BRILLIANT INTERNATIONAL JOURNAL OF MANAGEMENT AND TOURISM
http://ejurnal.stie-trianandra.ac.id/index.php/bijmt
Main Journal Link : http://ejurnal.stie-trianandra.ac.id/index.php

Post-Disaster Mitigation Analysis In Cianjur

Abdur Rahim[1], Zainal Muksin[2], Andi Hermansyah[3], Azhari Aziz Samudra[4], Evi Satispi[5]

[1,2,3,4,5] Doctoral Program in Public Administration Faculty of Social and Political Sciences, Muhammadiyah University Jakarta
*Corresponding Author(s) Email : abdur.rahim@student.umj.ac.id[1], zainal.muksin@student.umj.ac.id[2], andi.hermansyah@student.umj.ac.id[3], azhariazis.samudra@umj.ac.id[4], evi.satispi@umj.ac.id[5]

ABSTRACT

There are important lessons after the earthquake in Cianjur, namely carrying out disaster mitigation both before and after the disaster. Communities who are at the location of the earthquake, are expected to always be vigilant. Earthquake events on the surface in densely populated areas can cause secondary disasters, such as cracks and subsidence of the ground, ground movement, and liquefaction. Therefore, it is necessary to map earthquake-prone zoning with a more detailed scale so that it can become a reference in determining the selection of settlement locations. Zoning mapping must be equipped with a good mitigation scheme. The role of local and central government is urgently needed, such as outreach and constructing earthquake-resistant buildings complete with evacuation routes and places. All elements must be involved in handling the aftermath of this earthquake. One disaster event should be able to illustrate that many efforts must be prepared. It is hoped that the penta helix collaboration will make people calm and able to adapt to disasters. In post-disaster handling, what needs to be paid more attention is related to coordination between each unit handling disaster mitigation, patterns of distribution and or storage of aid that comes from various sources, accountability of disaster mitigation social organizations, sustainability of the aid program itself, and accountability for the aid program. also related parties. Future programs after the disaster are adequate education for the community, repair of infrastructure damaged by the earthquake, and creation of evacuation routes if another disaster occurs.

Keywords: *Analysis, Mitigation, Post Disaster*

Article History:
Reviewed : 30 December 2022
Revised : 22 January 2023
Accepted : 24 February 2023

DOI Prefix : https://doi.org/10.55606/bijmt.v3i1.1174

I. INTRODUCTION

The earthquake that occurred in Cianjur, West Java, caused deep sorrow, as well as concern, not only for people living in earthquake-prone locations but also for people living around Cianjur. The cause of the earthquake in Cianjur is likely to be related to the existence of the Cimandiri Fault, this is in accordance with what was conveyed by the BMKG on November 21, 2022. However, there are some experts who express the opinion that it was not the Cimandiri Fault that triggered the earthquake. Ismawan, a lecturer in Geological Engineering Unpad, for example, has different views and believes that the cause of the earthquake did not come from the Cimandiri Fault (Patnistik, 2022).

The location of the epicenter is far from the Cimandiri Fault (10 kilometers north of the Cimandiri fault line). The contour of the Cimandiri Fault, which is located in the south direction, with a width of 8-10 meters, opens the opportunity for a fault that has not yet been revealed. Cianjur Regency is a lowland, but there is also a undulating to rugged plain in the southeastern part of Mount Gede. The quake caused casualties and injuries, as well as damage to infrastructure and buildings.

The large number of casualties because the settlements affected by the earthquake are areas that are included in the disaster-prone area (KRB) of high earthquakes. Settlement studies are interesting in disaster mitigation-based studies. The settlement study can be used as a reference in the evaluation of renca l na tata rual ngarea to reduce the magnitude of casualties in the future. In settlement studies, locations that have experienced disasters will have a risk of experiencing disasters again according to aland re-period in certain disasters, including earthquake disasters. Shallow earthquakes near the solid surface of the population generally caused large casualties. Therefore, community capacity and structural and nonstructural mitigation are things that need to be preparedln, especially for people living in locations that have potential disaster. Cianjur is one of the sa l tu wilayalh which has a risk of earthquake disaster in West Java. West Java Province is the province with the largest population in Indonesia, which is 48.64 million people or 17 percent of the Indonesian population living in this region (Jabar.bps.go.id, 2022). The charm of Java Balrat which has a comfortable climate and a comfortable soil

fertile turns out to bememenda l m potential disasterl earthquake. West Java has at least six active faults, namely the Cimandiri Fault, Baribis Fault, Lembang Fault, Cita l rik Fault, Cipalmingkis Fault, South Garut Fault (Garsela).

