

Disaster Mitigation Strategy at Local Level: Study of Disaster Mitigation Strategy at Malang District, East Java, Indonesia

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Abstract

An effective strategy of disaster mitigation policy must be formulated immediately. Act 24 of 2007 about Disaster Mitigation (UUPB) has provided a more certain policy framework for disaster mitigation policy but it is still subjected to weaknesses. These weaknesses are so obvious in the implementation of disaster mitigation policy at local level. Research is conducted at Malang District, East Java, Indonesia. Method of research is descriptive. Type of data is qualitative which is understood by Van Metter and Van Horn's theory of policy implementation. Field findings have indicated that at pre-disaster, the following actions are not yet taken such as integrating the implementation of disaster mitigation into a local planning document, reducing the disaster risk, preventing the disaster, formulating the Disaster Risk Analysis, enforcing the space order plan, carrying out the disaster education and training, and formulating technical standard document of disaster mitigation. During the disaster, some important immediate matters are not well managed such as preparedness, early warning and mitigation. A number of urgent documents such as contingency plan and operational plan are not formulated. Risk assessment is inappropriately executed. At post-disaster condition, rehabilitative and reconstruction plans are not maximum. Indeed, an appropriate strategy of disaster mitigation policy needs to be formulated based on the local condition. Within this review, a number of policy strategies that must be considered by the local governments in Indonesia may involve empowering the policy and capacity for the disaster mitigation organization at local level, implementing the integrated disaster mitigation, carrying out research, education and training, and improving the capacity and participation of local community.

Keywords: policy implementation, policy strategy, local disaster mitigation

A. Introduction

An effective strategy of disaster mitigation policy is an immediate necessity because too many disasters have occurred and the disaster mitigation measures in Indonesia are still implemented less maximally. The implementation of disaster mitigation policy at local level may also still be a problematic. Therefore, the review of local disaster mitigation policy strategy is reliable to be encouraged to uncover what matters are happening.

The review of disaster mitigation policy strategy in Malang District considers the issue above as research background. Less maximum policy formulation within Act No.24 of 2007 about Disaster Mitigation (UUPB = *Undang-Undang Penanggulangan Bencana*) becomes a starting point for any issues behind the implementation of disaster mitigation policy at local level.

One issue may be seen from the definition of disaster by UUPB, which states that disaster is "an event or a set of events threatening and disturbing the life and subsistence of community, caused by either natural, non-natural or human factors, which leading to the presence of individual victim, environmental destruction, material loss and psychological impact".¹

Looking at more closely, this definition understates the triggering power of disaster. According to Wahana Lingkungan Hidup Indonesia (WALHI)², disaster cannot be distinguished merely between natural and non-natural disasters, but there is always a trigger (danger) preceding a disaster in certain area.³

Substantially, the baseline and goal of UUPB are very strong. Points stated in Article 3 (three) about the principle may be interesting which includes: (a) humanity, (b) justice, (c) equality before law and government, (d) balance, harmony, and compatibility, (e) transparency and accountability, (f) partnership, (g) empowerment, (h) non-discriminative, and (i) non-proletizing. But, this article is biased toward inconsistency because there is no clear sanction against the deviation. The policy seems being set without caution, and therefore, it remains unclear

¹ Asian Disaster Reduction Center, 2005. *The Concept of Total Disaster Risk Management*. Asian Disaster Reduction Center, page 43.

² Wahana Lingkungan Hidup Indonesia (WALHI) is a NGO forum with 473 organization members which care for environmental justice and sustainability. Walhi is a member of FOE International which is established at 72 countries. Walhi headquarter is at Jakarta with branch offices in 32 provinces throughout Indonesia.

³ Sofyan et al, 2008. *Membangun Kekuatan Kolektif-Reduksi Resiko Bencana*, Wahana Lingkungan Hidup Indonesia – Walhi Press, Jakarta.

what is the responsibility to be charged, what is minimum standard, what is standard to apply, and who is to be responsible during the disaster. Indonesia has never experienced in making a standard for the management of refugees. The strange is that the Act has stated very clearly about those matters above, including what is action to be taken for any suits submitted by citizen, what is standard to implement, and who is the implementer of this standard for giving appropriate solution.

Other articles may be quite dangerous because it can trigger a conflict. Article 32 UUPB provides the government an authority to revoke the right of ownership on the behalf of disaster mitigation. It is not a secret if the disaster vulnerable area¹ and the prohibited area for housing are made unilaterally without considering the socio-cultural aspect of the immediate community and the capacity or preparedness of the community to adapt, to settle and to establish into vulnerable area. The potential of disaster in Indonesia region has reached 83 % and the question is where more than 230 millions citizens are to be relocated during the disaster.

