

THE REPRODUCTION OF HUMAN (IN)SECURITY: A CASE STUDY OF POST-
FLOOD AYUTTHAYA

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Arts Program in International Development Studies

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งานวิจัยนี้เน้นการศึกษาความมั่นคงของมนุษย์ในชุมชนที่ได้รับผลกระทบจากอุทกภัยเมื่อปี พ.ศ. 2554 ในจังหวัดพระนครศรีอยุธยา โดยมีวัตถุประสงค์เพื่อที่จะประเมินการผลิตซ้ำของความ(ไม่)มั่นคงของมนุษย์ อันเป็นผลมาจากปฏิบัติการด้านการช่วยเหลือ ตลอดจนการเรียนรู้ และประสบการณ์ของชุมชนเอง การศึกษานี้พยายามอธิบายกระบวนการการผลิตซ้ำของความ(ไม่)มั่นคงของมนุษย์ โดยให้ความสนใจกระบวนการการเรียนรู้ของชุมชนที่ได้รับผลกระทบว่าเข้าใจและปรับตัวเพื่อทำให้ความมั่นคงของมนุษย์เข้าสู่ภาวะปกติได้หรือไม่ อย่างไร นอกจากนี้งานวิจัยนี้ยังได้เสนอแนวทางในการสร้างใหม่และการปรับโครงสร้างใหม่ของความมั่นคงของมนุษย์ในสถานการณ์หลังเหตุการณ์ภัยพิบัติอีกด้วย

งานวิจัยนี้เป็นงานวิจัยเชิงวิเคราะห์คุณภาพ โดยใช้อุทกภัยในปี พ.ศ. 2554 เป็นกรณีศึกษา และหน่วยในการวิเคราะห์ เนื่องจากจังหวัดพระนครศรีอยุธยามีความสำคัญทั้งทางด้านประวัติศาสตร์ การท่องเที่ยว และเศรษฐกิจ โดยเป็นที่ตั้งของนิคมอุตสาหกรรมถึง 5 นิคมด้วยกัน ซึ่งมีนัยสำคัญต่อการพัฒนาทางเศรษฐกิจของประเทศอย่างมาก

งานวิจัยนี้พบว่าอุทกภัยในปี พ.ศ. 2554 ได้ส่งผลกระทบต่อความมั่นคงของมนุษย์ในด้านอาหาร สุขภาพ สิ่งแวดล้อม บุคคล ชุมชน และการเมือง ซึ่งเกิดขึ้นทันทีและในระยะสั้น การปฏิบัติการด้านความช่วยเหลือจากหน่วยงานต่างๆ ส่งผลให้เกิดการผลิตซ้ำของความมั่นคงของมนุษย์ในระดับหนึ่ง อย่างไรก็ตาม แม้ว่าความมั่นคงของมนุษย์จะถูกผลิตซ้ำ แต่ยังมีประเด็นที่เกี่ยวกับอุทกภัยและภัยธรรมชาติอื่นๆ ที่ผู้มีส่วนได้ส่วนเสียจำเป็นต้องพิจารณาเมื่อต้องเผชิญกับภัยธรรมชาติในอนาคต

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TANANCHON SUTTICHUAY: THE REPRODUCTION OF HUMAN (IN)SECURITY: A CASE STUDY OF POST-FLOOD AYUTTHAYA. ADVISOR: Asst. Prof. NARUEMON THABCHUMPON, Ph.D., 78 pp.

The study focuses on human security in the post-flood environment of disaster-affected community. The research aims to assess the reproduction of human (in)security constituted by relief operation as well as institutional learning of community's experience. It explains the reproduction process of human security concentrated on community of affected areas. In addition, it further proposes potential way of reconstructing and restructuring human security in the post-disaster environment future preparation.

This research is the analytical-qualitative study being employed the case study of the 2011 flood in Lae Paniad Luang Elephant Camp and Ayutthaya Hospital community as the unit of analysis. Ayutthaya, housing five industrial zones and contributing to a large amount of the country's GDP as well as its historical significance, was severely affected by the incident in 2011. The methodology utilized in the study includes in-depth and semi-structured interview, potentially aimed to extract qualitative data analysis.

The study found that flood in 2011 resulted in immediate-to-short term food, economic, health, environmental, personal, community and political insecurity. The relief operation by different sectors contributed to addressing multi-dimensional human insecurity to some degree. The findings suggest that even though human security has been reproduced to some extent two years after the disaster, there have been numbers of issues different stakeholders need to learn and take in account in coping with natural disaster.

Field of study: International Development Studies Student's Signature:.....

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ABBREVIATIONS

ADPC	Asian Development Preparedness Center
BACC	Bank of Agriculture and Agricultural Cooperatives
CNDR	Civil Network for Disaster Relief
CSOs	Civil Society Organizations
DDPM	Department of Disaster Prevention and Mitigation
FAD	Fine Arts Department
FROC	Flood Relief Operation Center
GDP	Gross Domestic Product
EIA	Environmental Impact Assessment
IOs	International Organizations
MOAC	Ministry of Agriculture and Cooperatives
MOC	Ministry of Culture
MOD	Ministry of Defense
MOL	Ministry of Labor
MOPH	Ministry of Public Health
NESDB	National Economic and Social Development Board
TWHIC	Thailand World Heritage Information Center
UCS	Universal Coverage Scheme
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organization

CHAPTER I

INTRODUCTION

1.1 Prologue

“There is fish in the water, there is rice in the field.” – a longtime description of the amply rich, fertile land where Thailand is situated for hundreds of years. Thai society has been dependent on rivers for as far back as “Siam” or even “Thai” had not yet existed, perhaps long before the Sukhothai Kingdom was known. Communities settled along the rivers given that they relied significantly on water to cultivate. In addition, rivers and canals were used as the fortress to protect the capital or cities from foreign invasion. People settling along the river are quite common until today because river plays the major role in their livelihood. Loy Krathong is an example of the ritual practice that Thai people pay respect to rivers for their contribution. The livelihood of Thai people is closely attached with rivers. They adapt along occurrences in nature so that they can maintain the livelihood which rivers, in other words water, is an important part of their life as seen along Chao Phraya River, the vein and rice bowl of the Kingdom.

Changes over the period of time come with the changing perception toward water. Industrialization has somehow altered how people perceive and live with water. Industries, for example, rely in many ways on water supplies for their activities as well as transportation. In short, they need regular water to run their economic activities and businesses. Improving and maintaining water supplies, therefore, is considered the very basic infrastructure needed to effectively be constructed.

Those pictures change over the particular situation such as natural disasters, especially floods, causing severe loss of lives, property and long-term impacts. Floods are the major natural disasters Thai people have been dealing with for many decades, or even centuries. Despite the best efforts, oftentimes severe damages caused by floods leave behind different lessons for people to learn. Various sectors, especially the state, have been coping with the situation which results in different outcomes. Each region is affected by floods according to the severity of particular natural disaster and geographical condition as well as the preparedness and response.

In 2011, millions of people across Thailand had faced the most tragic flood in a century. The disaster caused uncountable loss of lives, property, impacts on economy as well as livelihood. The approximate evaluation in terms of economic value may be assessed, however, loss of lives and wide range of impacts are impossible to be calculated. The 2011 floods also raised many issues such as water management, relief measures and policy or even the skepticism whether the natural disaster is indeed man-made occurrence.

Floods in 2011 not only resulted in economic damages, but also the underlined social impacts on livelihoods of residents in the affected areas. Socio-economic impacts were caused severely during the onset and aftermath of the disaster which forced the residents to cope with the immediate circumstances of loss and adapt after the situation began to recover. Issues such as social cohesion, gender and intergenerational relations, political economy of aid distribution and its governance have been raised throughout and after the disaster. The 2011 flood in Thailand has subsequently been assessed for its resilient recovery operation which may result in the potential implication of disaster risk management in the future.

This research aims to assess the restoration of human (in)security in the post-flood environment. The study extensively evaluates human security constituted by relief operation, recovery and reconstruction efforts during and after the disaster. The post-disaster condition of particular community demonstrates how human (in)security is reproduced by certain factors in certain circumstance. This research is purposely aimed to contribute to proposing potential ways for affected community to restore and recover from disaster-affected insecurity. In other words, the reproduction of human security in disaster-affected community is significant which the findings may ultimately contribute.

1.2 Research Questions

This research undertaken seeks to answer the following questions:

Main research question: How has human (in)security been reproduced in post-flood Ayutthaya?

Sub-research questions:

1. How did the 2011 flood affect human security in Ayutthaya?
2. How did relief operation address human security in the affected community?
3. How did affected community restore human security?
4. How should affected areas as an institutional learning process deal with future incident?

The abovementioned questions contribute to the understanding in the reproduction of human (in)security of disaster-affected community. The questions further lead to how affected areas can and should learn from the incident as an institutional process. The questions themselves yield scientific importance to the analysis which more or less contributes to the reproduction of human security.

1.3 Objectives

The purposes of this research are:

1. To assess human security in the post-flood environment of Ayutthaya.
2. To evaluate human security constituted by relief operation in the post-flood.
3. To understand the reproduction process of human security in affected areas.
4. To propose potential way of reconstructing human security in the post-disaster environment.

1.4 Conceptual Framework

Upon conducting this research, human security and institutional learning are chiefly and principally employed in framing the study. The following model explains the reproduction of human (in)security of the post-flood community which undergoes relief operation, recovery and reconstruction through existing institutional mechanism.