BRILLIANT INTERNATIONAL JOURNAL OF MANAGEMENT AND TOURISM
http://ejurnal.stie-trianandra.ac.id/index.php/bijmt
Main Journal Link : http://ejurnal.stie-trianandra.ac.id/index.php

In the end, we are alwaystold to be prepared for disasters. The community needs adequate education about the risks of disasters that will be faced and not to be feared. People's fears actually increase the risk of disaster. On the contrary, community preparednessincreases the capacity of the community to respond to future disasters. This study aims to analyze mitigalthe disaster both before and after the disaster in Cianjur Regency. From the uraialn above, it is considered necessary to conduct a disaster mitigation analysis in Cianjur.

II. METHODOLOGY

The design of this study refers to litative kua l research in the form of a case study yes lit's a case study of situation analysis. This study is a study conducted to study or analyze the truth of a case that is being discussed or a large case in the community. For example, cases of evacuation, earthquakes, evacuations, the influence of social media use, and so on. According to Cresswell (in Mahmudah et a l l., 2021), case studies are a research strategy to carefully investigate a matter by collecting complete information using various data collection procedures. Pollit & Hungler (in Arthur, 2016) presentscase studies as a research method that uses in-depth analysis, which is carried out completely and meticulously on an individual, family, group, institution, or social unit lalin. Several stagesof creating a case study begin with determining the problem, creating designs and instruments, collecting data, making data analysis, and preparing research reports. The end result of a case study is a deep understanding of a phenomenon. The characteristics of good case study research are to view the object of research as a case or problem, to treat the case as a contemporary phenomenon, to be carried out based on existing reality or factsl, and to usevariousdata sources for research. The purpose of case study research as qualitative research, in general, there is l lah to examine human understanding and behavior based on beliefs, scientific theories, and differences in values (Polit & Beck, Borbasi, in Yona, 2014). The general case study objectives can be detailed as follows:

1. Researchers useln methods to understand or adjust the problem under study.
2. Effective for demonstrating respondents' relationships with researchers.

3. Allows readers to find results related to stylistic, factual, and internal consistency, i.e. trust in the results of the study. This case study is supported by an exploratory method of data by responding to the results of observations in the evaluation of disaster events that occurred in Cianjur.

III. THEORIES AND CONCEPTS

Mitigation is a step that is also taken before a disaster occurs. Examples of its activities include making maps of wilaya l h rawan benca l na, making earthquake-resistant ba l ngunan, planting ba l man treesbalkau, greening forests, as well as providing counseling and improving the healthof people living in disaster-prone areas. The Mitigation Phase is an effort to minimize the negative impact of disasters. Examples are zoning and *building codes*, vulnerability analysis; *public* learning. The Preparadness phase is planninghow to respond to disasters. An example is planning preparedness; emergency drills, warning systems. According to Law Number 24 of 2007, mitigation is a series of efforts to reduce disaster risk, both through physical development and awareness and improvement of the ability to face disaster threats. Mitigation is an effort that has a number of objectives, namely to recognize risks, awareness of disaster risks, mitigation planning, and so on. It can be said that disaster mitigation is all efforts from prevention before a disaster occurs to handling after a disaster occurs. Mitigation is an effortaimed at reducing the risk and impact of disasters. Disasters themselves have three categories, namely bencalna alam, nonalam disasters, and social disasters. Natural disasters, there areldisasters caused by events / series of events by nature. Meanwhile, a nonalam disaster, is a disaster caused by a nonalam event/series of events. Meanwhile, a social disaster is a disaster caused by an event/series of events by humans. Natural disasters themselves can still be divided into two categories, namely meteorological natural disasters and geological disasters. Disasters ala l m meteorology therel is a climate-related disaster, generally does not occur inl a special place. While geological disasters are natural disasters that occur on the earth's surface such as earthquakes, tsunamis, and landslides.

