwa karakter rezim bencana bersifat fatalis-individualis dan relasi kuasa bersifat substitusi (sebagai peran pengganti). Dengan demikian diperlukan pengintegrasian aspek kemanusiaan sebagai cara pandang dalam memahami risiko. Harapannya akan menguatkan kapasitas aktor kelembagaan di instansi pemerintah. Terakhir, penting untuk mengefektifkan peran unsur pengarah dalam rezim PB yakni melibatkan keikutsertaan masyarakat sipil. Dengan demikian sinergi antara pemerintah dan CSO akan tercapai guna mengimplementasikan CBDRM. CSO berperan sebagai mitra dalam penanggulangan bencana dengan pemerintah.

Kata Kunci : *manajemen risiko bencana gunungapi, karakter rezim bencana, relasi kuasa antara institusi formal dan informal.*

## INTRODUCTION

This research analyses a regime design observed in an emergency response phase disaster risk management process occurred at Merapi volcano eruption 2010. Furthermore, it analyses deeply the possibility of a regime character which is defined as a risk management system. The research is important since it explains how the government implements formal regulations in the form of risk management in disaster regime and how the authority relation happens. Therefore, it will be useful to evaluate risk management design to measure the effectiveness and efficiency of a system and to describe the disaster regime character in the emergency response phase.

Kabupaten Sleman as a formal institution has a mechanism to reduce the natural disaster risk especially Merapi volcano eruption through forming SKPD board which consists of Dinas Kesbanglinmas & Disaster Management Center (PB). The mechanism is arranged and stated in laws which are Perbup No. 11 Tahun 2006 and Perbup No. 15 Tahun 2006. PB, then, implemented the law into a safe zone design in 2007 and got an amendment in 2009. The safe zone after the amendment covers 12 KMs in radius. Sleman government with PB regularly hold a preparedness program through a routine practice in facing the eruption disaster started in August 2010. This program is centered in Kepuharjo village. For the re-

construction program after the eruption, Sleman government collaborated with some Local Government Unit (SKPD) areas recover some social buildings. The other aspect that is crucial to analyse in this research is how emergency response character design for Merapi volcano eruption? The emergency response is an action that aims to protect the human life and properties affected by natural disasters (Kreps, 2006). It is like a disaster recovery for social buildings (managing random building ruins and recovering public places) and population protection (evacuating, protecting, and providing temporary houses and medical stuffs for victims).

Merapi volcano eruption in 2010 is the different eruption based on the scheme of Merapi eruption occurred in previous years and what Sleman government planned. This is due to the eruption occurred two times bangs *piroklastik* with *wedhus gembel*, a lava flow with 600 Celsius degree, reaching 17 KMs through *Kali Gendhol* (Gendhol River). Therefore, the disaster risk management is revised by changing the safe zone from 8 KMs to 20 KMs in radius. The bangs occurred for 33 minutes. It is impossible for people to stay in their house around Merapi. BPPTK also says that in 20 KMs radius, the area must be clear from people. This is not a simple challenge for Sleman government. Moving a thousand people from their settlements to other places becomes a big challenge for disaster risk management design in emergency response phase. The result is what a regime; government for example, can give services for their basic right in evacuation places as what they get normally. So far, the government bureaucracy management system just prepares the services in normal situation. It means in an emergency condition, the government's roles are disrupted, even perished.

## THEORETICAL FRAMEWORK

The research uses three main theories which are Emergency Response Phase, Regime Character, and Authority Relation. However, terminology of Risk Society is described for supporting materials research.

### 1. Risk Society

A vulnerable condition that directly affects the human life around Merapi becomes a basic step to define the Risk Society. Anand-Gasper

(in Pelling, 2011) explain that the vulnerability and component surroundings are interpreted as a result of the debate toward a social justice emphasizing on human safety dimension and how to fulfil their basic needs. Therefore, identification and prevention are important things to do before everything comes into problems.