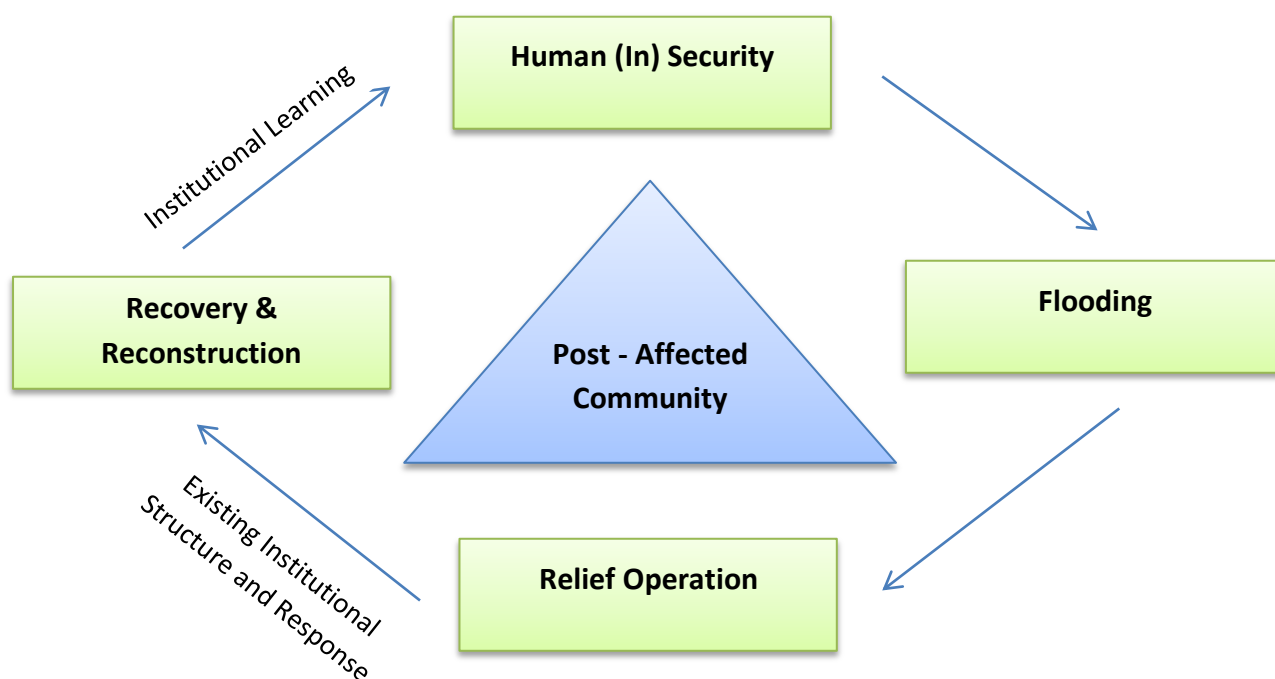


Figure 1: Conceptual Model

Flooding caused impacts on human security which more or less exist among affected communities before the disaster. The onset of flood saw human security gradually dropped. During disaster, community is usually insecure. Food, economic, health, environmental, personal, community and political security were threatened since the onset of the disaster.

Relief operation carried out by multiple sectors could relieve, recover and reconstruct the affected community during and after the disaster. Relief operation includes government agencies, inter-governmental agencies, international organizations,

civil society organizations as well as public minded people whose actions and contribution helped reduce the potential insecurity.

In addition, if there is a multi-level institutional learning of community and relief operators, mainly state authorities, human security in different dimensions tends to be created and restored in the post-disaster environment. But if it fails, affected community may repeatedly be insecure in the aftermath of particular disaster. In short, reconstruction and recovery process justifies how and how much human security has been reproduced.

1.5 Methodology

The research method employed in this study is qualitative methodology. Documentary and field research including the case study will be utilized. This qualitative research aims to explain the phenomenon during and after the 2011 floods in Ayutthaya and assess human security of affected community, relief operation carried out during and after the incident.

1.5.1 Case Study

Case study is defined as a comprehensive description and explanation on the various aspects of an individual, a group, an organization (community), a program, or a social situation (Berg, 2009). The approach allows the researcher to concentrate the selected case intensively (Kumar, 2011). Case study is applied to analyze data on the subject examined as much as possible. When put together data obtained from different sources and methods in case study, research questions can be proven and confirmed in theory, and in practice. The case study of the 2011 flood in Ayutthaya, Thailand is justified because the incident in the area is marked as one of the most severe natural disasters, costing immensely economic loss and extensive socio-political impacts given that it houses numerous industries, accounting for a large numbers of the national GDP.

The case study of the 2011 floods in Ayutthaya was mainly analyzed in this research. The units of analysis are:

1. Lae Paniad Luang Elephant Camp – Data obtained from interviews with the Elephant Camp staff and people in the surrounding community;
2. Community around Ayutthaya Hospital – Data obtained from interviews with community residents, business owners.

In addition, further expert interviews were conducted with Civil Society Organization representatives, state officers and international organization officers (UN) who provided other perspectives on the reproduction of human (in)security in the case selected. (See Figure 1.2)

1.5.2 Data Analysis

The research was conducted using both primary and secondary data through in-depth, semi-structured interview, literature study, observation in line with the analysis on the topic of human security and institutional learning. In analyzing the data, source triangulation was also applied.

1.5.3 Sources of Data

Sources of data include primary and secondary data. Primary data was obtained through in-depth, semi-structured interviews and observation. The secondary sources data in this research gained through documentation of governmental, intergovernmental, non-governmental and international organizations' studies.

1.5.4 Data Collecting Techniques

1. In-depth and semi- structured interview

In-depth interview provides freedom of the interview content and structure to glean existing and important data from the interviewee (Kumar, 2011). Semi-structured

interview also allows the researcher to collect data within the limited time from the sources. In-depth and semi-structured interview was extensively applied to collect data mainly from affected community which included different stakeholders.

2. Documentation

Documentation entails significant knowledge in terms of historical background, facts and figures as well as analysis of any particular events where research needs to fulfill the prospective study. Secondary data was gathered from documentation process chiefly found from researching from multiple sources such as World Bank and other international organizations reports, reports of governmental agencies, private sector reports, new articles, individual advocacies and video records of related interviews, etc.

3. Observation

Observation – a systematic and selective way of watching and listening of particular phenomenon – is one of the methods used for primary data collection (Kumar, 2011). Observation in this research had continuously been utilized to extensively differentiate general interaction of each sectors affected by the floods as well as physical change such as infrastructure built and rebuilt after the floods.

1.5.5 Analyzing Techniques

Primary and secondary data were gathered and analyzed as follows:

1. select data that address and relate to the research questions;
2. analyze data obtained in parallel with conceptual framework and guiding theory;
3. present analyzed data in a comprehensive format.

1.5.6 Validity and Reliability

Triangulation is defined as the mixing of data or methods of diverse data obtained from various sources in order to validate the claims or information that might emerge from the initial pilot (Olsen, 2004). Data collected were triangulated among different sources to confirm validity and reliability of the research. Investigator triangulation – the use of more than two sources in any research stages of the same study – was employed to compare data obtained from all stages of data collection (Hussein, 2009). The following steps was conducted to validate data obtained:

1. Compare data obtained among interviews conducted in the field work from different sectors;
2. Compare data obtained from interviews conducted in the field work with data obtained through documentation.

Methodology/No. of Interviews	Elephant Camp	Hospital Community	Experts
Semi-structured Interview	10	15	3
In-depth Interview	5	5	3

Table 1: Case Study Interview

1.6 Research Significance

The study addresses possible unaddressed issues where human insecurity caused by natural disaster may obstruct the restoration and reproduction of human security in the post-flood environment. Issues such as social justice, equal remedial measures as well as multi-dimensional human security during and after the disaster were unveiled comprehensively in the study. This research contributes directly to wide range of

stakeholders including affected communities, policymakers, civil society organizations as well as public minded people, from which extensive findings can be taken into consideration should stakeholders engage with such disaster-related operation in the future.

1.7 Limitations of Research

One of the difficulties for data collection was the bureaucracy of government agencies which required long and complicated process of arrangement. In addition, there might be political disparity among community members. Therefore, it was necessary to be aware of sensitive questions and responses during fieldwork study. Religious diversity and sensitivity was seriously considered given that there is a large Muslim community in the case study site.

CHAPTER II

HUMAN SECURITY AND THE 2011 FLOOD IN THAILAND

Upon scoping this study, literature review was undertaken in order to narrow down areas of research and knowledge gap of relief and recovery operation in the post-flood recovery and reconstruction planning of Thailand. A range of literatures including reported conducted by governmental, intergovernmental agencies, private sectors and individual advocacies have extensively contributed to the remarkable guideline and framework upon conducting the field study. Literature review is delegated into two major areas including descriptive explanation on geography of Ayutthaya province as well as impacts and measure as well as guiding theories and analysis of elements which conceptualize the scope of this research.

2.1 2011 Floods and its Impacts

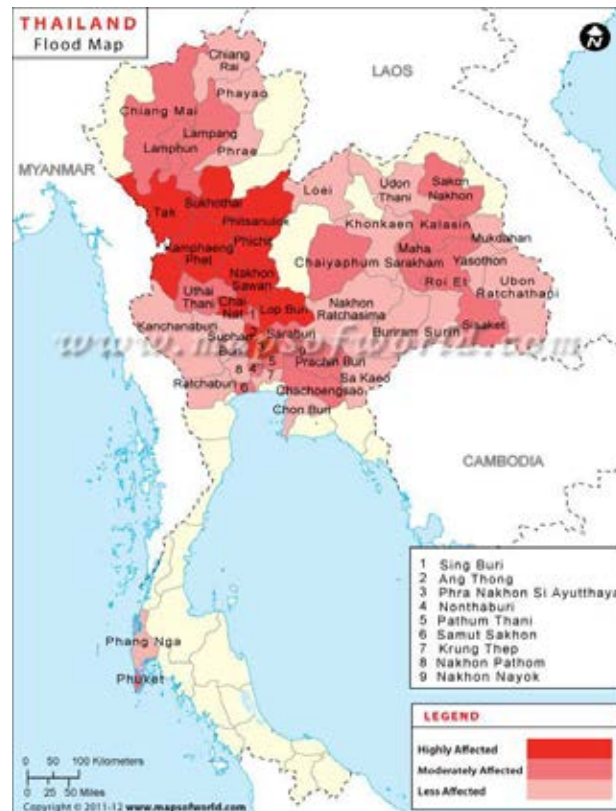


Figure 2.1: Flood Map (Source: <http://www.mapsofworld.com/thailand/maps/thailand-flood-map.jpg>)

The 2011 floods in Thailand marked one of the country's most severe natural disasters enhanced by the results of monsoon rains combining with the series of tropical cyclones, starting from late July through October (Aon Benfield, 2012). The excessive rainfall was related to the presence of an active La Niña phase of the El Niño-Southern Oscillation (ENSO), affecting massively in the northern and central section of Thailand before the floodwaters began to shift southward to Bangkok metropolitan area in October (World Bank, 2011).

The key elements of Thailand floods in 2011 first occurred in the northern sections of the country as a result of the tropical monsoon season. The arrival of the Tropical Storm Nok-ten in late July had accelerated the massive rainfall and floods across the northern, northeastern, and central sections of Thailand. Moreover, the other remnants of additional storms reaching Thailand had heightened floods and rainfall totals. Those systems of storms are Haima in June, Haitang in September, Nesat in September, and Nalgae in October (Aon Benfield, 2012).

