The role of communication as the disaster risk reduction in Indonesia capital city transference policy

Z Khumairoh, IDK K Widana and S H Sumantri

Disaster Management Study Program, Faculty of National Security of the Indonesian Defense University, Kawasan IPSC Sentul, Bogor 16810, Indonesia.

Corresponding author: chumik.zahrogmail.com

Abstract. Disaster can not be avoided, but the risk of disasters is able to be diminished through mitigation. Mitigation in the form of discussion and communication becoming an instrument of society in facing the matters of life. This study describes the role of government in preventing to face the hazard potentials and disaster mitigations, such as natural hazards, disasters and conflicts through the effective communication. This study applied a descriptive qualitative approach through forum discussion group method and literature study. The informants in this study are the stakeholders of government organizations those are the experts of disasters, such as BNPB, BMKG, KLH and the academics. The theories in this study are the theory of communication and disaster mitigation focusing on the effective communication for enhancing the disaster risk reduction related to Indonesia capital city transference plans in Kalimantan. The result of this study shows that the role of disaster communication can help the government giving and socializing the information to the society in order to support the successful of disaster risk reductions.

1. Introduction

The frequency, intensity, dimensions and trends of disasters have increased, especially in most countries in the Asia Pacific region. Based on data compiled by The Economic and Social Commission for Asia and the Pacific (ESCAP) and The UN International Strategy for Disaster Reduction (UNISDR) in the 2010 Asia Pacific Disaster Report, states that Indonesia ranks second in the list of the highest number of deaths due to the disaster natures [1]. Based on this fact, Indonesia is demanded to continue to improve and improve the disaster communication system through various efforts, one of which is communication with the public through mass media, public group discussions or open discussions with the public. Communication becomes one of the biggest problems in handling disaster problems, both conceptually (theory and assumptions) and actual (field application), namely "KIKK" (communication, information, coordination, and cooperation), especially in the aspects of speed, accuracy, accuracy and reliability. This is due to the fact that communication and information confusion causes inaccurate actions in disaster management, such as inefficient logistical distribution, harmonization and multisectoral cohesion in disasters which must be corrected immediately through increasing the effectiveness of the communication role [2].

Increasing the effectiveness of the role of communication in disaster management is expected to be able to help achieve the ideal conditions of human security in sustainable development, so as to minimize the impact of fatalities and material [3]. Furthermore Donna also explained that through
effective communication in various mass media, it can reduce public panic due to unclear issues or rumors or hoaxes related to disaster conditions. This means that communication has a larger role in disaster risk reduction.

Disaster communication has an important role in raising public awareness regarding disasters, including basic knowledge, types of disasters, disaster prone locations, disaster preparedness and mitigation, emergency response period, post-disaster including rehabilitation and reconstruction as well as contingency plans or sustainable plans to minimize various potential future disaster risks. In the process of understanding basic disaster knowledge, communication plays an important role in providing actual and factual information to the community, so that the community is able to absorb information and apply measures and efforts in disaster conditions quickly and accurately.

Effective communication is communication that provides convenience in understanding messages between the giver and receiver with language that is straightforward, clear, precise and complete so that they are able to practice the use of language both verbally and non-verbally and are able to have an impact on attitude changes on their users [4].

Furthermore, the effective communication will also be a media liaison between the government and local communities, so that the community will be able to increase effectiveness in accordance with the capabilities and potential of surrounding resources. The development of science and technology that continues to increase is expected to be in line with the intensity of programs or dialogue on disasters between the government, academics and the community in order to maintain public awareness related to various disaster information and increase disaster risk reduction efforts, one of which is in the Discussion forum for discourse on capital relocation policies Indonesia in Kalimantan.

The polemic about the relocation of the Indonesian capital has become a long-standing discourse that has led to widespread speculation among Indonesians. Determination of the capital of a country is not done by necessarily pointing to a specific location, but it requires a study and analysis based on various criteria and indicators in various aspects, including the growth and development of the city which includes the influence of internal, external, carrying capacity of the new capital, potential the condition of the relationship between the government and the community, support for space needs and public services, so that prime accessibility to the smooth running of government performance can be achieved, one of which is through the effectiveness of communication. Based on its function, the Capital City has a standard of functions that must be fulfilled, namely: as a Government Center, Public Services, Trade and Services, and Settlements.