IV. DISCUSSION

The earthquake in Cialnjur, West Java, not only caused deep sorrow. The earthquake also caused concern, not only for the peopleliving around Cianjur but also for people living in other earthquake-prone locations. TheCianjur earthquake is suspected to be related to the existence of the Cimandiri Fault, according to the BMKG release on November 21, 2022. However, some palkar argue that it was not the Cimandiri Fault that triggered the earthquake.

BRILLIANT INTERNATIONAL JOURNAL OF MANAGEMENT AND TOURISM
http://ejurnal.stie-trianandra.ac.id/index.php/bijmt
Main Journal Link : http://ejurnal.stie-trianandra.ac.id/index.php

Ismawan, a lecturer in Geological Engineering Unpad, for example, has a different view andbelieves that the cause of the earthquake did not come from the Cimandiri Fault (Unpad.ac.id, Tuesday 22/11). The death toll was 328 people, 12 people are still missing, loka l si epicenter (epicenter) which is far from the Cimandiri Fault (10 kilometers north of the Cimalndiri fault line). The contour of the Cimandiri Fault which is in the direction of the sidelinesltan, with a width of 8-10 meters opens up opportunities

The existence of a fault that has not been revealed. Kalbupaten Cianjur is a lowland, but there is also a undulating to steep plain in the southeastern part of Mount Gede. The quake caused casualties and injuries, as well as damagetoinfrastructure and buildings. The large number of casualties because the settlements affected by the earthquake are areas that are included in the disaster-prone area (KRB) of high earthquakes. The study of settlements in ha l l is interesting in disaster mitigation-based studies. Settlement studies can be acualn in the evaluation of the regional spatial plan for reducing the magnitude of future casualties. On the study of settlements, the location of which once Experiencing a disaster will have the risk of experiencing a Kemba L Li disaster according to the re-period ofL certain disasters, including earthquake disasters. Shallow earthquakes near densely populated surfaces generally cause casualties that are large l r. Therefore, community stability and structural and nonstructural mitigation are things that need to be prepared, especially for people living in lokalsi who have the potential for disaster. Cianjur is one of the areas that has a risk of earthquake disasters in West Java. West Java Province is the province with the largest population in Indonesia, which is 48.64 million people or 17 percent of the Indonesian population living in this region (Jabar.bps.go.id, 2022). The charm of West Java, which has a comfortable climate and fertile soil, turns out to harbor the potential for earthquake disasters. West Java has at least six active faults, namely the Cimandiri Fault, Baribis Fault, Lembang Fault, Citarik Fault, Cipamingkis Fault, South Garut Fault (Garsela). Active faults in parts of the tidal k region are clearly visible because they are covered by volcanic deposits that are soft in nature amplifying the effects of shocks (vsi.esdm.go.id, 21/11). The existence of l n faults must be anticipated to create disaster preparedness and resilient communities, especially in West Jalwa and generally throughout Indonesia. In the end we are always faced with a situation to be prepared for disasters. Peopleneed adequate education about the risks of disasters that will be faced and not to be feared. People's fears actually increase the risk of disaster. On the contrary, preparednesslan