As the monsoonal and tropical cyclone-triggered rains continue in the northern part of the country, the rainwater drained into Chao Phraya River, the river swelled and breached its banks while flowing southward. The floods ultimately covered the northern province of Chiang Mai to Ayutthaya. In addition, in this period, the Bhumibol and Sirikit dams had discharged water as they could not manage the massive water that was accumulated. The water flowing southward along the Chao Phraya River to Ayutthaya, Pathum Thani and Nonthaburi provinces had broken floodgates which control water to traverse through irrigation systems of canals and rice paddies in the areas (Aon Benfield, 2012).

In October, as the floods shift southward, the focus turned to Bangkok as efforts had been made to prevent the capital from floodwaters. The reports show that 470 locations of 32 districts were impacted by floodwaters (Aon Benfield, 2012). In total, more than two million residents were ordered to evacuate as floodwaters forced the closure of Don Mueang International Airport and some highways of Bangkok. In November, the floods began to recede as large pumping stations were applied to drain water into Chao Phraya River, and the Gulf of Thailand respectively (World Bank, 2011).

The 2011 flood in Thailand has caused massive damage impacts to the residents and country's economy. The immediate impacts were widespread across the sections affected by floodwater. In total, approximately 10 million people were affected by the floods in 65 provinces where personal property, commercial, infrastructure, transportation, agricultural effects were immense (World Bank, 2011).

Government reports indicate that 1.5 million homes and other structures were affected during the floods. According to the Thai Real Estate Information Center (REIC), Bangkok metropolitan alone has 300,000 homes impacted. The World Bank estimated that the total economic losses to households were at USD 2.7 billion (Aon Benfield, 2012).

Electrical appliances and equipment, medical equipment, automobiles and food and beverage industries were severely impacted. 7,510 industrial and manufacturing plants in 40 provinces were damaged, especially Ayutthaya province where multiple industrial estates including Rojana, Saha Rattana Nakhon, Hi-Tech, Bang Pa-In, and Factoryland which were severely damaged and forced to cease production during the floods. Companies that were affected in those industrial estates include Japanese automakers such as Toyota, Honda, Mazda, Nissan, Mitsubishi and electronic device manufacturers such as Sony, Nikon, Hitachi, etc. Department of Industrial Works estimates that USD 7.4 billion were damage costs that were currently in production and finished goods whereas the World Bank noted that the overall economic cost nationwide was USD 32.5 billion (World Bank, 2011).

Transportation and agriculture infrastructure were also affected by the floods. The Department of Highways reported that parts of 1,700 roads, highways and bridges were damaged or destroyed during four months. The total economic cost was listed at USD 4.5 billions. Don Mueang International Airport was forced to close in October as the floodwaters moved southward from northern Bangkok and the main terminal building was deluged, suspending the service until March the following year which required USD4.8 million for repairmen. Train service was also disrupted in the multiple affected areas. The Royal Thai Government estimates show that the economic loss to the farm

sector was USD 2.4 billion mainly rice accounted for rice crop and bumper crop (World Bank, 2011).

Central section of Thailand was most severely affected by the disaster in terms of economic loss given that a number of industrial zones cluster largely in the flooded areas. Among all flood-affected provinces in the central part, Phra Nakhon Si Ayutthaya was hit heavily by the floods leading to damages and impacts on industry sector in the province whose contribution of the country's GDP has relatively been large. The ministry of Industry set the damage of the four industrial estates of Phra Nakhon Si Ayutthaya – Saharatna Nakhon, Rojana, Hi-tech, Bang Pa-in – and the other two in outside of Phra Nakhon Si Auytthaya – Nawanakon (Pathum Thai), Bang Kadi (Nakhonsawan) – at THB 237.4 billion. The immediate measures to protect the industrial estates were not effective enough to secure the areas from floodwaters. Similarly, the community around the industrial zones in those provinces was considerably affected by the floods (World Bank, 2011).

2.2 Relief Responses

Flood Recovery Operation Centre (FROC) was established to provide immediate emergency responses and to coordinate among government bodies. The immediate needs were more or less met by appropriate measures of the government's different ministries, and the Thai Red Cross Society which also played a critical role in assisting residents in the affected areas. The Thai Red Cross Society provided emergency needs including food, relief kits, drinking water and medical kits. While the Ministry of Social Development and Human Security was in charge of establishing shelters, Ministry of Public Health was also responsible to set up emergency clinics to for medical provision in various affected areas. In addition, aides from private and informal sectors sent directly to the areas also helped intensified the situation. Approximately 60,000 army, naval and air force personnel were assigned to the multiple areas cross the affected region being responsible for water management, humanitarian assistance, managing relief supplies, and evacuation missions. The role of military during the incident implies one potential

measures of state to deal with the emergency situation such as natural disasters (World Bank, 2011).

The Government initiated a range of relief measures including cash transfer of THB 5,000 for households affected by the floods and additional THB 2,000 support. In addition, the Government was prepared to put in place financial measures to assist agricultural, business and industrial sectors whose productivity was suspended and extremely affected by the floods. The measures covered debt moratorium for specialized financial institutions (SFIs) and agricultural cooperative, loan for specific target groups, low-interest loan and soft loan (World Bank, 2011).

The Yingluck administration announced the immediate, short and long-term strategic plan establishing committees in charge of specific functions to manage the disaster-aftermath recovery. The strategic plan is aimed to provide recovery measures and create disaster prevention mechanism in order to be prepared for possible natural disasters, especially floods. The Government's strategic plan has initially been implemented from the very onset of the disaster. While short-term plan was put in practice almost immediately after the floods, the long-term strategic committees are set for policy recommendation of reconstruction, future development and water resource management.

Policies have been laid out across the multiple sectors with the timeframe outlined above. The major areas the strategic plan is aimed to cover wide range of sectors which include: infrastructure, productive, economics, social and crosscutting. Each sector consists of different elements and issues which have been and are to be implemented by policy formulated at the national level. The Government has clearly outlined measure and policy to be implemented according to different sectors on the basis of 3R's – Rescue, Restore and Rebuild (Termpittayapaisith, 2012). Furthermore, the Eleventh National and Social Development Plan drafted in 2012 was clearly outlined the prospective plans to ensure the preparedness for natural disaster response such as developing the data system and telecommunication network and strengthening private sectors, enterprises, local authorities and communities (NESDB, 2012).

However, there have been extended and comprehensive studies on the 2011 floods in Thailand by multiple agencies who have contributed to particular policy recommendations potentially designed at the national level. The studies bring about various recommendations based on the lessons learned from the disaster. Risk assessment plan conducted by authorities is required for community and national preparedness as well as early warning communication which are necessarily needed in order to predict nature of the disasters and anticipate the possible behaviors, etc. Some studies suggest that the emergency management and coordination at the national level must be reviewed given that the role, response and function are blurred, and lead to confusion and difficulty to coordinate, especially at the time of emergency. Furthermore, the existing community-based disaster relief management should also be more buttressed. This loosely structured organization including community volunteers, rescuers, and external volunteers is proven to be effective in terms of quick responding, training, coordinating and preparing community for the risks from disasters. The advantage of this fact must be taken into account when policy is being formulated at the national level to help strengthen community-based disaster management so that the loss can be controlled (World Bank, 2011).

2.3 Ayutthaya

Ayutthaya or Phra Nakhon Si Ayutthaya Province is situated in the central section of Thailand. The province is 76 kilometers north of Bangkok bordering Lop Buri and Ang Thong to the north, Pathum Thani, Nonthaburi and Nakhon Pathom to the south, Saraburi to the east, and Supan Buri to the west. Ayutthaya covers the area of 2,556 square kilometers and is subdivided into 16 districts. Ayutthaya is a flood plain area which contributes to the rice production with four rivers flow through. The total population is approximately 800,000 as of 2012 (Ayutthaya Provincial Office).

Ayutthaya is not only well-known for the history of modern Thailand, but it is also important for Thailand's economy as it houses one of the country's largest industrial zones: Ban-Wa, Saharattana Nakhon, Bang Pa-In, Rojana, and Factory Land. The Gross Provincial Product (GPP) of Ayutthaya accounts for 355,177 million baht ranked the

sixth largest after Rayong, Chonburi, Sumat Sakon, Samut Prakarn and Prachin Buri. The major economy of Ayutthaya is composed of industry, trade, agriculture and forestry, respectively (Ayutthaya Comptroller Generals Office).

Ayutthaya has resourceful water sources with Chao Phraya, Lopburi, Pa Sak, and Noi River passing through. There are more than 400 natural canals and 600 irrigation waterways across the province. In addition, underground water is also one of the main sources of water in Ayutthaya according to the condition of its geology. Apparently, Ayutthaya was severely flooded in 2011, affecting all 16 districts across the province (Ayutthaya Provincial Office of Natural Resources and Environment).



Figure 2.2: Satellite images showing Ayutthaya before and during flood

Source: http://en.wikipedia.org/wiki/File:2011_flooding_in_Ayutthaya_Province-EO-1_merged.jpg

2.4 Assessing the Reproduction of Human (In)Security – Losses and Needs

Assessment in terms of losses and need is essential, particular in the aftermath of the disaster to estimate how human security was threatened. The 2011 floods assessment has been conducted by various agencies which contribute, more or less, to address how and what should be implemented to cope with the post-flood human insecurity. It is worth understanding effects caused by the floods and recovery needs in different sectors which

all somehow associate with one another. The section focuses both on assessing flood effects and response in Thailand and Ayutthaya in particular.

2.4.1 Food and Agriculture Sector

Flood water took over farming areas including crop fields, poultry farms and livestock barns, etc. Agriculture sector no doubt was heavily affected despite the fact in some areas had attempted to fight with flood water by different means. However, damages were unavoidable in many areas as water level continued to rise, stopping almost every means farmers protected their produce.

There were huge losses incurred to main agriculture crop, such as rice, sweet corn, vegetables, sugar cane, maize and many other fruit trees (World Bank, 2011). Damages to crops immediately affected food security, especially in the affected areas where local produce was the major source of food. While major crops were damaged by flood water, the losses of livestock also resulted in the shortage of food supply. Some farmers were able to move their large animals such as pigs and cattle to the safe areas in the wake of the flood due to early warning, but many farmers, particularly the poultry, could not manage to relocate animals even though they knew that water was coming into the farms. In 2011, loss of agriculture sector in Ayutthaya was rated at 4,458 million Baht which ranked in the top three among affected provinces across the country (MOAC & World Bank, 2011).