Based on the explanation above, the main problem in this research is the minimum utilization of the role of communication between stakeholders as an effort to reduce disaster risk. This is because disaster communication has an important role in disaster communication, but disaster communication has not yet become part of the program to move the capital from Java to Kalimantan. Whereas the identification of disaster risks, both natural disasters and non-natural disasters, has been carried out by the government through various studies, one of which is a feasibility study, but the communication program to disseminate this to the stakeholders involved has not been carried out optimally. This study aims to illustrate the important role of communication as part of efforts to reduce disaster risk in the policy of moving the Indonesian capital in Kalimantan.

2. Conceptual framework

2.1. Communication theory
Communication is not only limited to science, but basic or primary human behavior or activities that cannot be eliminated in human life on earth, which aims to help humans complete important tasks in aspects of personal and social life [5]. Rudianto also explained that communication has a core function in the exchange of information and social interaction. In general, communication has three main objectives, namely:

a. To secure understanding, namely ensuring that the recipient through communication understands the message being conveyed;
b. to establish acceptance, i.e. communication is not only centered on the sender, but also to the recipient, therefore the recipient must be fostered and given an understanding of the symbols or language used in communication; and

c. to motivate active, ie communication aims to actively motivate the interrelation between sender and receiver [6]. If the communication goals can be achieved, then through appropriate and optimal communication, harmonization of relationships between individuals in the community can be established properly, so that common goals can be achieved, one of them being a sense of security from the potential threat of disasters around.

Disaster communication is considered as a new term that developed in communication theory since the Mega Tsunami disaster that struck Aceh in 2004. This tsunami disaster became a morning call waking up in the history of disaster in Indonesia. Communication in a disaster is a matter of uncertainty [7]. This means that in the role of communication in a disaster is to reduce the dissemination of information that is not sourced, hoaxed, invalid, uncertain which is troubling the community, for example the aftermath of the first disaster. This is due to the large amount of damage to public facilities and infrastructure, such as in the case of the earthquake and tsunami which caused damage to buildings and the loss of access to electricity, thereby hampering the distribution of factual and actual information relating to the conditions surrounding the time of the disaster.

Effective disaster communication is communication that is carried out periodically at three main stages of disaster management, namely during pre-disaster (preparedness and mitigation), emergency response, and post-disaster (rehabilitation and reconstruction) to stakeholders who can make the reception and delivery of information into more effective. Furthermore, disaster communication also includes risk communication, which is the process of sharing information about physical hazards through media as well as direct communication [8].

Kaye believes that communication management is a combination of communication and management concepts that are applied in various aspects of communication settings that aim to create harmony among communication actors [9]. This means that communication that is well coordinated, will create a harmonious relationship between stakeholders, so that they are able to achieve conditions ready to face various risks and potential disasters, considering communication is an important part in disaster mitigation efforts (disaster risk reduction). Communication also acts as a forum for development, community awareness development, to understanding and equating the different terms used between the government and the community in recognizing, understanding disaster risk and facing various potential disaster threats around them, one of them through communication of disaster information in Law Number 24 of 2007 concerning Disaster Management.

According to Haddow [10] in effective disaster communication there are 4 main basic foundations, namely:

1. Costumer Focus, namely the delivery of information precisely and accurately needed by the community and volunteers.

2. Leadership Commitment, which is a commitment to participate and establish active and effective communication that must be possessed by leaders in the disaster emergency response period.

3. Situational Awareness, namely the implementation of the principles of transparency in the collection, analysis and dissemination of controlled information related to disasters.

4. Media Partnership, namely cooperation between a team of disaster experts and various mass media in order to convey information accurately, quickly and accurately to the wider community, so that uncertainty and misunderstanding of information can be reduced properly.