masyaralkat increases the capacity of the community to face disasters in the future. There are several important activities after the earthquake disaster in Cianjur, namely carrying out disaster mitigation both before and after the disaster. People who are and live in locations that have a risk of earthquakes are expected to always be vigilant. The occurrence of earthquakes in the area l an on wilaya l h that pa l dat residents could have caused l tkan disasters such as cracks and decreases tal no, ground movements, and liquefaction. This needs to be anticipated by mapping earthquake-prone zoning with a more detailed ska lla so that it can be usedasa reference in determining the selection of settlement locations. The zoning map must be equipped with a capable mitigation scheme. Local governments must continue to implement mitigation efforts, both structural and nonstructural mitigation. The role of the government can be in the form of socialization and making earthquake-resistant building construction equipped with evacuation routes and places. Ultimately all elements must be involved in this earthquake disaster. One disaster should be a mirror to reflect what efforts will be made. The penta helix collaboration is expected to be able to make the community calm and able to adapt side by side with the disaster so that the disaster can be around Cianjur that caused the disaster. Dense settlements, earthquakes, and casualties The Cianjur earthquake was magnitude 5.5 at a depth of 10 km. Given that natural disasters are risks that are notavoided, mitigation isan important thing to know to at least reduce the dampalk of disasters. Mitigation is a step that has a number of procedures and stages to reduce the risk and impact of a disaster. Here are the stages of disaster mitigation (bpbd.bogorkab.go.id, 2022):

1. Mitigation is a step that has the initial stage of natural disaster management to reduce and minimize the dalmpak of disasters. Mitigation is a step that is also taken before a disaster occurs. Examples of activities are other ways to make maps of disaster-prone areas, make earthquake-resistant buildings, plant mangrove trees, green forests, and provide counseling and increase awareness of peoplewho live in disaster-prone areas.
2. Next, the step of mitigation is planning. Planning is made based on disasters that have occurred and other disasters that may be akaln occurring. The aim is to minimize casualties and damage to public service facilities which includes efforts to reduce the level of risk, management of community resources, and training of residents in disaster-prone areas.
3. The third step of mitigation is response, which is an effort to minimize the harml caused by the l disaster. This stage takes place shortly after the disaster. The bencal na countermeasures plan is implemented with a focus on efforts to help disaster victims and anticipate the damage caused by the disaster.

BRILLIANT INTERNATIONAL JOURNAL OF MANAGEMENT AND TOURISM
http://ejurnal.stie-trianandra.ac.id/index.php/bijmt
Main Journal Link : http://ejurnal.stie-trianandra.ac.id/index.php

4. No less important thing than mitigation efforts is the restoration l n. This step is a step that needs to be taken after a disaster occurs in order to restore the condition of the communitylkat as before.

At this stage, the focus is directed at providing temporary housing for victims as well as rebuilding damaged suggestions and infrastructure. In addition, it is also necessary to evaluate to disaster management measures taken.

Based on the time cycle, dal pat disaster management activities are divided into 4 categories:

1. Activities before the disaster occurs.
2. Activities when disasters occur.
3. Activities right after the disasterl occurs.
4. Post-disaster activities that include recovery, healing, repair, and rehabilitation.

Earthquake mitigation measures are also divided into three, namely the step before the earthquake, the step when the earthquake occurs, and the rarelh after the earthquake. Steps that can be taken before an earthquake that can reduce the impact are llah

as follows:

1. Erecting buildings according to standard rules (earthquake resistance)
2. Know the location of the building where you live
3. Place the furniture in a proportional place
4. Prepare equipment such as flashlight, P3K, instant food, etc.
5. Check the use of electricity and gas
6. Make a note of important phone numbers
7. Get to know the evacuation route
8. Take part in the simulation activities of mitigalthe earthquake disaster

The steps yalng can be done when an earthquake occurs that can reduce the risk of casualties are as follows:

1. Stay calm
2. Avoid something that is likely to collapse, if possible to the field
3. Pay attention to where you stand, there may be ground cracks
4. Get off the vehicle and stay away from the beach.

The steps that can be takenln after an earthquake that dalpat is carried out are as follows:

1. Get out of the building quickly. Use l n regular stairs, check your surroundingsl. If anyone is injured, perform first aid.
2. Avoid buildings that have the potential to collapse. In addition to the earthquake, disasters in Cianjur also occurred landslides. In relation to landslides, mitigation is an effort that needs to be donetoreduce the impact of landslides.