Risk society is defined as a society condition which is susceptible to a risk created by natural phenomena such as eruption. This area directly is identified as a danger one caused by eruption as what National Disaster Management Agency (BNPB). The people in that area will be classified as those who have to be the victims of eruption or survivors. When the disaster comes, they prefer to fast fulfil their need with ignoring where the supply comes from. Therefore, they are easily exploited and influenced by surroundings. They also ignore the source in getting fresh air, good shelters, health, and water. What they are thinking is they can get all they need. It means they cannot think logically anymore and do not know the negative effects of what they do.

## **2. Emergency Response Phase**

Disaster Risk Reduction is a series of efforts to reduce the disaster which are creating good policy, preparedness, emergency response, and rehabilitation (RENAS PB, 2010). The emergency response can be defined as an effort to evacuate, fulfil the basic needs, protect, manage, and rescue all victims when the disaster happens as well as to recovery the public infrastructures (RENAS PB, 2010).

According to the definition above, the emergency response phase can be explored more into some activities. They are searching and rescuing victims and treasures; fulfilling their basic needs such as house, food, cloths, water, health, and recovering the public infrastructures. Then, this research will study the real condition when the eruption happens.

## **3. Regime Character**

According to Stephen D. Krasner (in Budiman, 1996) regime is norms and procedures that are used as a foundation to make policies by the government. Regime can be interpreted as authoritarian, democracy, or the combination of them. It essentially is managed by political system

controlled by the government. Therefore, the government is the only institution formally runs and creates policies based on the norms and procedures.

Regime character can be observed through a risk management design chosen by the regime (Hood, 2001). *First*, the risk management design is viewed by market liberalism. In this view, the government believes in the market system or civil law is not perfect. However, this system considers that market liberalism absolutely must be the number one although public authorities are important to consider as a part of risk solving.

*Second*, being responsive towards public opinions is one way to identify the regime character through giving chances widely for people to convey their opinions about the best way to solve a problem. However, this also brings negative effects if this is not managed well.

*Third*, in this position, regime is defined as a real idea in political calculation that regulation activities reflect the interaction and lobby among actors (institution). Contrast with the two previous definitions about how to pursue prosperity in the risk, this doctrine emphasizes on the corporative ideas that government has to be existing a strong society.

Based on that case, there is a culture of risk theory which identifies the risk as culture construction. Holling (in Adams, 1995) concerns on the power managerial type has a consistency scheme among the different paradigms. Holling notes that when the government creates a policy, nature gives a different paradigm which has to be considered. There are four types that are common. They are first, *fatalist*. It is a regime which identifies the disaster as nature activities. It cannot be controlled and predicted accurately so that the policies seem to be unprepared well, minimum anticipation, and just respond after the disaster, and not enduring.

Second, *individualist* is a regime which identifies the disaster as the bad effect of market interest. The policies are considered based on the market interest. They are also supported by those who have willingness to play a market or those who want to get benefits only from the market. Third is *equality*. It is a regime which identifies a disaster as a risk management that involving people to manage it through opinions. They determine the policies created. Its characteristics are like the existence of people

participations, forums, local communities, and citizen juries. Fourth is *hierarchy*. It explains that a regime needs to know the authority in creating a policy. The regime, then, is as a legal power hierarchy which assumes that it is the best way to solve some disaster problems.

Based on the fourth theories explanation above, this research, first, focuses on analysing how the risk management scheme conducted by the government is able to reduce the disaster in the emergency response phase when Merapi volcano eruption 2010 occurred towards the risk society. It is considered by the model of risk management types used by the government based on Christopher Hood. Then it is observed through surveillance towards its context and content of risk management. At last, the regime character will be determined by that mechanism to note the appropriate regime character use whether *hierarchy*, *individualist*, *fatalist*, or *equality*.