Disaster communication is also participatory communication that involves the community in each stage, starting from planning, implementing, and evaluating [11]. Participatory disaster communication is considered to be able to increase the successful achievement of the implementation of disaster response programs. This is caused by the active role of the community as actors in disaster
management while still referring to the foundations of disaster management information from the government.

Based on this description, effective and targeted communication management will increase harmonization and bonding among stakeholders in efforts to reduce disaster risk. This means that through good, effective and appropriate communication, the people of Kalimantan will better understand the concept of disaster, its types, disaster-prone locations, potential disasters that will occur as well as the right steps to be taken in the event of a disaster, so as to reduce risks and losses both in real and material terms are caused by disasters.

2.2. Disaster mitigation theory

The mitigation process involves two main elements of action, namely disaster prevention and the reduction of adverse impacts of disasters at a minimum stage through various long-term structural policies using a technological and scientific and non-structural approach through legalization, legislation, regulation and regional planning [12]. In addition to the above understanding, mitigation is an effort aimed at reducing the impact of natural disasters, human-made disasters or a combination of both within a country or community [13]. Law Number 24 Year 2007 Article 1 Paragraph 9 also explains the definition of mitigation as "efforts to reduce disaster risk, both through physical development and awareness and enhancing the ability to deal with disasters". Furthermore, based on this understanding, mitigation consists of two main patterns, namely: (1) structural mitigation through the physical construction of facilities and infrastructure using a technology approach; and (2) non-structural mitigation that focuses on the formulation, decision making and implementation of governance and capacity building (legislative capacity building), legislation, insurance and so on [14].

As same as the line with these regulations, in Law number 23 of 2007 article 47 paragraph (c) relating to disaster management, the concept of disaster mitigation is applied in the form of educational activities, outreach, counseling, simulations and training both conventional and modern involving technology. Arimastuti [15] argues that socialization is one of communication activities. That is, in the implementation of disaster mitigation activities, communication has a primary role as a medium of education, outreach, simulation, training and so on. Increasing the effectiveness of communication will have a good impact on efforts to reduce disaster risk by the stakeholders, namely the community, government, business world, academics and so on.

Carter believes that based on experience in managing disasters in the world, the most effective response to disasters depends on two main factors, namely information and human or community resources [16]. This means that the two main factors, namely disaster information received by the community are the key effective and appropriate steps taken to deal with disaster problems if properly communicated.

3. Method

This study uses a qualitative method with a descriptive approach (qualitative method through descriptive approach) with text analysis. The study was conducted through FGD or Forum Group Discussion and literature study using several scientific sources, namely scientific journals, research reports, research data reports, and reference books that focus on the study of scientific texts with data collection techniques through the study of documentation from various sources of news texts, scientific discussions, and scientific journals relating to the issues of discussing policy discourse on moving the Indonesian capital.

This study presents data that are the result of discussions by academics relating to government policy in the discourse of the transfer of the Indonesian capital to Kalimantan in 2019. Afiyanti [17] argues that the data collection method uses the FGD method which aims to obtain data through interaction of discussion results. The interaction of a group of participants is able to increase the depth of information through the disclosure of various aspects of phenomena in life, so that it can be defined and explained.
The FGD participants consisted of various disaster experts including: BNPB, BMKG, KLH and disaster academics. The purpose of the discussion is to get an idea of the importance of the role of disaster communication so that it can help in solving problems and find solutions related to government policies in moving the Indonesian capital in Kalimantan based on the perspective of disaster, both risk, potential, vulnerable areas, to the readiness of local communities in facing disasters in the future.

The data analysis technique used in this study is a descriptive-qualitative analysis technique through the following steps: a) presentation of all data; b) the process of reducing data by sorting and selecting data in accordance with the field of research; c) categorization and classification; d) interpretation of research data conclusions.

4. Results and discussion

History records the discourse of moving the capital of Indonesia has always been a long polemic that reaps the pros and cons in its implementation. These pros and cons are widely expressed, reviewed, and studied scientifically in a variety of formal and informal discussions, one of them is the Group Group Discussion (FGD) held at the Indonesian Defense University which is one of the literature review material in this study.

