

ROLES OF PUBLIC SECTOR AND MASS MEDIA IN MANAGEMENT COMMUNICATION FOR NATURAL DISASTERS: A CASE STUDY OF SONGKHLA PROVINCE IN THAILAND

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Abstract— This study aimed to analyze the roles of public sector and mass media in management communication for natural disasters in Songkhla Province. In part of the public sector, the effectiveness of communication management plan and development were considered in every occasion of disasters. In part of mass media, the roles of present functions and information towards natural violence were studied. This qualitative research data was collected using in-depth interviews and focus group discussions. Data were analyzed and the results were reported. The concepts of David K. Berlo (1960) were used as a guide for data analysis and showed that the source formed by single command. Initial disaster messages were screened by the Disaster Management Board of the Province and then the Provincial Governor of Songkhla Province has taken supremacy to be the informant of disasters. As the situation rapidly changes, the disaster emergency message needed to be precisely written and promptly announced. A critical disaster discovery was publicized by national and regional media channels including television and radio station broadcasts, especially three local radio stations, so the population at risk (or receivers) prepared to survive before a disaster strikes. Meanwhile, during the catastrophe stage, fact-finding reports by mass media were important for the receivers. Mass media also have important roles in mobilizing assistance from wider public for victims of the disaster.

Index Terms— Management Communication, Natural Disasters, Mass Media, Thailand

I. INTRODUCTION

More than 60 percent of violent natural disasters such as flood, storm and earthquake have occurred in Asia. Thailand, one of Asian countries has high risks of violent natural disasters [1]. In the last decade, there were violent natural disasters occurred worldwide. The disasters extremely damaged human's lives and properties such as Tsunami in Southeast Asia in 2004, Cyclone Nargis in Burma and the earthquake in Sesuan, China in 2008, the earthquake in Haiti in 2010 and earthquake and Tsunami in Japan at the beginning of 2011. All these natural disasters caused a number of deaths and damaged properties. They created communication problems. When the violent natural disasters occurred, communication networks including telephone systems, mobile telephone systems and other public utilities were damaged. These made difficulty of information transfer from the damaged areas to outer world and vice versa. As the result, the study of government and mass media's communicative administration during damaging duration was important so that comprehensive strategies used to assist all victims could be developed which then could reduce losses and/or rehabilitate them.

II. LITERATURE REVIEWS

A. Definition of 'National Disaster'

Thikhaphut and Tansirattanawong (2006) [2] state that natural disaster is any danger happening naturally. Every time it happens, it countless affects and damages lives, properties and environment. There have still been natural disasters occurring nowadays. Boonyakanjana and Aryupong (2011) [3] say that there are ten types of natural disasters: volcano eruption, earthquake, Tsunami, various kinds of storms (Tropical Cyclones /Tornadoes and Thunderstorms), flood, drought, fire, landslide and mudslide, blizzard and avalanche, human epidemic and animal disease.

The natural disasters occurring in Thailand can be categorized into nine types: tropical cyclone, flood, thunderstorm, storm surge and slide, earthquake, Tsunami, drought and forest fire. The damageable disasters occurring in Thailand very often are meteorological disasters that are storm, flood and drought. The most violent disasters occurring in Thailand are:

- Tropical storm at Laem Talumphuk, Pakpanang District, Nakhonsrithammarat Province on 25th October 1962. There were 870 people died, 160 people disappeared and more than 16,000 people did not have habitation. The total damage value was more than 960 million Bahts.
- Typhoon Gay at Chumporn Province on 4th November 1989. There were 602 people died and 5,000 people injured. The total damage value was more than 11, 000 million Bahts.
- Typhoon Linda on 2nd – 4th November 1997 caused the flood and violent wave in the area of 11 southern and eastern provinces.

B. Natural Disaster Management Notions

The modern notions dealing with the natural disasters emphasize planning for continuously facing with it since before, during and after the occurrence of disasters as called Disaster Management Cycle. The cycle consists of (a) Prevention – to avoid or protect the disasters and damages, (b) Mitigation – activities focusing on effects and violence reduction causing damages to community and nation, (c) Preparedness – pre-preparation to increase capability of government, organization, community and individuals in facing with the disaster effectively, (d) Emergency Response – sudden reaction to the disaster, (e) Recovery – done after the occurrence of disaster to recover the community to normal

situation, and (f) Development – revision and study the happened disasters for operational system adjustment for least damage [4].

According to the above notions, the natural disaster management has emphasized prevention, mitigation and preparation for the disaster. This cannot be achieved without effective communication management between public sectors and mass media.