Relief and response to floods for agriculture sector was initiated mainly by the MOAC and the Bank for Agriculture and Agricultural Cooperatives (BACC) in the forms of compensation and loans. The compensation was given for damage in crops, livestock and fisheries based on numbers of rai affected. The assistance aimed to cover all affected areas which the rate of compensation varied by detailed criteria of different sub-sectors (MOAC, 2011). In addition, damages of farm equipment and infrastructure were compensated through the other government agency.

Agriculture is considered the major economic means which the majority of Thai population in rural areas lives off. The shortage of food resulted immediately in the rising food price, not only in affected areas, but across the country as experienced during the

disaster. Damage and loss in agriculture sector affected farmers of different kinds directly, and severely. The socio-economic impacts on the livelihoods of the farming families were significant while the need for assistance is also enormous. Assistance from the state more or less helped relieve immediate difficulty, however drawbacks and challenges for a long-term recovery have evidently been questioned. Food and agriculture sector losses were inter-related to different human insecurities for a certain period of time, one way or another.

2.4.2 Economic Impacts and (In)Security

Floods in 2011 inevitably caused considerable economic impacts to the whole country. The Office of the National Economic and Social Development Board (NESDB) reported that loss calculation in terms of flood-affected sectors showed obvious and immense impacts on Gross Domestic Product (GDP) when comparing to the pre-flood real GDP (NESDB, 2012). Macroeconomic perspective impacts based on the calculation of different sectors and subsectors mainly including infrastructure, productive, social and crosscutting sectors in the post-flood projection impacts largely on GDP while the growth of the early politically stabilized economy like Thailand would also fall (NESDB, 2012). Economic impacts caused by floods affected both private and public ownerships, which the relatively larger effects born by public sectors (World Bank, 2011).

In the microeconomic perspective, floods create immediate impacts on livelihoods of millions in the affected areas. It severely caused damages on commercial, industrial and agricultural property and equipment. Microeconomic impacts on livelihood, particularly in affected areas like Ayutthaya where industry and agriculture account for a large portion not only for provincial but also for national productivity, resulted immediate, short, medium and long-term economic insecurities across multiple sectors and groups of population.

Loss in wages was predicted as much as THB 122 billion since the onset of disaster (World Bank, 2012). It can be assumed that a large proportion of loss in wages occurred among the most vulnerable population whose access to social protection and security is limited. Formal and informal workers can be considered to define the degree of

impacts particular group might have to encounter during the flood. While the number of affected formal workers was assessed by the Ministry of Labor (MOL), there was no official information for affected workers in the informal sectors which also include migrant workers which make up of a large number of labor forces, particular in industrial sectors as such.

The vulnerable population includes mainly informal workers and migrant workers, both registered and unregistered. These groups have very limited access to social security and protection. Simply speaking, they are not provided or sufficiently provided the safety net, especially the economic safety net which justifies access to other social protections. Approximately nearly 10 million workers in the informal sectors lack access to formal protection, almost 1 million international migrants were affected across flooded area, and almost 14,000 registered migrant workers are found in Ayutthaya (MOL, 2011).

Impacts on economic difficulty brought by the disaster resulted in impacts on livelihoods, especially the vulnerable group including informal workers and migrant labor who lost wages and income during and after the flood. The fact that these groups have limited access to social protection such as social security or compensation when unemployed makes them socially fragile to social risks given that their capacity to maintain the economic means was disrupted due to the flood.

Immediate relief measure might dress urgent needs among these groups, however, long-term recovery plans which are dependent on national policy needs to be reviewed in terms of labor policy, more specifically recovery measures in the time of disaster like the 2011 flood toward labor forces in different sectors. Social security and social protection for these vulnerable groups need to be reviewed by policymakers since the existing was proved insufficient to address long-term recovery and resiliency among the groups so that economic insecurity caused by floods will not lead to other insecurities.

2.4.3 Social (In)Security

Floods in 2011 affected all social sectors composed of health, education and culture. Considering the components of human security, social impacts can be underlined

in the post-flood. Health, for example, is linked with other factors that help reproduce human security after the flood while education being affected in terms of physical structure not only require reconstruction of damages, but also comprehensive plans of recovery given that educational institutions across affected areas were not able to function for months. Or damages on historical site also resulted in community security, apart from economic loss generated by tourism industry. This section focuses on two major sub-sectors – health and cultural heritage – which entails (in)security in social dimension during and after the post-disaster.

Health

The disaster impacted health sector across all affected areas even more severely than annual or usually flood. No doubts, the flood caused some hundred deaths mainly caused by drowning, and flood-borne disease was not reportedly a major outbreak during two to three months in most flooded areas. Many health facilities were destroyed and interrupted by the flood which put even more burdens to people in need of medical service, bring hardships that threatened health security.

In Ayutthaya, provincial health offices and district health offices were destroyed by the floods with the relatively higher portion on private facilities. Interestingly, all of the severely impacted health facilities are located in the low-lying, flood-prone plains of central section of Thailand which accounts for 90 percent of all damages in health facilities in 2011. Most of the damage to health facilities is structural caused by flood currents (World Bank, 2011)..

Flood-related health issues were as much urgently critical as food insecurity during and after the disaster. People in many flooded areas suffered largely from water-related diseases such as skin disease and leptospirosis, etc. Water-borne diseases are associated with flooding. Sanitation was also a concerned issue, especially in the areas where water was not flowing. Floods may also lead to an increase in vector-borne outbreak through the expansion of vector habitats. Standing water can be a breeding ground of mosquitoes carrying and transmitting diseases such as dengue, malaria, etc. (WHO, 2013).

Ministry of Public Health (MOPH) was one of the most active government agencies in relief operation where efforts to counter health issues were seen and recognized. MOPH doubled up surveillance activities to monitor the situation and disseminate timely information relating to health issues such as outbreak, campaigns on flood-related health risks, etc. MOPH also conducted post-flood survey on public health facilities to assess the needs for reconstruction and rehabilitation (MOPH, 2012).



Figure 2.3: Flood water at Ayutthaya Hospital was as high as 2 m.

Source: http://www.moph.go.th/ops/iprg/include/admin_hotnew/show_hotnew.php?idHot_new=41723

One of the interesting and successful flood disaster responses plan promoted by MOPH and become well-known and coined as “Bangrakam model”, named after one of Phitsanulok province districts, flooded every monsoon, where flooding did cause only a few problems in the areas. The idea of “2R 2P” was introduced by the government attributed by Bangrakam district. The first “P” (Preparation) emphasizes on public information campaigns, and medical equipment and supply preparation as well as staff capacity building before the flood allows healthcare personnel to prepare and plan for evacuation and emergency strategy if the certain extent of disaster is to hit the area. The first “R” (Response) provides scope and plan of relief and response to health issues. It includes health units, outreach teams as well as assessment of mental health among affected communities. The second “R” (Recovery) must be taken into account immediately after the situation. Recovery includes need assessment and utility reconstruction such as clean water and sanitation. Recovery phase reduce post-disaster health risk potentials. And the last “P” (Prevention) brings about future plan in dealing with future disaster.

Prevention requires assessment in various agendas to strategize long-term and sustainable prevention plan (World Bank, 2011).

The existing healthcare provision in Thailand, also known as the “Universal Coverage Scheme” (UCS), helped increase considerable health security and resilience during and after the flood. The UCS benefited affected people in the form of flexible payment mechanism because the system allows patient to be referred without payment conditions during the disaster. The state-subsidized scheme covers medical expenses of Thai nationals, and the number of subsidy has been increasingly injected into the system over the past years (Limwattananon et al, 2012). The successful implementation and subsequent improvement of the UCS contribute extensively to the relief and response to disaster health risks, sharing burdens among the vulnerable to a certain extent. And the attempt to accelerate effectiveness of the provision at MOPH continues addressing health insecurity ever since.

In short, health sector has shown significant recovery from the flood since the situation started to abate in 2011. Government’s efforts, mainly through the MOPH’s practices – mobile units, information center and emergency transport, etc., to deliver health relief and recovery has produced significant resilience among affected population, especially the vulnerable who benefited largely from the UCS the country has subsequently been developing since it was put in place a decade ago. In addition, the local practice of 2R2P provides lessons for other areas where degree of resilience might differ according to different factors to learn and practice in dealing with future disaster. It is worth noting that health security has been reproduced not only in Ayutthaya but also in many other affected areas after the disaster in 2011, which also creates new platform for the country to cope with future disaster scenario in terms of healthcare.

Cultural Heritage

One of Ayutthaya’s importance, besides the economic significance, is its historical background and cultural heritage. Having been the Kingdom’s center for 417 years and listed UNESCO’s World Heritage site since 1991 defines tremendously the historical heritage of modern Thailand today (TWHIC, 2013). Damage and losses of

cultural heritage sector by disaster definitely create immediate-, short- and long-term impacts on multi-dimensional security of affected community and population (TWHIC, 2013).

Cultural heritage is classified as tangible and intangible heritage. Tangible heritage includes mobile and immobile which are sites or monuments whereas the mobile ones are collection of archives, for instance. The cultural heritage signifies human history, national treasure and identity of the country which, in terms of value, is impossible to evaluate even though productivity generated by tourism industry may be assessed.

Floods in 2011 affected cultural heritage across 26 provinces. Assessment was carried out mainly by the Fine Arts Department (FAD), a functioning body under the Ministry of Culture (MOC). FAD produced damage and restoration estimates with the total cost for repairs and restoration works at THB 1.5 billion. Interesting enough, almost half of the cost goes to Ayutthaya (World Bank, 2011). The calculation was not even included with the longer-term economic impacts from the tourism industry such as declines in tickets and sales, for example. Extended losses including the disrupted events and activities or the temporary closedown of sites also incurred in Ayutthaya where cultural events take place throughout the year.

Ayutthaya is significant as a cultural heritage sector, therefore, it is essential that the sector is actively preserved, protected and monitored during and after the disaster. In 2006, flood water affected Ayutthaya historical sites and cultural heritage once, however, the 2011 disaster occurred in the unexpected scale that, on one hand, brought about a lesson worth learning for the sector to prepare for future flooding. Ayutthaya's cultural heritage sector requires specific attention, particularly from the state, given the damages and extensive losses from the disaster that create impacts on the city and country as a whole, apart from the livelihoods of those dependent on its economic significance.