One important issue in the implementation of UUPB is related to subordinate regulations if government regulation and President Decree are to be changed. The entry in Government Regulation which states that “.....local government can establish its own Local Agency for Disaster Mitigation (BPBD = *Badan Penanggulangan Bencana Daerah*)” is a clause which blurs the importance of BPBD itself.

The performance of regulations is not yet optimum. The government, community and interest parties in Indonesia are not ready to deal with disaster and as a result, higher number of individual or material losses caused by disaster is so much evident. Less optimizing performance is also indicated by less integration and lack of coordination and cooperation in coping with emergency response situation. This emergency response is often disordered because there is always confusion in arranging the seeker and rescuer teams, or in coordinating the collection and distribution of donation to the victim.

The issue within emergency response context is starting with the absence of Action Plan for Disaster Mitigation (RAPB = *Rencana Aksi Penanggulangan Bencana*) at local level. The local government seems just relegating the level of National RAPB into Local RAPB.

More weaknesses are also apparent in the disaster mitigation policy. Disaster mitigation is implemented less maximally at local level. It only signifies that a deep research may be needed to elaborate the strategy of disaster mitigation policy at local level (*problem statement*). One concern in this current research is Malang District with its wide coverage but with some area so vulnerable to various disasters (covering 33 subdistricts, and being a second widest District in East Java).

B. Methodology

Paper uses qualitative data² to understand the implementation of disaster mitigation policy in Malang District and the ideal policy strategy to apply.

Theoretical base used in this research is Van Metter and Van Horn's theory of policy implementation.³ Both these authors say that ideal implementation of policy involves six variables which can determine the likelihood of policy implementation. These six variables are: (a) the size and goal of policy, (b) the sources of policy, (c) the characteristic of implementer agency / organization, (d) the communication between related organizations and of implementation activities, (e) the attitude of implementer, and (f) the economical, social and political environments.

C. Disaster Mitigation Strategy at Local Level

Any problems and constraints against the implementation of disaster mitigation policy in Malang District must be answered, borrowing from Mustopadidjaya AR term, by establishing an effective “strategy of disaster mitigation policy”.⁴ Some considerations are surfaced such as empowering the policy and capacity of organization, implementing the integrated disaster mitigation, carrying out research, education and training, and improving the capacity and participation of community.

First, Empowering the Policy and Capacity of Organization

The implementation of emergency response activities by related organizations must be well managed. The capacity building for the organization for disaster mitigation efforts involve several steps such as:

- To prepare Standard Operational Procedure of Disaster Mitigation Management;
- To organize Periodic Preparedness Exercise;

¹ Bradbury, Raymond J, 2002, *Involving Citizens in Hazard Mitigation Planning: Making The Right Choices*, Australian Journal of An Emergency Management, Vol 16. No.3 P 45, Spring, 2002

² Miles, M.B. and A.M. Huberman, 1992, *Analisis Data Kualitatif*. Tjetjep Rohendi Rohidi (Translator), Quantitative Data Analysis, UI Press, Jakarta.

³ Nugroho, Riant, D. 2004. *Kebijakan Publik: Formulasi, Implementasi dan Evaluasi*. Jakarta: Elex Media Komputindo.

⁴ Mustopadidjaya AR. 2003. *Manajemen Proses Kebijakan Publik, Formulasi, Implementasi dan Evaluasi Kinerja, Lembaga Administrasi Negara, Republik Indonesia*. Jakarta: Duta Pertiwi Foundation.

- To arrange the Manual of Review for The Evaluation over The Implementation of Disaster Emergency Response Operation; and
- To establish the mechanism of monitoring and evaluation over the implementation of disaster emergency response operation.

Organizational capacity building is important for the effective implementation of disaster mitigation policy in Malang District. Early step to be taken may be to prepare Standard Operational Procedure of Disaster Mitigation Management and to organize Periodic Preparedness Exercise. Malang District shall have a document of standard operational procedure that has been reviewed based on the contingency plan and synchronized with internal procedure of each institution related to disaster mitigation.

The government must organize Periodic Preparedness Exercise in a package of disaster preparedness exercise which, in this matter, may involve seven exercises a year.

The mechanism of monitoring and evaluation over the implementation of disaster emergency response operation can be made only if Malang District has the Manual of Review of The Evaluation over The Implementation of Disaster Emergency Response Operation. The manual can be compiled based on the result of communication note, the result of interview with related figures and the result of review of the evaluation over the implementation of disaster emergency response operation.

The government shall establish the mechanism of monitoring and evaluation over the implementation of disaster emergency response operation. Local regulation can be made to empower the mechanism of monitoring and evaluation over the implementation of disaster emergency response operation. Periodic review can also be conducted for the effectiveness of the procedure of disaster emergency response operation.