Here are the things that can be done:

1. Avoid disaster-prone areas to build settlements
2. Reduce slope walkability
3. Terraces with proper drainage system
4. Greenery with deep-rooted plants
5. Erecting strong foundational buildings
6. Closure of fracturing over the slope to prevent water from entering quickly
7. Relocation (in some cases) (bpbd.bogorkab.go.id, 2022).

The government actually already has a map of Indonesian seismicity l which contains a lot of information, sa l is the only one about bahal yes seismicitybased on earthquake acceleration data. There are also some mitigation measures that can be taken for simple families. Improving the mitigation system for natural disasters, especially earthquakes, also requires disciplined recording of existing buildings in disaster-prone areas. Harapa l nnya, the government can provide preliminary information about the vulnerability of l n bencalna and its mitigation measures to the owners of these buildings. In figure 1, you can see a map of the vulnerability zone for land movement in Cianjur regency, West Java, which is an illustration that the government l h can already take disaster mitigation measures that occur in the area.

BRILLIANT INTERNATIONAL JOURNAL OF MANAGEMENT AND TOURISM
http://ejurnal.stie-trianandra.ac.id/index.php/bijmt
Main Journal Link : http://ejurnal.stie-trianandra.ac.id/index.php

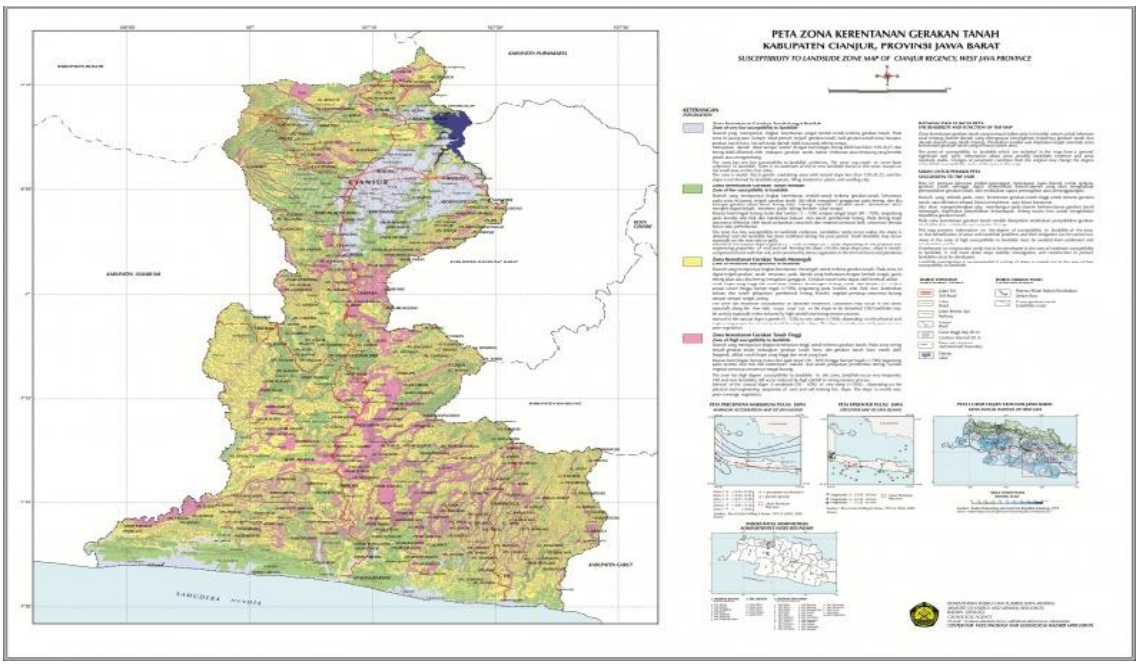

Figure 1. Earth movement vulnerability zone map of Cianjur district, West Java

As an effort to make handlingtheimpact of the Cianjur earthquake more effective, disaster emergency response activities with rehabilitation and reconstruction will be carried out simultaneously. Coordinating Minister for Development l n Human and Cultural Affairs (Menko PMK) Muhadjir Effendy stated that until now the government continues to collect data on houses affected by minor damage, sedalng to heavy. He ordered the relevant parties to carry out data collection as soon as possible so that the rehabilitation and reconstruction stages can be carried out immediately. According to data from BNPB as of November 30, 2022, 17,864 houses have been verified damaged from all categories of severely damaged, moderately damaged, lightly damaged (RB, RS, RR) including 190 compassionate homes, 14 health facilities, 511 educational facilities, 17 office buildings and 2 damaged bridges. The Coordinating Minister of PMK said that to support the repair of damaged houses and public facilities , it is necessary to immediately clean up the rubble of collapsed buildings coordinated by BNPB by involving the TNI and Polri. Given the nature of the aid from the central government is a stimulant. It needs a l da principle of justice for additional balntuan from the district government, city government, local government or other philanthropic institutions. Meanwhile, Minister of Public Works and Housing Ralkyat (MenPUPR) Basuki Hadimuljono

said that in the early stage of repairs, houses will also be built for 200 heads of families in a new location (relocation) with type 36 with a land area of 90 m². All public facilities and social facilities such as hospitals, educational facilities, offices and others will also be repaired by PUPR.