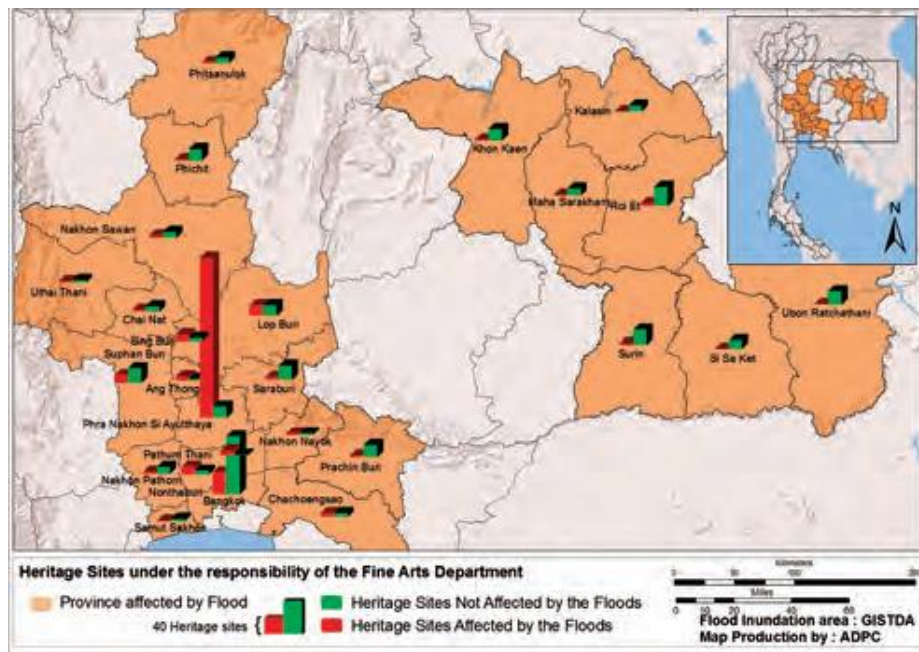


Figure 2.4: Heritage sites affected by the 2011 floods

Source: ADPC (http://www.gfdr.org/sites/gfdr.org/files/publication/Thai_Flood_2011_2.pdf)

2.4.4 Environment Security

One of the disaster hazards that threaten human security is the impact on environment. Depletion of natural resources, disturbance of ecosystem, impacts on forests and protected areas, lakes, rivers as well as industrial waste management facilities were all classified as environmental impacts which one way or another linked to security of human livelihood. The 2011 flood has considerable and widespread impacts on environment across the country; which some of them may seem significant but will have secondary impacts on interlinked ecosystem (World Bank, 2011).

Ayutthaya houses a number of industrial zones where floods created effects for months. The fact that these industrial sites use chemical substances in the production, the possibility of impact on environment due to hazardous waste was also highly risky during the floods. In other words, industrial waste can create long-term hazard to environment in the areas. There needs to be a long-term comprehensive environmental assessment in the disaster-affected areas in terms of industrial-related environmental impacts, biodiversity and changes of natural habitat.

Post-disaster condition around the city seems to continue to create a series of changes in environment and natural resources owing to the flood-control infrastructure built by households and authorities to prevent future floods. The infrastructure might have caused unstable natural habitats, especially the state-funded constructions where issue of Environmental Impact Assessment (EIA) has been unclear and debated until today.

In short, post-flood environmental security has not been much regarded by communities in the selected areas. The immediate impacts on environment were seen in terms of physical changes in farming and vegetation whereas impacts on biodiversity could have been further studied. Affected communities and people were not much concerned about environmental impacts induced by floods compared to other issues such as economic difficulty or health insecurity.

2.5 Framing the Research

There are several concepts upon studying literature that frame the understanding of research questions. This research is to be conducted on the basis of two guiding theories: human security and institutional learning.

Human security helps frame extensively and effectively the impacts of natural disasters on human in the sense that the incidents requires sufficiently effective responses from various institutions such as state as the key actor. In addition, the concept of institutional learning can be utilized to explain organizational difficulties and adjustment due to changes from particular events such as natural disasters. The concerned institutions gradually realize the fact that the conditions require them to alter the traditional way of dealing with the problem.

2.5.1 Human Security

Human security is first appeared in the major document of the 1994 Human Development Report (HDR) contributed by the United Nations Development Program

(UNDP) using the concept as summed up as: Human security is a child who did not die a disease, a disease that did not spread, a job that was not cut, an ethnic tension that did not explode in violence, a dissident who was not silenced. The term itself has shifted national and global attention toward security of people rather than traditional security of state or nation because the threats have also been shifted as the 1994 Report defines the term in two dimensions; safety from such chronic threats as hunger, disease and repression; protection from sudden and hurtful disruption in the patterns of daily life. Human security has ever since been arresting wide attention from all arenas including state, civil society, businesses and individuals given the new threats that create impacts on human livelihoods emerge daily and have become more complex to deal with. Human security can be elaborated into seven categories – economic security, food security, health security, environmental security, personal security, community security and political security (UNDP, 1994).

Human Security is also defined the importance of five elements as follows;

- It is people-centered;
- It is integrated with human development and human rights
- It deals with a comprehensive set of threats;
- It engages actors beyond the government; and
- It proposes a bi-modal strategy of protection from above and empowerment from below (Jimba et al, 2011).

Natural disasters such as floods directly lead to human insecurity as the impacts are resulted in multiple difficulties of human livelihoods, both in the immediate circumstance and long-term condition. Disasters cause considerable economic loss of one nation. Furthermore, it yields long-term impacts should the nation fails to address the very need of the stakeholders.

The concept of human security explains that natural disasters in developing countries are interrelated with the poverty cycle in the sense that disasters exacerbate poverty if responses are slow, inadequate and uncoordinated. Therefore, human security requires policy and measure of local, national and international level that effectively respond to natural disasters, immediately, in a short and long term.

Floods in Thailand can be viewed through the prism of human security because the approach provides quite an effective survey of the understanding in human development. Human security scopes and identifies the threats and risks both the already existing and new ones that arise with changes. In addition, human security can be used as a tool to prioritize the problems that remain but are ignored because of their familiarity like floods in Thailand (UNDP, 2009).

Human security is utilized as a key conceptual framework of this research given that it significantly sets forth as a potential guideline for the assessment of post-disaster environment. Human security provides need assessment tools which benefits the study in the sense that pre and post-disaster environment can potentially be compared. And that human (in)security can be assessed by existing tools.

2.5.2 Institutional Learning

Learning as defined by Senge (1990) is an inquiry that results eventually in new understanding and new behavior. Edwards (1996) defines learning as a process of personal growth and discovery, not just an accumulation of knowledge. The definition determines institutional learning as organizational learning which happens at different levels or units as a result of the accumulation of knowledge and experience.

Lebel (2011) pinpoints the institutional difficulties that obstruct Thailand's disaster risk management namely institutional traps comprising fragmentation, rigidity, scale, elite captures and crisis management. He extensively provides recommendations on how the institutions should learn and address those existing traps so that the policy can better function in the long run.

The outcomes of learning stated in this research respectively are institutional learning, new understanding and new practice. It is also further assumed that improved practice will lead to improved preparation and eventually measures to respond to natural disasters. Floods in Thailand have long been encountered in history. There have been

policies formulated to cope with the flooding at the national level, however, those policies cannot be applied to all sections. In the subordinate levels including provincial and community level, policies designed at national level have been far-fetched in managing floods and the aftermath recovery efforts. Therefore, those lower institutions learn and understand from the incidents themselves how to respond properly to the situations.

Lebel (2011) points that flood regime in Thailand has been obstructed by multiple institutional difficulties in functioning, and addressing the issues. He identifies circumstances as institutional traps which consist of the following:

- Fragmentation – bureaucratic competition and separatism leading to inefficient coordination among different agencies which result in the poor provision of relief measure;
- Rigidity – interlocking with bureaucracies, being reinforced by the technicality to make stark change or adjustment in order to enable the current polices to continuously function because they have already gained public acceptance;
- Scale – mostly concentrating responses at a single level due to powerful actors in that level. Highly centralized system can result in poor capacities to respond and recovery in remote areas whereas the mere decentralized practice may also lead to colossal vulnerabilities in the large events;
- Elite capture – natural disasters allow elites to deploy their experts and technicality in ways that serve their interests and not those of less politically powered and socially vulnerable population. Risk redistribution of protecting central business areas at the expense of the surrounding cities is a good example of interests protected by the elites; and
- Crisis management – policy that focuses only on the emergency response and immediate recovery after natural disaster such as flash food results in a neglect to focus on a long-term measure. Historically, Thailand has

experienced multiple severe disasters, however, relief measure and response have been proven ineffective in many recent events (Lebel, 2011).

Lebel (2011) further suggests that the institutional traps can be addressed through extensive practices. For instance, expanding public participation, building adaptive capacities at multiple levels, integrating floods into development policy components, prioritizing vulnerable and needy groups and linking knowledge and practice together can bring about a robust long-term disaster management.

2.6 Analyses

Analyses on the nature of pre- and post-disaster prevention and relief operation enlarge the theoretical knowledge of the issue. Natural disasters not only bring about physical losses such as the damage of economy, infrastructure or loss of human lives, but also they potentially cause long-term traumatized conditions among the affected population. In other words, it affects long-term human security. Being able to comprehend theoretical paradigm of social impacts, short or long-term, is tremendously necessary for the robust responses to particular events. The literature review undertaken embarks in multi-dimensional approaches to understand social impacts and how this research can possibly be set tone to the contribution it may offer.

2.6.1 Climate Change and Social Justice

Natural disasters such as floods and social justice issues are being interconnected and managed by measure and policy (Lebel et al, 2009). Inappropriate policymaking process can result in the poor condition of programs aimed at target groups, especially the vulnerable. Top-down policy with the exclusion of proper researches and participatory policymaking process can lead to the emerging of social injustice issues in the long run. Lebel (2009) pointed that social injustice can be worsened by both in actions and misguided policies given that flood regime in Thailand is comprehensively various

requiring different approach of policymaking process to address each particular situation. He also pointed out potential challenges government agencies, business as well as civil society must take into consideration when responding to the flood regime in Thailand as stated in the following:

- Reducing the risks of exposure of vulnerable groups which requires strong representation of affected groups, especially the vulnerable;
- Enhancing capacities to cope and respond through bureaucratic competition and fragmentation. Decentralization in Thailand is proved to hold local government more accountable on coping with disaster early warning and defense system. However, capacities to respond still remains multilevel due to the various competencies and resources;
- Securing the affected and vulnerable – the policies and practices of the government have not secured the most highly affected and vulnerable groups from floods. In addition, securing the central business districts may cause the risks and burdens in the surrounding cities;
- Building and maintaining resilience is necessarily vital that the policy ensures the system can undergo and retain the same control on structure and function. Resiliency includes expanding livelihood opportunities, restoring ecosystem, etc.; and
- Strengthening links between knowledge and practice – the marked lack of comprehensive research limits the capacities to assess the vulnerability and policy options. Understanding the cause of floods and flood regime can enable authorities to take effective remedial actions via policy formulated at certain level (Lebel, 2009).