Second, Planning The Integrated Disaster Mitigation

The planning system of the integrated disaster mitigation may be empowered by the government of Malang District with two major steps. *First* is to strengthen the information and publication system of local disaster. *Second* is to optimize the result of Disaster Risk Review to help the setting of local policy and planning in the cross-administrative regions relationship. The detail of these two major steps involves following actions:

- To build the data and information system of local disaster which is accessible to the public;
- To optimize early warning system which is integrated with provincial and national early warning systems by combining technology and local wisdom;
- To construct Local Early Warning Procedure for priority disasters;
- To exercise periodic trial for local early warning system;
- To synchronize Disaster Risk Review by calculating cross-boundary disaster mitigation policies;
- To develop a cooperation with neighbor region for the implementation of disaster mitigation before, during and after the disaster; and
- To prepare priority disaster contingency plan at district/town levels.

First major step is elucidated as follows. Strengthening information and publication system of local disaster which is accessible to the public is very important. Information shall be valid until lower level of government and may need periodic update. Thus, Malang District will have a disaster database which is then useful for the reference of disaster mitigation planning in Malang District. Service System of Disaster Warning Information System can be integrated to National Disaster Information. Open access must be given to the community. Local disaster information system must be integrated with provincial and national disaster information systems.

Malang District shall develop a local disaster information system which is integrated with provincial and national disaster information systems. It can be realized by developing a data and information system of local disaster which is publicly accessible. Malang District can have a local website about local disaster information which is connected to disaster information system at provincial and national levels. The existence of a sustainable update mechanism for the database and also the presence of local disaster information database remain important to support the planning of local disaster mitigation. Next action must to do by the government of Malang District, therefore, is to develop early warning system which is integrated with provincial and national early warning systems. It is achieved by optimizing early warning system which is integrated with provincial and national early warning systems by combining technology and local wisdom. Hereby, Malang District will have an early detection device for priority disasters at district/town levels and be facilitated to expose early warning information to the household level.

Local Early Warning Procedure for priority disasters is constructed by aim that Malang District has local early warning procedure to be synchronized with early warning system at provincial and national levels. Local early warning system in Malang District shall be trialed periodically.

The government of Malang District also needs to consider second major step, which is to optimize the result of Disaster Risk Review to help the setting of local policy and planning in the cross-administrative regions relationship in the disaster mitigation planning. It can be realized by synchronizing Disaster Risk Review by calculating cross-boundary disaster mitigation policies and also enlisting the cooperation from the neighbor area

before, during and after disaster.

The cooperation is realizable by the presence of the document of agreement for the implementation of disaster mitigation in the border region. By this document, disaster mitigation policies are synchronized because cross-boundary risks are calculated. Planning of cooperation is optimized through policies and goals related to social development programs set by government or non-government organizations for reducing the number of vulnerable regions. It is achieved by enlisting the cooperation from the neighbor area for disaster mitigation efforts before, during and after disaster.

The cooperation with the neighbor area for disaster mitigation efforts before, during and after disaster may start the ratification of the document of agreement for the implementation of cross-boundary disaster mitigation and also for the synchronization of disaster mitigation policies by calculating cross-boundary risks.

Local contingency demand is fulfilled by calculating resource availability in Malang District. The government of Malang District, therefore, must prepare contingency plan for priority disasters. A written agreement shall be made by every institution related to disaster mitigation explaining about resource allocation based on contingency plan. Disaster emergency fund must be set based on demand in the contingency plan.

In addition to contingency plan, the government of Malang District must provide structure and infrastructure that will support local preparedness because of the complete equipment for local preparedness.

Third, Carrying Out Research, Education and Training

Next step in the strategy of the implementation of disaster mitigation policy at local level is carrying out research, education and training. Some activities are involved such as:

- To empower higher education, internal researcher and governmental employee to conduct a research to monitor disaster threat and to reduce local vulnerability;
- To integrate the result of research into the policy and planning of disaster mitigation;
- To establish a local disaster research forum;
- To build a local disaster research library;
- To organize the periodic education and training for integrated disaster mitigation;
- To develop Disaster Alert School Curriculum; and
- To prepare Teaching Manual and Student Learning Material for Disaster Alert School.

These activities are elaborated as follows. Research, education and training are improved by empowering higher education, internal researcher and governmental employee to conduct a research about the reduction of local vulnerability. A research method of local disaster to reduce local vulnerability is a great aspiration to be attended by the government of Malang District.

At elementary and secondary levels of education, the government of Malang District must consider the result of research to reduce disaster risks in structural way by empowering higher education, internal researcher and governmental employee to conduct a research to monitor disaster threat and to reduce local vulnerability. The direction of policy and the orientation of disaster research innovation shall be clear because it will help the application of multiuse technology innovation to the community. The allotment for quota 10 % can be taken from civil servant in every district/town to give their focus onto disaster mitigation research.