C. Communication Concepts

According to McQuail (2005) [5], communication means giving and receiving, message transfer and acceptance, including response, share and interaction. Chirasopone (2003) [6] refers to Berlo (1960) [7] who created a communication model called S M C R Model consisting of:

- Source: people who are skillful in communication by encoding the message, having positive attitude towards the message receiver, being knowledgeable towards the sending message
- Message: content, sign and message sending methods
- Channel: message sending methods through five senses
- Receiver: people who are skillful in communication by decoding the message, having similar attitude, knowledge and social cultural background with the sender that causes effective communication

Although they are all communicative components, there still are obstacles affecting the effectiveness of communication. Therefore, it is necessary to specify appropriate communication method for effective communication. Communication among crisis must thus be studied specifically.

III. RESEARCH METHODS

This research study is a qualitative research aiming to study the roles of communication used by government sectors in Songkhla province in planning and administrative managing communication during the process of the disaster: before, during and after the occurrence of natural disasters. The study would also explore roles and information which the mass media in Songkhla province should have undertaken and presented during the natural disasters.

A. Study Area Selection

Songkhla province is the center of government, economy, society and education in the Southern Thailand. Its location is shown in figure 1. There were at least three major violent natural disasters in the province. The first was Hat Yai Flood in November 1988 with damage value of more than US\$ 28.5 million. The second was Hat Yai and Neighborhood Flood in November 2000 with the damage value of more than US\$ 485 million. The third was the depression bombarding Songkhla province and flood in Hat Yai and neighborhood at the beginning of November in 2010 causing the damage value of more than US\$ 285 million. [8]. Those disasters occurring in Songkhla province were similar to big natural disasters occurring all around the world. In other words, when it happens, it affects people profoundly as it damages public utilities, including communication networks. Telephone system and mobile telephone system are totally damaged causing communication problems between people in the disaster areas and people outside. Therefore, the study of the roles of government sectors and mass media

In managing communication in the process of natural disaster occurrence was necessary as the results could help decrease the damages caused by disasters.



Figure 1. Study Area in Songkhla Province

B. Population and Samples

The population in this research was categorized into two groups:

- Government organizations and personnel in provincial and local administration levels relating to disaster management in Songkhla province, Purposive Sampling Technique was used to select the total of 55 people as the sample size.
- Mass media and public relations personnel in Songkhla province. Purposive Sampling Technique was used to select the total of 60 people as the sample size. They were divided into three groups, mass media administrators, news staff and local community radio entrepreneurs in the risk areas of four districts.

C. Research Instruments

The research instruments were divided into two types for five sets as follows:

- Three sets of in-depth interview that were semi-structure interview forms which were used for collecting data relating to concepts and details of communication plan and administration of government sectors and the mass media participants.
- Two sets of focus group discussion that were semi-structure discussion forms used for collection data relating to concepts and details of communication plan and administration of local administration level sectors and community radio broadcaster participants.

IV. FINDINGS AND DISCUSSION

The findings of this study were divided into two parts based on research objectives focusing the government and mass media sectors.

A. Government Sectors

Data collected from the government sectors were sub-divided into two parts, communication plan and management during the occurrence of natural disaster, using the S M C R Model of Berlo (1960) [7] as conceptual concepts for interpretation.

1) *Communication Plan* In terms of the message senders, the findings showed that the leaders of the government sector regularly held monthly meeting and aimed to plan for distributing information to public, preparing their staff, tools and equipments ready for the disaster. Moreover, natural

disaster warning was the main focus for disaster protection and management before, during and after the occurrence of the disasters in order to reduce the loss of lives and properties. Public Relation Department Songkhla was responsible for the center of disaster information coordination and publication so that people and relating government sectors would receive information from a single outlet.

For information, it emphasized on correctness and rapidity to decrease the loss of lives and properties. The frequency of information giving to the public depended on what happened at the time. That was its frequency would increase when the situation was more violent. The process of information transfer was from the high level to the low level. In another word, the commands or policies always come from provincial administrators to the district and the local administrators. However, the disaster event was reported from the low level to the high level, that is, from village headmen, sub district headman, Chief Executive Officer of the sub district Administrative Organization. to the Provincial Governor. There were two types of information sending to the people. The first was for structured protection such as water source dredge and the second for unstructured protection such as at risk and suffered locations, duration and preparation required for the upcoming disaster.

For information channels, the information transferred from the provincial sectors to people was sent through two main channels: three local radio stations and the website of the Public Relation Department Songkhla. Whilst the local sectors used community wide broadcasting, including local leaders to orally giving information to villagers as the local leaders have been accepted and widely regarded by the villagers. Therefore, the information transfer was quite effective.