2.6.2 Natural Disasters and Vulnerability

Analyses on vulnerability can help address the need of population suffered from the natural disasters. Apparently, the impacts associated with natural disasters result in various social, political and economic vulnerabilities (Ribot, 2009).

Ironically, social structure transforms natural disasters into multiple vulnerabilities chiefly gathering among the poor, and inequality seems to be an obstacle for development (Sen, 1999). Causes of vulnerabilities fueled by natural disasters can be understood through the lens of poverty associated with social inequality, unequal access to resources, limited representation and failure of policy implementation (Sen, 1999). Ribot (2009) points that among those all causes of vulnerabilities, poverty is the most salient of all conditions that shape climate-related risks. Poor population often inhabit in the unsafe flood-prone areas in both urban and rural environments. While the lack of insurance seems far-fetched for the poor, the lack of influence on protective measures from the authorities is quite difficult to be obtained.

Analyses of vulnerabilities can be based to identify the measures to be developed and institutional responsibilities for particular policy. In his work, Ribot (2009) presents two different frameworks possibly used to identify climate-related vulnerabilities; risk-hazard framework which evaluates different outcomes of a risk in a particular disaster; social constructivist framework characterizing multiple causes of a single outcome. However, the comprehensive analyses of vulnerabilities must account for all factors – biophysical and social contributing to the impact on the unit of concern.

He further suggests that because the poor (the weak) tend to be of lower priority for those in power, it is essentially critical that policies must be pro-poor. Economically, the poor in urban slum or marginalized groups far from the centers of power in rural areas may not be as important as the people holding power, political office or involved in businesses. The pro-poor policy can extensively help raise the lack of socio-political and economic opportunities to influence those policymakers who, most of the time, are not at all connected with them, having to experience vulnerability locally (Ribot, 2009).

2.7 Knowledge Gap

Literature reviews demonstrate that there has been assessment conducted by multiple sectors in the post-flood condition of Thailand after 2011. Although the assessment leans toward economic and social impact evaluation, there has still been a lack of the emphasis on assessing the reproduction of human security at the household and community level of affected areas. In addition, the focus on evaluating relief operation and reconstruction and recovery measures initiated by different actors is limited as situation seemed to have become normal after two years. This research helps more or less address the knowledge gap of understanding human security driven and associated with natural disasters, relief operation and measures and institutional learning process through the bottom-up perspective, micro-level assessment.

The case study focuses on two communities in Ayutthaya where floods in 2011 affected human security to a large extent. One is Ayutthaya Hospital community located along Chao Phraya River and surrounded by many government's offices and historical sites. The other is Lae Paniad Luang Elephant Camp which is situated in the inner section of Ayutthaya. Research findings are categorized into four aspects of human security – food, economic, health and personal/community/political during different timeframes based on conceptual model.

CHAPTER III

LAE PANIAD LUANG ELEPHANT COMMUNITY

This chapter focuses on the Elephant Camp and its surrounding community in assessing how flood affected livelihood in different timeframe. It explains multi-dimensions of human security during flood, relief operation and in the reconstruction and recovery process. It further provides analytical perspective from data collected during fieldwork study in understanding how human security was affected, and how it might have become reproduced.

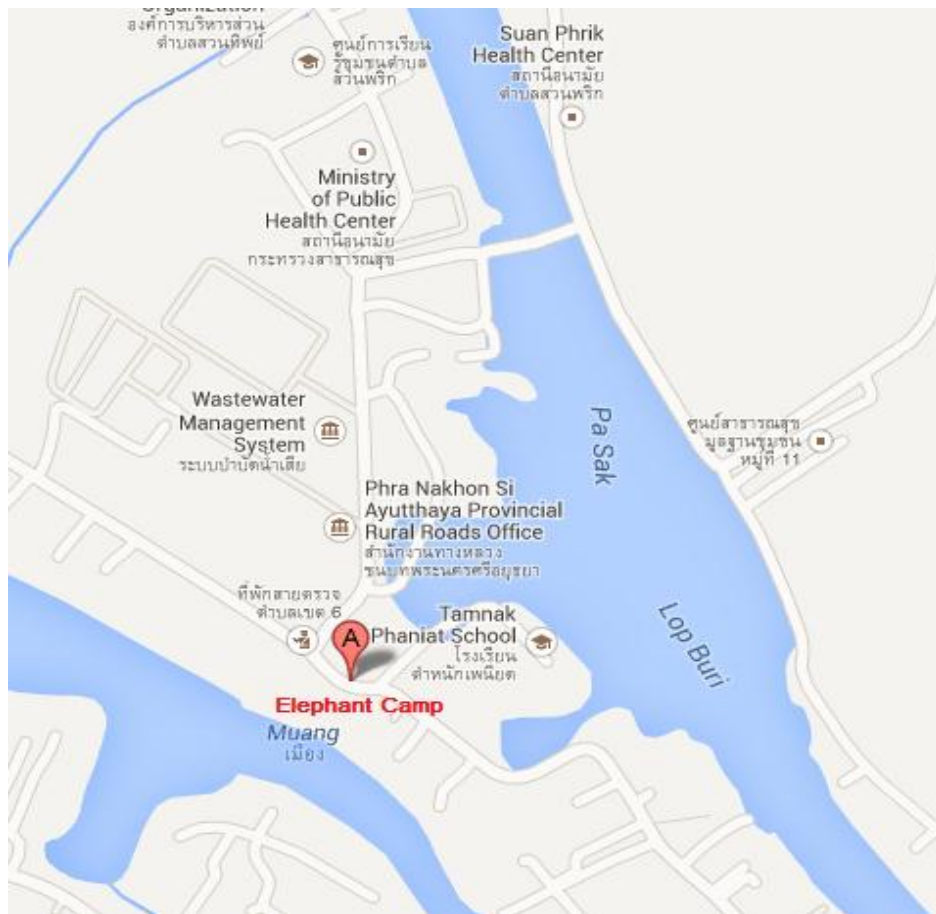


Figure 3.1: Map of Elephant Camp
Source: Adjust from Google Map

Lae Paniad Luang Elephant Camp is located on Lop Buri River in Phra Nakhon Si Ayutthaya district. It was established in 1996 by Lythonglian Meepan and his wife. The camp is also known as the Elephant Palace and the Royal Kraal. The Camp houses more than 100 elephants and some dozens of the mahouts and staff who live and work in the nearby neighborhood. Elephants of different age, generation and purposes of breeding are classified by the areas they are kept. There are first-born elephants, young, adult and old elephants which also work differently depending on their age. For example, adult or working elephants are trained to work for tourism, etc. Every elephant has its name and its mahout who lives, works and considers his or her elephant as his or her son or daughter.

Flood in 2011 directly and severely affect the Camp which had been flooded for almost three months. Flood impacted not only security of the Camp staff and other people in the same area, but also created difficulties and insecurities for the animals. Interviews unveiled how insecure both humans and animals faced during the disaster. Human insecurity in different dimensions subsequently stormed the Camp and surrounding communities given that relief assistance was quite limited in this particular area. Research results entails as follows;

3.1 Human Security during Flood

Flood in 2011 resulted in immediate impacts on human security of both people and animals at the Elephant Camp in terms of insufficient access to food, economic difficulties, health risks, personal and community insecurities. The impacts are categorized as follows;

3.1.1 Food Security

Food was the most urgent need when the Camp was flooded. Due to high level of water, both the Camp staff and people in the surrounding community were having a hard time accessing to food. Mahouts and staff at the Camp were given some food from the Camp owners who also live in the flooded area but managed to move out to the safe place. They sometimes had to fish and share with other staff who gathered up in the

higher squared-like structure called “Paniad” or Kraal which is enveloped with concrete walls. The top of the structure, built roughly four meters from the ground, had narrow space for mahouts and elephants.

The Camp owner would hire boats with food to feed some of the elephants, and for the Camp staff while affected people in the vicinity received limited food from the relief operation, mostly military personnel, who had to commute by boats into the affected areas and distributed as much food as they could possibly do. But mostly, people had to rely on their ability to find their own food. Those who had boats would make it easier to travel in search for food and possible assistance while those who did not either had to pay as much as 500 baht to hire boats or waited until limited assistance arrived.

Food scarcity was not as severely and critically urgent for human as for the elephants. Each elephant regularly consuming 300-400 kilograms per day was fed one third of the daily need. Some elephants were moved to the safe zone called “Phuu Kao Thong” (Golden Mountain) while some dozens were moved up to the top of the Kraal. The Camp’s farmed grass was entirely destroyed, and the elephant’s food came mainly from outside of the affected areas, being delivered insufficiently by boats. Mahouts had to roll around the Kraal and swing bananas and sugar canes across concrete fence because the space is quite narrow to walk. The elephants being densely located in narrow space had to stand at all time during days and nights.

3.1.2 Economic Security

The 2011 disaster posed economic difficulties among the Camp staff members to a large extent given that they did not receive any payment for three months while the Camp owners faced huge dilemmas by having no incomes from tourists and still having to manage to pay for food for both the staff and animals.

Many of the Camp staff come from other parts of Thailand such as Surin, the Northeastern province. They usually send some of their income back to the family members in the upcountry. Having no payment for months directly affected the staff. Furthermore, the family members whom despite not having been directly affected by flood, the dependence on their family members working at the camp resulted in their

economic difficulty as well. Some of them left the Camp during the flood because of the difficulty and hardship of trying to survive their daily life as well as having to look over the elephants.

However, there were some staff, in spite of getting no payment, chose to stay. Most of those who stayed during the flood in affected areas were aware that they would face economic insecurities once the water level receded. For example, they would have to reconstruct and renovate their house structures. They knew that there would be some assistance in terms of financial support from the authority; however, they thought that it would not be enough, and the process of compensation would also take a lot of time. Therefore, it is necessary for them to start thinking of other plans to access to financial sources when the situation became normal.