Participants who attended the Group Discussion Forum (FGD), namely: 1) BNPB represented by Ir. Bernadus Wisnu Widjaja as Deputy for Prevention and Preparedness; 2) BMKG represented by Dr. Daryono, S.Sc., M.Sc. by reviewing the plan to relocate the capital of Indonesia based on aspects of the potential earthquake, tsunami and climate; and 3) KLH represented by Doni Agus Satriayudha, S.Hut, M.Si as the Director General of Forestry and Environmental Planning of the Ministry of Environment and Forestry.

The results obtained in the forum are as follows. First, Ir. Bernadus Wisnu Widjaja as Deputy for Prevention and Preparedness of BNPB explained "Disaster Data related to the Moving of the National Capital" which generally describes the potential of Kalimantan, the availability of ground water, shipping and flight paths, disaster risk index, matrix of criteria in the development of penta helix in the InaRIisk system belonging to the State InaRIisk system BNPB. Furthermore, he also considered that Kalimantan Island, which was targeted to be the location of the National Capital of Indonesia, had three locations including; a) South Kalimantan Province; b) East Kalimantan and; c) Central Kalimantan. The three candidate provinces in the perspective of disaster by BNPB are considered to have advantages and disadvantages, with the following description:

a) South Kalimantan Province
Based on its superiority, this province has the threat of a low earthquake disaster, dealing directly with the Jawam Sea and not directly bordering the country's borders. However, this province has weaknesses, namely the threat of high floods and flash floods, the availability of limited groundwater resources and peat layers that are vulnerable to forest and land fires.

b) East Kalimantan Province
East Kalimantan Province has the following advantages; Its strategic location is close to 2 major airports in Balikpapan and Samarinda, and it is close to the Semayang port - Samarinda. Furthermore, the province has an abundant supply of clean energy and water network infrastructure, a heterogeneous demographic structure because most are migrants, delineation locations traversed by ALKI II around the Makassar Strait, free of natural disasters, earthquakes and forest fires, do not border directly to the national boundary, has the availability of land with APL status, production forests with HTI concessions and production forests free of concessions. Meanwhile, the weaknesses of this province are flood-prone areas in areas close to the upstream of the watershed, and the availability of low groundwater resources.
c) Central Kalimantan Province

The Province of Central Kalimantan has more or less the same advantages as the Province of East Kalimantan, as follows: a strategic location that is close to 2 major airports in Balikpapan and Samarinda, close to the Balikpapan - Samarinda toll road access, close to Semayang port, the availability of energy network infrastructure and clean water, heterogeneous demographic structure that is mostly migrants, delineation locations traversed by ALKI II around the Makassar strait area, free from earthquake disasters and forest fires, not directly adjacent to national borders, have land availability with APL status, production forest with HTI concessions and concession-free production forests. Meanwhile, the weaknesses of this province are flood-prone areas in areas close to the upstream of the watershed, and the availability of low groundwater resources.

Secondly, Dr. Daryono, S.Sc., M.Sc. as representatives of the BMKG considered that in reviewing the current plan to move the capital of the State of Indonesia from the aspect of disaster, previously it was noted that there were some countries that had succeeded in doing so and there were also those who had problems from the aspect of disaster such as Kazakhstan and Belize. The reasons for moving the capital of the State of Indonesia in its development can be identified as follows:

a. Small disaster risk
b. Representation of National Identity
c. In the middle of the territory of the Republic of Indonesia
d. Energy Availability
e. Disaster Safe
f. There is a carrying capacity around
g. Economic and Population Equity
h. Environmental Quality

So, based on scientific studies relating to the existing strategic environment, DKI Jakarta is considered no longer ideal to be the Capital City of Indonesia because it has a high enough threat of disaster. Tectonically, Indonesia's territory itself has 6 subduction zone earthquake sources with 16 megathrust segmentation and more than 295 active faults. There are 3 earthquake source threats for DKI Jakarta namely the megathrust zone in southern West Java, the megathrust zone in the southern Sunda Strait, and the active fault on the mainland (Baribis Fault, Lembang Fault, and Cimandiri Fault). Based on historical records in DKI Jakarta, West Java, and Banten, there have been more than 22 destructive earthquakes.