#### 4. Authority relation

Authority relation means that there is an interaction among legal powers in managing the disaster risk reduction. The authorities will be a main subject to observe in the authority relation that involves their agreement of the risk management and regulations created as well as the implementation of the laws in the regime. In the term of nation, authority relation involves two kinds of institutions which are formal and informal ones (Helmke & Levitsky, 2003). Commonly, in a political scheme the risk management focuses only on the formal author, that is the government. Yet, in a certain situation perhaps the formal one is not effective to manage the risk of disaster. Considering the role of informal institutions in this context will be useful. Therefore, an interaction process will be held to manage the disaster risk.

According to this method, formal institutions means national boards such as the courts, legislatures, and executives and laws such as legal laws and constitution. Beside, the informal institutions include society, religion, relationship, and organization. Furthermore, sociocultural, patriotism, customs, and other unwritten social laws can be included into informal ones. There are four authority relation types. They are first, *complementary*. It is as complementary role that is a vacuum role left by a formal

institution. In addition, it is also able to consider the formal laws which can be implemented well in society so that the informal one is needed to complete. The informal one here means that the custom or an agreement among people.

Second is *accommodative*. It is mixing the effective formal institutions and the aims of other author which is contrast. So that the policies resulted will accommodate the unseen needs regulated in a formal law. It assumes that the opposite author contributes in producing policies.

Third is *competitive*. There is a competition in producing policies when the formal and informal ones cannot be united in a context. It assumes that the formal one is weaker then the other so that the informal one gives opinions to produce policies. The informal competes through informal ways to create policies.

Fourth, *substitution* is putting the informal institution as a substitution. It assumes that the formal institution is too weak therefore the compatible informal institution takes over the role of the formal one.

Analysing how the scheme in facing the disaster risk is important. It will consider the use of role of authority relation into *complementary*, *substitution*, *competitive*, or *accommodative*. Hope, this research will show the result of the authority relation occurred in that process.

## RESEARCH METHODS

This research uses the descriptive-qualitative method. Generally, this optimises case study type. The representative of three villages in the rim of Merapi volcano which are Pakem, Turi, and Cangkringan are the locations of this research.

Data collecting technique for this research is field observation, deep interview, and secondary data such as book, journal, others. The researcher interviewed all authors who have the core role in a regime. First is local government who is the head of disaster sub-division PB and the head of preparedness sub-division PB Kesbanlinmas department and PB; the head of villages, and the head of countrysides in three sub-district, Cangkringan, Turi, and Pakem. The second is Civil Society Organizations (CSO) that are Muhammadiyah Disaster Management Center (MDMC) and Merapi Circle Information Network (JALIN MERAPI) through

Combine Resource Institution (CRI).

Data Analysis Technique was conducted through analysing all field observation findings. The scheme of it is first, the researcher matches the scheme. This compares the schemes based on empiric data with the predicted schemes. Therefore, it is possible that among independent and dependent variables of findings are relevant to those which are predicted before data collection (Yin, 2010). Second is explanation. It is explaining a phenomenon which means to decide the interconnection of the phenomenon. The aim of this explanation is to develop the ideas to give recommendation for the next relevant researches. The result of this research will meet the conclusion based on case study discussion.

## **RESULT AND ANALYSIS**

### **1. The Need of Efficient Disaster Risk Management System in Emergency Response Phase**

Empowering the humanity response is the most important and crucial thing in the disaster risk reduction. A response becomes a foundation to know how the people's sense of belonging works. In this discussion, responding in humanity point of view has to be unity between interest and willingness, especially in an emergency response phase. Therefore, a regime character is prominent in this situation. The policies produced have to give the humanity priority. Yet, as a matter of fact, the policies are not synergy with what people need at emergency moments. Usually, the emergency situation has no organised schemes. It depends on fast services from those who have interest to humanity. This is the government weakness in managing the risk.

The danger of Merapi volcano eruption 2010 started when the government decided the status 'on guard' or 'on wary' in the phase of preparedness towards the volcano eruption. Then October 25, 2010, the status said by the government was 'be aware', the phase absolutely changed into emergency respond phase to anticipate the danger and evacuate the people. Therefore, the challenge to run the emergency respond phase needs contribution form society as informal aspect. Based on standard operational procedure, the government plays its role to produce policies and the societies directly do the policies on the spot. So, it is expected

this role management can minimize the disaster risk and victims. Certainly, this process must not be a claim of the government that does the disaster risk reduction by defining the role of civil society and activist who participating in acted.