Camp Staff 1 expressed that,

“Many people left the camp when water was getting higher. They went back to their hometown in Surin. Most of the mahouts originally come from Surin. I think these people might suffer a lot because their family there needs to use money too. I did not get paid for three months. I was worried about my daughter. Because when the situation got better and she would need to go back to school. Both I and my husband did not get our salary. I understand the situation because the owner also had a difficult time too. He had to pay a lot of money for the elephant food and other costs. Some of the mahouts had to quit the job and find the new one in other places because they have to use money. I have been working for long so I feel attached to this place, both elephants and the owner. I cannot leave here and find other job even though I had to think of financial sources to reconstruct my house and to spend for my daughter to go to school again.” – (Camp Staff 1, June 7, 2013)

3.1.3 Health Security

Health issue at the Camp concerned both humans and animals. Medical supplies were limited at the Camp where staff had to use only when necessary. Commuting from the area for medical reasons was extremely hard for the Camp community members,

especially the elderly who usually have their regular medical check-up at Ayutthaya Hospital. Children were also vulnerable in terms of health during the flood. Many children had influenzas and conjunctivitis from swimming while injuries and fatalities due to drowning were also reported. (UNICEF, 2011)

Clean water and sanitation were one of the most critical health concerns the camp staff and people in surrounding community had to encounter. Drinking water was provided mainly by the camp owner from the safe areas for the camp staff who decided to stay at the camp to look after the elephants. Concerns over hygiene and sanitation at the camp were basically confronted with sanitary items such as soap bar, shampoo and detergent to reduce the risk of getting infected by flood-borne diseases such as leptospirosis and diarrhea.

Health concerns at the Camp might not be as critical as food, but it resulted in severe impacts on particular groups whereas the livelihood of the whole community was disrupted due to the difficulty to access to clean, hygienic and sanitary items used to protect the possibility flood-borne outbreaks. Fortunately, major and severe outbreak was not reported during three months at the Camp and nearby community.

3.1.4 Personal, Community, Political Security

During the disaster, floods had more or less resulted in a series of mental depression given that affected people had to deal with the immediate circumstance while having also to anticipate what would happen next, and what they would have to do to survive the crisis. Affected people at the Camp and community nearby all had this difficulty. When they could manage to at least survive the daily basis by accessing to basic needs, they started thinking about their future. Adults, especially family leaders seemed to have undergone more of depression than their children. Interviews were found that they had concerns over a number of matters. The very immediate and explicit concern was the damages occurred and how they could have minimized the losses, especially properties. For some, these concerns lasted for quite a while until they could accept that the situation was irreversible.

Some family members had serial concerns caused by damages and losses occurred with their family. The major concern found at the Camp was related to economic insecurity. Those choosing to remain at the Camp and having no payment had to find possible ways to access to any source of income because they have other family members to take care of. Parents were also worried about how they could afford to rebuild destroyed infrastructure and necessary items while planning for their children in terms of schooling when the situation began to return normal. Simply concluding, personal insecurity during and shortly after the flood was found in the sense of mental concerns worried most of affected families for a certain period of time.

3.2 Human Security during Relief Operation

The section focuses on how relief operation helped address human insecurity in different dimensions during the flood and when the situation began to become normal at the Camp and its vicinity. It looks at food, economic, health and personal and community security chiefly coped by relief assistance efforts of multiple sectors.

3.2.1 Food Security

Food security was the most urgent issue at the Camp and community nearby in terms of sufficiency during the flood. Relief assistance in terms of food was provided by different sectors, mainly the military, Provincial Department of Disaster Prevention and Mitigation as well as local civil society organizations which provided relief bags which contained canned food and drinking water. Food was cooked and distributed to the Elephant community from the relief assistance center established at the Provincial Hall which is far from the community. The Camp staff had difficulty in accessing to enough food from outside because food given by the Camp owners was not sufficient for their family members. There was a shortage of food after the water receded, resulting in the high food price around Ayutthaya. Relief operation efforts carried out by different sectors helped reduce food security around the Camp community to a certain extent. However, it was also found that limited distribution of food created insecurity to some people in the community.

Khun Chuleekorn, the Camp assistant manager, expressed that,

“I have been living here for 7 years, and the 2011 flood was the most severe and horrifying one I witnessed. We had a hard time having to find food for ourselves because no one or very few came in the area flooded for three months. The camp owner was the only one we got help from at the beginning. Sometimes we had to fish for meals, sometimes we ate bananas which we were supposed to feed the elephants. We did not eat a lot comparing to our elephants. I had been very worried how much elephants would be fed. They cannot talk so they cannot tell if they are hungry while we, human, would be able to find something to eat anyway.” – (Chuleekorn, June 1, 2013)

3.2.2 Economic Security

Some of the mahouts left the Camp during flood for their hometown in the Northeast or for other parts of Thailand to find job opportunities while income was not generated for those who remained at the Camp. The remaining staff, mostly the local, all faced economic difficulty when water decreased in terms of reconstructing the damaged structures and properties as well as expenses for their children to go to school.

Even though most of them who remained in the area received relief compensation, all of them noted that it was not enough to cover everything damaged and needed. They received 12,000 – 20,000 THB depending on house structure. Some of them used their savings to renovate house structure and buy necessary items damaged during floods, however, those who did not have savings had to find other sources of finance. To access to other financial sources, they had to borrow from the informal sectors which they had to pay high interest rate as it is hard for them to access to formal loan. It was found that compensation was spent mostly on necessary items destroyed during the disaster such as electronic devices, household items, food, clothes, etc.

3.2.3 Health Security

Health concern was one of the issues taken into account in the relief assistance provided throughout affected areas in Ayutthaya. Although there was no health-related outbreak reported in the area, the community had encountered some health issues. Sanitation was one of the major concerns during and after the flood. Many houses were flooded, affecting the proper use of toilet and sanitation. The relief assistance distributed in the form of relief bags were also included items such as soap bar and shampoo which people at the Camp could use in preventing the contamination from possible disease. However, necessary items for women such as sanitary napkin were not included in relief bags at the beginning.

Another health issue found among people in the area is mental stress. Public health officers visited the area and provided basic healthcare which also included mental health counseling. Many affected people had encountered stress because their livelihood, particularly the economic means, had been disrupted for months. The mental stress lasted long among community members during and even after the flood.

3.2.4 Personal, Community, Political Security

The staff who remained at the Camp had difficult time in managing to survive from the lack of food and livelihood disruption throughout the disaster. When water receded, the immediate circumstance that created personal security was concern over economic condition of their family. Most of them who remained at the Camp throughout the flood had to manage to help out at the Camp without payment while at the same time beginning to assess damage caused to their house structure and property.

Many of them live and work at the Camp for many years, and so they also consider the Camp and elephants as part of their family. However, they accepted that even though they understood the situation of the Camp owner who perhaps had even more difficult time in trying to maintain the business after the disaster, they were also concerned about their family including children and the elderly they had to take care of. The compensation provided was limited, and did not cover all expenses which were needed to restore the normal livelihood they used to have before the flood. In order to

bring about personal security of the family members, the family leaders had to find other sources of income or money to at least buy necessary items damaged by flood. In sum, family members were concerned about how and what they would have to do after flood in order to restore the normal livelihood again. More concerns and pressures relied, however, on family leaders.

3.3 Human Security during Reconstruction and Recovery

This section emphasizes on flood reconstruction and recovery process in understanding how human security might have been reproduced in the longer timeframe. Two years after the disaster in Ayutthaya has also come about more obvious human security restored among affected people at the Camp.

3.3.1 Food Security

The Camp staff and affected people in surrounding community can access to sufficient and affordable food providing that their income has been generated for two years since the flood. The camp owner has been providing food for the staff. Most of them only have to pay for food for their family members. Although food security is not a concern in terms of sufficiency, the higher cost of living throughout the country somehow alters the pattern of food consumption among many people at the Camp. For example, egg has become relatively more expensive than before. So, some of them have limited the consumption of some staple food such as egg. Every camp staff agreed that their food security was relatively restored two years after the disaster when lack of food during flood was the most urgent need for all of them. In addition, elephants are also fed with proper amount of food every day given that the farmed grass, the main source of elephant food at the Camp, can be replanted after having been destroyed by flood two years ago.

3.3.2 Economic Security

The camp staff had encountered economic difficulties during the flood, and for a certain period of time in the aftermath of such disaster. Although compensation provided

by the government was limited, most of the camp workers managed to find other sources of finance for necessary expenses. Some of them have savings which they have saved up for many years. Those who did not have enough savings would take informal loan which they did not have to repay in lump-sum once they started to get paid by the camp. Most of the expenses were spent on reconstructing and renovating house structure and damaged properties.

Most of the camp staff are not concerned about their economic condition once they could start working and getting paid again. There have been more tourists these days, meaning that their income also increases, besides monthly salary they earn. The increasing numbers of tourists is partly because of the more active advertisement of the camp to generate more income. In short, economic security has been recovered among the camp staff two years after the flood.

However, many affected people in the community nearby have still been trying to manage to make their living on their regular basis. Many of them are informal workers whose income depends on their day-by-day ability to trade food and goods or general work such as taxi motorcycle. These people have defined themselves poor, and being concerned about their economic condition in the long run if they cannot earn enough for their family members. Although they could resume the economic means again two years after flood, many people in the surrounding community of the elephant camp still have to deal with economic insecurity to some degree.

3.3.3 Health Security

When water receded and situation began to become normal, many of the camp workers and their family members were in need of health care. But because most of health facilities were damaged during three months of incident, healthcare provision was relatively limited in terms of accessibility. They could still access to primary medical care from relief assistance. It took months for most of public health facilities including sub-district health center and hospital to resume the service. However, when healthcare facilities were in service, affected people could access effectively to the provision.

It is noted that the Universal Coverage Scheme (UCS) significantly benefited the camp workers because they could receive healthcare provision without having to pay. Even though some of them were not registered in Ayutthaya, they could also benefit from the UCS. Health security among the camp workers and affected residents in the nearby community gradually began to increase again when healthcare was fully in service several months after water receded.

3.3.4 Personal, Community, Political Security

Concerns related to economic difficulty and damages caused by flood resulted in continuous stress among the camp staff. The degree of stresses differed according to the ability to access to finance. Damage and loss in properties related to stresses for the time being until they could find solutions. Even though compensation given by the government was limited, the fact that relief operation had been effectively carried out throughout flood reduced long-term personal security to a certain degree. Some had encountered personal insecurity for a long period of time, but relief measure and assistance continuously provided has gradually reduced the stress.