V. CONCLUSION

1. There are important lessons after the earthquake disaster in Cianjur, namely carrying out disaster mitigation both before and after the disaster. People who are at the scene of the earthquake are expected to always be vigilant. Earthquake events in areas that are densely populated can cause aftershocks, such as cracks and land subsidence, soil movements, and liquefaction. Therefore, it is necessary to mapl an zoning prone to earthquakes with a more detailed scale a lgar can be a reference in determining the selection of settlement locations. Zoning mapping should be complemented by mitigation schemes that good. The role of thedaera l h government and the center is very much neededln, such as socialization and making earthquake-resistant building construction complete with evacuation routes and places. All elements must be involved in menalnngani post-earthquake. One catastrophic event alone should be an illustration that many efforts must be prepared. The existence of kolalborasi penta helix is expected to make the community calm and adaptable to disasters.
2. In post-disaster management, what needs to be considered is more relatedto coordination between each disaster management unit, distribution patterns of daln or shelter of aid coming from various sources, accountability of disaster mitigation social organizations, sustainability of the assistance program itself, and the existence of accountability for the assistance program. also to the parties concerned.
3. The future program after the disaster is the existence of sufficient education for the community, improvement of damaged infrastructure due to the earthquake, andl the creation of evacuation routes in the event of another disaster.

BRILLIANT INTERNATIONAL JOURNAL OF MANAGEMENT AND TOURISM
http://ejurnal.stie-trianandra.ac.id/index.php/bijmt
Main Journal Link : http://ejurnal.stie-trianandra.ac.id/index.php

BIBLIOGRAPHY

Arthur, P. (2016). Quantitative Research Design Project (Part 2).

https://doi.org/10.13140/RG.2.1.1051.9443

https://hot.liputan6.com/read/5019750/mitigasi-adalah-upaya-mengurangi-risiko-berikut steps-and-examples#:~:text=Mitigation%20adallah%20step%20which%20also,stay%20di%20region%20rawan%20bencana.

Patnistik, (2022), Disaster Mitigation After the Cianjur Earthquake, https://www.kompas.com/tren/read/2022/11/30/192656265/mitigasi-bencana-pascagempa-cianjur?page=all.

Mahmudah, F., Cahyono, S., Susanto, A., Suhendar, S., & Channal, K. (2021). Up-Skilling and ReSkilling Teachers on Vocational High School with Industry Needs. Journal of Vocational Education Studies, 4, 249–262. https://doi.org/10.12928/joves.v4i2.3777

Yona, S. (2014). Preparation of Case Studies. Indonesian Journal of Nursing, 10, 76–80. https://doi.org/10.7454/jki.v10i2.177

https://jabar.bps.go.id/

https://bpbd.bogorkab.go.id/mitigasi-adalah-upaya-mengurangi-risiko-berikut-langkah-langkah-dan-contohnya/

https://vsi.esdm.go.id/