Islamic society organization, Muhammadiyah, through MDMC creates a Disaster Medical Committee (DMC), a unit of health service by Muhammadiyah/Aisyiyah hospital, equipped by standard medical tools. It facilitates the victims who need fast health service. Beside, in Faculty of Psychology of Muhammadiyah universities collaborated with the young of Muhammadiyah cadres initiated a psychological guidance program for children and adults in the affected areas.

Since 2006, JALIN MERAPI reports every different situation analysis through mainstreaming the real of condition lived from the surrounding on the Merapi volcanoes area. In order that, it is hopes that people get true information. It also informs the need of logistic, the affected areas, the number survivor, and people who are aware to them as well as the committee to transfer all assistance form people. To maximize the role, this network, occasionally opens recruitment for the voluntary.

The synergy between Dinas Kesbanglinmas & PB, MDMC, and JALIN MERAPI is authority relation, formal and informal institutions. This collaboration is expected to give the effective and efficient contribution in managing the disaster risk of Merapi volcano eruption 2010.

## **2. Disaster Risk Management System in The Emergency Response Phase Occurred in Merapi Eruption 2010**

The disaster risk reduction usually reveals a new power in society although the government is the author who has main responsibility for it. Yet, the government's role cannot be optimal practically in the emergency phase. In the Merapi volcano eruption 2010 for example, the emergency response phase was quite bad and rude. In addition, barely all the government staffs were not aware to the phase in the disaster phenomenon.

TABLE 1. RESPONSE COMPARISON AMONG 3 INSTITUTIONS AT THE EMERGENCY  
RESPONSE PHASE

| Author/<br>component                         | The Government  | MDMC  | JALIN MERAPI  |
|--|---|---|---|
| Collection of risk<br>information            | <ul style="list-style-type: none"> <li>• Risk is emergency situation</li> <li>• Risk is considered by efficiency</li> </ul>   | <ul style="list-style-type: none"> <li>• Risk is a phase that must be focused since the prepared ness phase</li> <li>• Dedicated to the risk society</li> </ul>   | <ul style="list-style-type: none"> <li>• Risk is a condition that must be minimized soon (victim must be rescued soon)</li> </ul>   |
| Management<br>Standard                       | <ul style="list-style-type: none"> <li>• Law of Kep. Bupati No. 83/kep. KDH/A/2006 about the mechanism volcano disaster reduction</li> <li>• Contingency planning on Merapi Volcano in 2009</li> <li>• Standard Operational Procedure (SOP) on Emergency Response (yet practically, it cannot be implemented well because of the regularly law. SKPD staffs is the executor)</li> </ul> | <ul style="list-style-type: none"> <li>• Arranged by a law created together with the member of organization. but the law does not focus on volcano disaster yet</li> <li>• The implementation in the location is more flexible due to the executors are volunteers. The concept as voluntary pioneers.</li> </ul> | <ul style="list-style-type: none"> <li>• An agreement among JALIN MERAPI forum, consist of NGO, radio community, and humanitarian activists</li> <li>• The implementation in the location is well prepared due to the executors are students/ volunteers</li> </ul> |
| Author attitude in<br>the emergency<br>phase | <ul style="list-style-type: none"> <li>• There is imbalance interest among author and society because of the different perception in how meaning the risk</li> </ul>  | <ul style="list-style-type: none"> <li>• There is a strong contribution from volunteer because their strong commitment for humanity: the concept is "jama'ah tangguh bencana" (the strong desires in muhammadiyah communities for coping the disaster)</li> </ul>   | <ul style="list-style-type: none"> <li>• Society is a part of author. They are master in information system. This is a meaningful network.</li> </ul>   |

sources: from interview field notes to explain three authors

The risk management of this regime character tends to be *fatalist*, rather *individualist*. It is not arranged well and concerns on the economic aspect rather than humanity to safe people, especially after the eruption at November 5, 2010.