The government of Malang District must also integrate the result of research into the policy and planning of disaster mitigation. Disaster mitigation policy must be based on result of local research. A local disaster research forum, therefore, shall be established to accommodate the communication and synchronization between disaster researchers at local level especially in preparing a disaster education curriculum for every formal education stage. The development of disaster alert culture may start from this curriculum. Disaster education curriculum must be planned and applied periodically to give obvious contribution to the increase of capacity of local disaster mitigation.

Results of any local disaster researches can be identified and collected easily if there is a local disaster research library providing them. The library may contain database and catalog of local disaster mitigation researches. The local disaster research library is also widely accessible.

The government must optimize education and training to improve the local capacity and preparedness by organizing the periodic education and training for integrated disaster mitigation. It may be implemented once a year and followed by government, non-government and business organizations to fertilize the understanding of disaster mitigation. Disaster Alert School Curriculum needs to be developed, and Teaching Manual and Student Learning Material for Disaster Alert School must be prepared. Furthermore, Disaster Alert School Curriculum may be delivered in elementary and secondary formal education stages. Local regulation may support the validation of this curriculum and also help to provide teaching manual and student learning material for disaster alert school in any elementary and secondary formal education stages.

Fourth, Improving the Capacity and Participation of Community

The capacity and participation of community for the effective implementation of disaster mitigation policy at local level may be improved if BPBD of Malang District as disaster mitigation agency is given authority to do

strategic action. One is giving access for local press media in transparent way to publications related to disaster mitigation actions. Second is to optimize partnership for disaster mitigation. The detail of these two actions is as follows:

- To build a disaster journalist network as the government partner to publish disaster mitigation efforts at local level;
- To develop Forum PRB at District/Town levels;
- To increase the capacity of Forum PRB members at District/Town levels;
- To support the participation of private sector and business world to organize disaster mitigation; and
- To facilitate the development of a resistant village in efforts of reducing local disaster risk.

The steps above explain about how to build an access for local press media in transparent way to publications related to disaster mitigation actions in Malang District. It can be realized by empowering local journalist on publication and giving disaster education to the community. It is supported by building a disaster journalist network as the government partner to publish disaster mitigation efforts at local level. The network is also improved by the initiation of a local journalist forum by the government and by the active role played of journalist in the implementation of disaster mitigation efforts at local level.

Malang District can optimize the partnership with government and business sector in the reduction of disaster risk to support disaster mitigation efforts in Malang District. This partnership will support the participation of private sector and business world.

The government of Malang District shall develop Forum PRB (Forum Pengurangan Resiko Bencana) to increase the synergy and to accelerate the progress of disaster mitigation in Malang District. Forum PRB may smooth bureaucracy process of disaster mitigation efforts at governmental level. Forum PRB also contributes to the process of setting and evaluating the disaster mitigation policies at local level.

What other thing to do by the government of Malang District is to empower the partnership of government and business sector in the PRB to support the organizing of disaster mitigation in Malang District. It may be realized by supporting the participation of private sector and business world to organize disaster mitigation. A cooperation contract between government and business world to use CSR may be helpful to fulfill the demands of emergency treatment and disaster recovery. The development of Disaster Alert Culture through a model village is achieved by facilitating the development of a resistant village in efforts of reducing local disaster risk.

Conclusion

Data analysis concludes that the government of Malang District, as other region also shows, has not considered yet good substance of disaster mitigation into its Local Long-Term Development (RPJPD) and Local Middle-Term Development (RPJMD).

Disaster mitigation paradigm is concentrated more on emergency treatment and post-disaster treatment, and therefore, prevention (pre-disaster) is understated.

Activities and programs in DPA are not directed toward vision-mission of disaster mitigation. Budget committees (Bapeda, DPRD and BKAD-Badan Keuangan dan Aset Daerah) always give a denial cross to the proposal of disaster mitigation program in DPA.

The government of Malang District has not prepared policy standard for emergency response, including the document of the planning for emergency response situation. Similar case is also found at post-disaster when the government of Malang District is unprepared for rehabilitation and reconstruction documents.

The competence of employees at BPBD of Malang District is very low as indicted by inappropriate assignment of employees compared to their skill.

Structure and infrastructure of BPBD are not enough to develop BPBD of Malang District to be a professional organization.

The use of disaster mitigation budget still follows President Decree No. 54 of 2010 about Goods and Service Provisions and this takes longer time while PB needs acceleration. Therefore, the idea of *on-call* fund is functional, but Local Regulation insists that *On-Call* fund remains within local cash and takes times for issuance.

Directing Substance plays a very vital role in BPBD of Malang District, and this substance is not yet founded.

The standard and goal of disaster mitigation is less understood by the related organizations and sectors (officials and agencies in District government).

The support from business world to the disaster mitigation efforts must be well organized, for example, by utilizing CSR Program from companies because this program has a spirit of disaster mitigation.

Political process of budgeting must be pushed forward to produce a budget with disaster mitigation insight.

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