He further explained that Kalimantan Island was the leading candidate to become the National Capital of Indonesia. Based on the map of earthquake activity in Indonesia, it appears that Kalimantan Island has the lowest level of earthquake activity although there are still some active faults in Kalimantan which are the source of the earthquake. The BMKG monitoring results showed that there were many earthquakes in Kalimantan. Most of the earthquake events in Kalimantan have relatively little strength. Based on the history of earthquake events in Indonesia, East Kalimantan was recorded as having experienced a destructive earthquake and tsunami in 1921 precisely in Sangkulirang which had an intensity scale VII-VIII MMI, which means many buildings had moderate to severe damage. Gunung Mas Regency, Central Kalimantan, which is the location of the planned National Capital City, has never had an earthquake.

Based on the results of a study conducted by BMKG, besides Kaltara and East Kalimantan, the entire Kalimantan region is relatively safe from the threat of strong earthquakes because of its location far from the source of the megathrust earthquake and regional faults. The results of tsunami modeling with an earthquake scenario M = 8.5 in the megathrust zone of North Sulawesi show that the beaches of North Kalimantan and East Kalimantan have the potential to cause tsunamis with an AWAS threat status with a height of more than 3 meters. South Kalimantan ALERT and Central Kalimantan Waspada. Meanwhile from other aspects, the level of danger and risk of catastrophic forest and land fires is quite high, especially in the southern Central Kalimantan region, especially in the dry period.

Third, Doni Agus Satriayudha, S. Hut, M.Si, as the Director General of Forestry and Environmental Planning of the Ministry of Environment and Forestry, who discusses the discourse of
moving the Indonesian capital through the theme of "Releasing, Exchanging and Changing the Function of Forest Areas through the Concept of Capital Development through the Capital State (IKN) from Environmental and Forestry Aspects ".

Forest areas in Indonesia have an area of 120.65 million ha (land) and also aquatic forest areas. Forest areas are considered strategic to be managed for development. Forest areas can be utilized by the use of forest areas outside the forestry sector. This can be done by using the Forest Area Use method (by not changing the status and function of forestry, such as a lease-to-use forest area permit) and changes to the designation of forest areas such as the exchange of forest areas, and the release of HPK forest areas.

IKN development must pay attention to the sustainability of environmental processes and functions. Sustainability of environmental productivity, safety, quality of life, and community welfare. So, based on the view of environmental and forestry aspects which are based on several main aspects: preparation of the legal basis and spatial planning, provision of space for IKN, infrastructure that must be provided, and the application of the principles of balance and sustainability.

Formulation of Legal Basis and Preparation of IKN Regional Spatial Planning, among others: a) It is necessary to prepare the revised RTRWN, and RTRWP / K along with its KLHS and the preparation of changes is done quickly; and b) RDTR needs to be developed for Prospective National Capital cities and their KLHS that are detailed and comprehensive so that they can be used as an AMDAL exception.

Furthermore, the Provision of Space for IKN, among others: 1) Changes in the Designation and Function of Forest Areas, can be pursued through a mechanism in accordance with PP 104 of 2015 concerning Procedures for Changing Allocation and Function of Forest Areas. Changes to the Designation and Function of Forest Areas can be done in provincial units (Revised RTRWP) or partially and; 2) Completion of Existing and Future Licensing, which includes: Forestry licenses for existing licenses shall be monitored and evaluated on the results of revocation, license reduction, and / or waiting for the validity period to expire. In addition, in the event that the capital city of the country already has an RDTR that is equipped with a detailed and comprehensive KLHS, all businesses and / or that are required to AMDAL in the National Capital region are only required to have UKL / UPL.

Some infrastructures that must be prepared in and around IKN, include: a) Maintaining certain Forest Areas in and around IKN that function as Life Support Systems; b) Engineering to maintain / improve the carrying capacity of the Environment, including the treatment of ex-mining pits as reservoirs and sources of clean water for IKN; c) When extreme rainfall and characteristic conditions that do not absorb water need to be engineered to harvest water and direct the flow of water so as not to cause damage to the IKN infrastructure; d) Restoration of areas in and around IKN with natural vegetation; and e) Infrastructure development must be environmentally friendly (efficiency related to emissions, water and energy).