In term of message receivers, there were two types of receivers: victims directly suffered by the disaster and receivers living outside the disaster areas. The first group was told to prepare for the disaster management at each level of the disaster danger. However, the people were recommended to wisely check the information distributed by all other media outlets as at time incorrect information and rumor relating to the disasters could be heard.

2) *Communication Management* In terms of the message senders, natural disaster management particularly during the actual disaster, the government sectors in Songkhla province emphasize that aids immediately provided to the victims. Four administration centers were established to cope with the natural disaster. These covered all risk areas of the whole province with the distribution and delegation of responsibility and management to help the victims. The coordination of and the cooperation among all mass media sectors was done only at the provincial administrator level. There was no formal coordination between mass media and the local administrators.

For information, information governmental management in Songkhla province mainly focused on the correctness and its rapidity to decrease the loss of lives and properties. The frequency of information giving depended on the situations of the natural disasters. That was the higher of the frequency, the more information given to the people. If there was rumor or an important announcement, the Provincial Governor would confirm, announce or refute it. The ways of information transfer were done in many forms. If it is the command or policy, it was often done from a high level to a low level. Distributors would be from a provincial administrator to a district level and then to a local level. However, the disaster

situation report was done in the opposite direction: from a low level to a high level (provincial governor).

In relation to the message channel, there were two communication channels: an internal channel and an external channel. The internal communication was done in the government organization that was quite a narrow communication but fast. It was done through mobile phones, including Application supporting communication such as Line – Group. Line is used for natural disaster information transfer that helps quickly send message to the receivers.

The external communication was done to communicate among all government sectors and between government sectors and people in the risk areas. There were several channels used for this external communication. The provincial government sectors communicate with people using two main channels: 1) three main local radio stations and 2) a website of Public Relation Department of Songkhla Province. The local government sectors use wide broadcasting of the village, including people or local leader to orally distribute information to the people. This type of communication played important roles in natural disaster information transfer in the remote areas.

Message receivers were divided into two groups: people in urban areas and people in rural areas. The people in urban areas have many channels for gaining current information. These include radio, television, internet and wide broadcasting depending on individual interest. Whilst people in the rural area received information less than the urban people. Therefore, not only radio was used, television also played an important role. Moreover, the local leader was an important information distributor to the rural people by using oral communication.

South East Meteorology Center also plays important roles in giving the natural disaster information. The message receivers are divided to sub-groups so that they can get the information faster and more variety. The groups of people are general people, agriculturists, especially rubber growers, shrimp farmers, merchants, fishermen, and construction industry. However, there was no formal evaluation whether target population received the information sent to them by the government sectors or not. It was reported that this was difficult to evaluate.

B. Findings from Mass Media Sectors

The results could be divided into two parts: roles of mass media and information to be presented by the mass media.

1) Roles of mass media

They are divided into five categories: information giving, cooperation, cultural heritage, entertainment, and gather all powers.

In terms of surveillance of the mass media, it showed that the mass media give information in three stages of the disaster process: before, during and after the occurrence of natural disasters. Before the disasters happen, the mass media present interesting information towards disaster, causes and tendency of disaster occurrence, readiness of community and local organization in their preparation for the disaster. This information enables the people to be active and stimulate relating organizations in their preparation for assisting people. During the occurrence of disaster, the mass media presents information in the whole system relating to the actual disaster event, including what happening, how to deal with it and finding solution. It also reported its effects, especially in the affected areas, the loss of lives and properties. The loss is

always emphasized because of public interest. After the disaster, the mass media would present suffers caused by the disaster, the details of loss, details of assistance provided to affected population, the summary report of the disaster and lessons learnt for any future disaster. Moreover, there is information which called for donations to be given to sufferers.

For correlation, the mass media believes that they play important roles of natural disaster management because they are the center of information distribution. They also called for assistance and coordinating among many organizations involved in the disaster. There are news reporter teams who directly interview people about their need. They also interviewed relating organizations about their assisting plans. . Specifically, during the disaster events, the radio stations play an outstanding role as middlemen between sufferers and helpers. They also interpreted information given people in government sectors to lay-people language. For example, staff of the South East Meteorology Center gave too academic information causing misunderstanding among people. These study results suggested that the South East Meteorology Center should hold training programs for radio broadcasters and news reporters so that they would increase their understanding of the weather information and then transfer it more effectively.

Despite the important role of the mass media, there was not any meeting or conferences for planning to deal with natural disasters organized for mass media staff. They were seen that they did not have direct roles in such disasters. They were perceived as only participants of government sectors' activities.