JALIN MERAPI and Muhammadiyah tends to be as non-government which significantly reinforces the role of government to reduce the disaster. JALIN MERAPI and Muhammadiyah, through MDMC, becomes a rescuer for society with a flexible mechanism which is contextual and out of bureaucracy. This makes a hypothesis that the role of society organisation and an informal forum become as *substitution* when the staffs of SKPD do not present at the emergency response phase.

They become a new power that is able to fulfil the need of services at the emergency response phase. Even those two informal institutions' power can handle what the government should do in the disaster reduction. The refugees, for instance, can access service faster from both informal institutions than from the government. This will create a danger if it

is not managed and coordinated well between informal and formal institutions. People won't believe in the formal institution.

### **3. Creating Solidarity Among Authors in Disaster Risk Reduction**

The government cannot do many things to handle the disaster without the role of informal institutions. The service it gives won't be optimal. According to a law UU No. 24 tahun 2007, those who are responsible for being aware to disaster are not only the government but also society. As a matter of fact that Dinas Kesbanglinmas & PB Sleman can't be as the only institution which tackles the reduction so that the existence of the informal institutions such as MDMC and JALIN MERAPI give a significant role to reinforce the government. In the informal structure, the classification differentiates those institutions. It is based on faith religion identity and humanity aspects. According to Levitsky and Helme, MDMC and JALIN MERAPI are a kinship and clientelism.

A law agreed in the formal institution is not appropriate enough if it synergies with a fact in the location. The institution needs a support from society. So that, the informal institutions can be considered as an institution which has an unwritten law as well as its punishment: society pressure. In this definition, it is stated also that the informal institution is not merely a weak institution but an institution that is built based on certain identity and agreement from society to respond certain issues.

MDMC and JALIN MERAPI are formed based on the values of religion and humanity. Those organizations are able to run as informal institutions that have significant roles in the emergency response phase. Then, the crucial deeply question is the function and role of the formal institution which are replaced by those informal institutions. This is because the disaster reduction management is different. For example open recruitment for staff or volunteer of the institutions. The formal institution recruits those who have mainstream that they are employers or civil servants which are paid by national government. Beside the informal ones, they tend to have the same cultural values to struggle together so that the foundation created is stronger than the civil servants. This is the trigger that makes them more ready to face the disaster reduction. They have the sense of belonging to work together in the field.

By the existence of the new power in society, especially from civil society organizations and informal forums of Merapi, the negative effects of Merapi volcano eruption 2010 should be followed up well. Yet, the fact that the job description among them is not managed well. Even, sometimes there is an overlap duty creating a conflict. So it is a strong necessary thing to create a well prepared in coping the disaster.

## CONCLUSION

According to the explanations above, in the end of this research, the researcher believe in the steps that must be done are *first*, integrating humanity aspect as the authors' point of view at the disaster risk reduction management. The concept of normal and abnormal government become a systematic things.

*Second*, preparing author and organization capacity in formal institutions such as BNPB/BPBD province/ BPBD district/ BPBD city so that they are ready to give the emergency respond well prepared.

*Third*, empowering Community Based Disaster Risk Management (CBDRM) towards Sleman government especially in the dangerous (KRB) area arranged in the reduction plan. This can be implemented through empowering a disaster strong village, initiating the local business unit (UKM), and formulating a new preparedness strategy.

*Fourth*, fulfilling effectively the guidance element's role in laws UU No. 24 Tahun 2007 about Disaster Reduction and Permendagri No. 46 Tahun 2008 about the Area Disaster Reduction Board's Organisation Guidance and Job Description of Local Government Disaster Management Agency (BPBD) from professional society which aims to consider non-government aspect. It is expected to bridge the coordination between the institutions at the emergency response phase in order to avoid duty overlapping between them in producing policies aspect.

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