Finally, he also said that it is necessary to apply the principles of balance and sustainability, including: a) The process of planning and implementing infrastructure development in IKN must implement the principles of balance and sustainability; and b) Monitoring and Evaluation of the application of the principles of balance and sustainability in the planning and implementation of infrastructure development.

Based on the explanation above is the identification of important issues in the process of moving the capital from various perspectives, one of which is disaster communication through literature review and FGD. The issues raised by the stakeholders are real disaster issues that have occurred in recent years in Jakarta. While the issues that are not yet understood by the stakeholders are the potential for future disasters, risk index, vulnerability, groundwater availability, earthquake history and other disaster data held by East Kalimantan.

There is a difference in understanding related to these important issues needed communication to get an agreement in reducing the risk of capital transfer in the process of transfer. One of them is interpersonal communication with regard to the local culture of the people of Kalimantan. In addition to interpersonal communication, ongoing communication is also needed in the transfer process,
because continuous communication can empower the community continuously. It means, in the context of this research that is in line with the results of the FGD above, it is necessary to increase early disaster socialization, increase disaster risk reduction literacy, as well as advocacy to stakeholders at all levels, from the government, the private sector, to the local community.

Based on these facts it is known that the Group Discussion Forum (FGD) is one of the best communication media in conducting education and outreach to increase public knowledge related to potential disaster risks in the discourse of moving the Indonesian capital to Kalimantan. Emosda et al [18] states that one of the realization of communication in a disaster is education, outreach, simulation and training that aims to equip the public with knowledge about potential, disaster risk and alternative efforts to mitigate community-based disasters that are alert, responsive and resilient to disasters.

5. Conclusion

The role of communication as an effort to reduce disaster risk in the discourse of relocating Indonesia's capital city in Kalimantan has an important role in educating, socializing and providing understanding to the public. The discourse of moving the capital of Indonesia has always been a long polemic that reaps the pros and cons in its implementation. These pros and cons are widely expressed, reviewed, and studied scientifically in a variety of formal and informal discussions, one of which is the Group Discussion (FGD) based on three main aspects as follows:

1. BNPB reviewed the strengths and weaknesses of three main regions, namely South Kalimantan Province, East Kalimantan Province and Central Kalimantan Province. The conclusion from his opinion is that the province of East Kalimantan has the greatest potential as the new capital of Indonesia.

2. BMKG in terms of earthquake, tsunami and climate aspects considers that Kalimantan Island is the leading candidate to become the Capital City of Indonesia, because Kalimantan Island has the lowest level of earthquake activity although there are still some active faults in Kalimantan which are the source of the earthquake. Furthermore, BMKG also explained that besides Kaltara and East Kalimantan, the entire Kalimantan region was relatively safe from the threat of strong earthquakes because of its location far from the source of the megathrust earthquake and regional faults; and

3. KLH assesses the obligation to pay attention to the sustainability of environmental processes and functions in the discourse of moving the new Indonesian capital. Sustainability of environmental productivity, safety, quality of life, and community welfare based on environmental and forestry aspects include: the preparation of a legal basis and spatial planning, the provision of space for IKN, the infrastructure that must be provided, and the application of the principles of balance and sustainability.

So, based on the explanation above, the main problem in this study is the lack of utilization of the role of communication between stakeholders as an effort to reduce disaster risk. This is because disaster communication has an important role in disaster communication, but disaster communication has not yet become part of the program to move the capital from Java to Kalimantan. Whereas the identification of disaster risks, both natural disasters and non-natural disasters has been carried out by the government through various studies, one of which is a feasibility study, but the communication program to socialize this to the stakeholders involved has not been carried out optimally, so the realization and the implementation of the role of disaster communication can help the government in providing information to the public, so that it can support success in disaster risk reduction efforts.

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