Results of the study indicated that mass media could help knowledge transferred through "socialization". There were on-going presentations of the effects of previous natural disasters. The content included protection and preparation methods so that people could prepare themselves for future disasters. Many media channels developed their own database focusing on disasters. Some created event-driven simulation so that it can be very beneficial for future disaster prediction and used for future warning. Furthermore, the mass media in Songkhla province states that to effectively report the natural disaster in the future, there should be a natural disaster report manual by brainstorming the mass media staff. A guideline for effective reporting natural disaster should also be developed. An example of mass media activities was the event-driven simulation of flood in Hat Yai in 2005. Another example was that local community radio broadcasters seeking folk wisdom in predicting natural disaster by observing behaviors of animals and changes in plants.

The participants of the mass media sector said that before and during of natural disaster, the entertainment was not needed. The mass media should emphasize methods used to prevent and manage the disaster. However, after the natural disaster event, entertainment can be used to relief stress and negative psychological conditions of victims. Radio broadcasters must be able to interact with listeners so that they can identify those who are at risk of being in a stress situation. Presentation techniques should be developed so that their listeners could share their experiences with others. It was anticipated that radio broadcasters the heart of communication during the natural disaster crisis.

For mobilization, the study results showed that all of newspapers, radios and televisions are efficient in mobilizing "mass" or communities. It generated "powers" shown by actual denotation which then helped the disaster victims. Mass media of many organizations could gather goods and large amount of

donating money. However, the mass media staff did not see their roles in bringing the donated goods and money to the victims as they did not have sufficient staff. The researcher of this study recommended that mass media should work with other social organizations such as the Red Cross to effectively manage all donations.

2) *Information Presentation*

The information presented to the people in the period of natural disaster should have three indicators: correctness, unbiased and human respect.

In terms of correctness, the study found that the mass media presented the information correctly and re-checked it with its source prior to the presentation. It was noted that information did not come from a single source. When there was a rumor of natural disaster, the mass media would check it deliberately with the organization responsible for that particular issue before presenting it to the people by checking it with the organization responsible for that particular issue. News reporters were at the disaster areas to double check the correctness by themselves.

However, the information of injured and dead people from any major natural disasters has to be sent from the organization responsible for it such as Department of Disaster Prevention. In case of Songkhla province, it is the provincial governor. After the occurrence of disaster, the mass media should check the information from the organizations or experts to investigate the causes and effects of the disaster. Then it was broadcasted to people as indicated in the guidelines.

In terms of morality, the mass media has to present correct and neutral facts by not comparing with others, avoiding any words causing conflict and solving all problems.

The morality of information presentation can be categorized into two parts:

- morality for people in presenting actual facts by emphasizing on equality and based on damages and violence of the areas, not physical areas. The more affected area should get the priority by being firstly presented, and
- morality for government sectors in presenting the information comprehensively of all aspects. Information relating to the work done by government sectors should be checked and all stakeholders such as disaster victims, government staff, including academics and experts were given opportunity to explain facts. If there is any conflict, the mass media has to be neutral.

In terms of human respect, each type of mass media has different methods showing their respect the human's honor: Firstly, the radio has to use polite words, not to encourage fear or conflict. They do not oppose others or criticize the third person or other organizations. During the disaster event, the radio broadcasters should be cautious since confusion could easily occur. Secondly, newspaper with the headline news should not look down or disparage the human's honor. Photographs used must be based on human right principles by not broadcasting inappropriate photos. Thirdly, television focusing on information presentation and warning referring to the government organizations involved with the disaster management should not add more information and not predict any in advance. Moreover, the inappropriate photograph of dead people should not be broadcasted since it causes sadness to the family and society.

V CONCLUSION

These research objectives are divided into two parts: the government sectors and the mass media. Results showed that both sectors are relating to each other. That is, the leaders of the government sector at the local level play important roles in distributing natural disaster information from the government sector to the general people. The government sectors should thus develop and maintain the training programs for the local leaders to increase natural disaster knowledge, including communicative skills, so that effective communication between the leaders and people can be further developed.

The findings of the study showed that the local leaders rarely interact with the mass media in distributing natural disaster information. The information was only given by authoritative government officers. It is recommended that programs should be developed so that activities which can build up positive relationship between the local leaders and mass media people. These will increase channels for spreading the disaster information to people. Moreover, local leaders can be another information source for the mass media. .

The study indicated that the roles of mass media affect directly and indirectly to the natural disaster victims. Governments expect that information be broadcasted correctly and speedily. The mass media in Songkhla province broadcasted the information unbiased and they respect the human's honor.

Mass media has played important roles in collecting donation. There should be a formal arrangement between the media sector and social organizations to effectively managed and maximized the use of human resources to achieve the goal of providing tangible help to disaster victims.

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