Camp Staff 2 mentioned that,

“We are very lucky that everyone is safe. I heard that some family lost their family members because of drowning. I was a little concerned at the beginning if more water would come. Some of the properties were destroyed and unfixable like bed and big sofa that we could not move. I think the situation in the city (some inner areas of Ayutthaya) was worse. The children are still young, so I had to keep an eye on them almost all the time.... I did not plan anything during the flood. I was thinking too much about it, and it was just headache. But when water receded I knew what I had to do.” – (Camp Staff 2, June 9, 2013)

Most of affected workers have become resilient after water receded and as time has gone. Many of them considered the disaster a lesson where they could learn. One thing they also learned among affected community members is the supports and helps

from one another during and after the flood which reduced both physical damages and mental hardship among community members.



Figure 3.2: Lae Paniad Lunag Elephant Camp

Source: <http://www.it4social.org/index.php?module=news&page2=detail&id=691>

3.4 Summary

Human security existed at the Elephant Camp and surrounding community before the flood in 2011. During the onset of the disaster when water began to flow into the area, human security had continuously been dropped. People in the community were aware of the flood coming into the area, however, they did not expect that it would be immediate and severe. Some of them could manage to reduce the damage and loss that might be caused to their properties, but many could not.

Relief operation was not apparent immediately when the Camp and its vicinity were flooded. It was about one week after when assistance arrived in the area where affected people had been insecure in terms of food and health. Access to food was extremely difficult during the first week while health-related need was highly present. When relief assistance was provided among affected people, human security seemed to increase once again. The area was flooded for almost three months, resulting in the impacts on human security in different dimensions. Food and health security were immediately threatened by the flood while economic and personal insecurity followed shortly after, causing temporary stress among affected people.

When flood began to recede, human insecurity existing during flood tended to be reduced due to relief assistance and measure since the onset of the incident. Affected people were compensated by the government aiming to reduce post-flood difficulty and hardship people had encountered for the past three month, and would have to face after the flood. Even though compensation provided did not cover all necessary expenditures such as house structure reconstruction and necessary items damaged by flood, most of the camp workers could manage to access to other financial sources such as savings and informal loan which they could use if needed. Human security began to increase again when they could resume their normal livelihood.

In sum, economic security was a major factor that created impacts on different securities. In other words, it interlocked other insecurities to a certain degree in the sense that it resulted in both physical constrains and psychological concerns during the flood and short-to-medium term after the disaster. However, it is noted that human security has been reproduced among the camp staff and community members two years after the incident.

CHAPTER IV

AYUTTHAYA HOSPITAL COMMUNITY

This chapter expands on the other case study – Ayutthaya Hospital Community – entirely affected by flood in 2011. It also focuses on human security in multi-dimensional perspectives typified into four components – food, economic, health, environmental and personal/community/political security. The analysis is based on the conceptual framework of the disaster – before and the onset of flood, during relief operation and two years after the disaster.



Figure 4.1: Map of Community around Ayutthaya Hospital

Source: Adjust from Google Map

Community around Ayutthaya Hospital was inevitably affected by floods given the geographical location where Chao Phraya River flows through the area. On the other side of the River, there is a large Muslim community, namely –Samphao Lom”, located along the River where floods in 2011 disrupted livelihood of the people in different ways. As mentioned early, Ayutthaya is home to numbers of Muslim population which relief

efforts were partly somehow controversial, however, research findings provide further details how human security was threatened during the floods, and how people in this flood-prone area have coped with natural changes which they consider something they can live with despite the fact that the 2011 floods was unprecedented and overwhelming for them.

4.1 Human Security during Flood

Human security during flood was decreased in the community which was entirely flooded. Although flash flood is common in this community, the 2011 flood was too overwhelming for people to cope with. Floods resulted in subsequent difficulties in maintaining the livelihood.

4.1.1 Food Security

Food security was not an issue before the disaster given its location which houses a large amount of agricultural productivity. Food security was affected almost immediately among people around the Hospital since the area was first hit. Flood disrupted entirely food transported from other parts of the province. Water came in so fast that many households could not manage to store enough food before the relief assistance was provided.

One of the crucial issues concerning food that the Hospital community faced during the flood was the extremely high food price. Those who could afford to buy food themselves had to pay five to ten times more expensive on food given the difficulty and shortage to access to food in affected areas. For example, papaya was sold 60 baht per one kilogram, six times more expensive than the usual price. Or beef, which most of the Muslim population consumes, was as expensive as 400 baht per one kilogram. If they could not afford to buy the relatively more expensive food, they would only rely on food distributed widely by the relief operation which was sufficient in the community.

4.1.2 Economic Security

Economic security of the community was affected like all others, businesses were all disrupted. Community around the Hospital makes their living mostly by trading, selling products such as food and, retailing store, etc. Ayutthaya is well-known for its local products – Roti Samai (Cotton candy) – sold around the city. There are many Roti Samai stores around the Hospital which were not able to run their business during the disaster while they had to encounter the higher cost of living, food for example. Generally speaking, economic means were all disrupted because supply and demand chains were interrupted by the floods. Some people had to use their savings to buy necessary items whereas accessing to their own savings was also hard because the ATM machines and banks in the city were not in service.

Samphao Lom community, where most of households also live off by making profits from selling goods and products, was more or less dealing with economic difficulty. Many people in the community, especially the poor, accepted that they had no savings at all. They make their living on a day-by-day basis which they earn only enough for daily needs. Floods cut them off from all kinds of economic means that they only had to rely on relief assistance.

Relief assistance in terms of food and basic needs helped reduce immediate hardship to the largest extent in the community where many families struggled to find basic needs such as food and water. Commuting in search of food and water could be done arduously only by boat which not every family has. Flood water in some sections of the community was as high as 2.50 meters, and hiring boat was the only way to commute. It was impossible for many poor families to pay since they did not have any money and income to pay even for the boat.

4.1.3 Health Security

Despite the fact that the Hospital is located in the vicinity, people in the community found it pretty difficult to receive medical assistance given that the premises were affected, and not able to provide medical assistance to people with serious and critical conditions. While sanitation and hygiene were critical in the community, the

elderly and children, in particular, were vulnerable to health risks. Even though there was no major outbreak in the community, death caused from drowning was reported.

Health security was decreased since the onset of flood given that flood water increased so fast that many were not prepared. This included the hospital located approximately 300 meters from the River. Water destroyed building structures and properties and patients in need of urgent medical care were transferred to other health care facilities in Bangkok and nearby provinces such as Suphanburi. However, the Hospital was able to provide primary health assistance on the second floor where flood water did not reach.

4.1.4 Personal, Community, Political Security

Given the diversity in the community, personal and community security were assumed to have been altered by the flood. The community made up of a large Muslim population had been affected in terms of livelihoods basically related to religious practices. Daily religious practices were forced to adapt, and some were suspended throughout the crisis. However, one important finding suggests that the flood brought people in the community together to support and help one another even though some internal tension could be heard during the field study.

The flood brought along the community sympathy in the sense that people were bound to help one another. One good example during the flood in this Muslim community was when someone died, and the body must be buried within 24 hours in accordance with religious belief. However, the fact the flood water was strong and high made it difficult to perform the rite. The only way to take the body to the graveyard, which was partly flooded, was by boat. The community members had a promise that if anyone died, there would be no charge for hiring boat. And that everyone should help perform the rite. Religious rites at the mosque were suspended because the current was strong and dangerous to commute to.

4.2 Human Security during Relief Operation

The community located around government offices and many landmarks received significant relief assistance from many different sectors which helped address insecurities of different kinds. Apart from the relief assistance, the community-initiated efforts to cope with the disaster underscored how human security was gradually reproduced in the community.

4.2.1 Food Security

The Hospital community had access to food provided by different relief sectors given its location being surrounded by a number of government offices and historical sites that captured wide range of attention from the relief mission. It was found that food insecurity was not a concern during the relief operation among affected households in the community because of the overprovision of food. Commuting to other places was not as difficulty as the Elephant camp because the water level was not as high, and some vehicles could still commute around. Relief operation in terms of food was carried out by different sectors including local authorities, especially military personnel and public minded people. Another reason is perhaps the fact that there are numbers of public places such as hospital, university, government offices and heritage sites in the nearby community which different sectors attempted to closely monitor and protect the property.

One of the concerns in terms of food in the Muslim community related to religious practice. Affected population was not assured if food was Halal or not, however, they did not have other choices but to consume food provided. However, the Central Islamic Council of Thailand and MOPH took lead in establishing Halal food center to provide Halal food in affected areas.

An interview with a Muslim Vendor 1 in Samphao Lom sub-district found that,

“There were many people coming in with food and water for us. We had more than enough food here. But sometimes we could not be sure if food was Halal or not. I think it was not. Sometimes people came with roasted pork with sticky rice to our community. I think we all appreciated it, but we could not eat pork. Later everyone knew that we are Muslim, so they came in with non-pork

food. Whether it was Halal or not, we received it because everything was so expensive that we could not buy.” – (Muslim Vendor 1, June 24, 2013)

4.2.2 Economic Security

When flood water receded, most households were compensated by the government. The compensation varied by the size and type of house structure destroyed by flood. Some received 12,000 THB and some got 20,000 THB to reconstruct or renovate their house structures. Interestingly, many households used the compensation for other purposes, especially to restore their economic difficulty. The research found that many poor families use the compensation to buy necessary items and save the remaining because accessing to microcredit was hard for them. Some house structures destroyed by flood waters have remained abandoned until today because affected people want to make use of the compensation on other priorities.

Most of affected people work in the informal sectors such as trading and vending produces. Most of them could not access to financial recovery apart from the government’s compensation. They might manage to take some informal loans. But the high interest rate and limited repayment time obstructed them to resume their economic means early when the situation became normal. Roti Samai owners were not as much affected in terms of economic condition as people in Sam Poa Lom community.



Figure 4.2: Some family chose to make use of compensation on improving the economic means rather than reconstructing destroyed structures. (Muslim Senior 1)

4.2.3 Health Security

Relief assistance provided was found lack of necessary health items such as sanitary napkin for women, which was a very demanding item for women in the community in the wake of the operation. However, when the issue was known, the items were included in the relief bag. There was not a major flood-related outbreak, but drowning caused loss of lives in the community where there children and abandoned seniors were at risk.

In terms of mental concerns, community members were trying to reduce stresses during the floods by reaching out to one another and participating in community activities. Interestingly, the way this community dealt with mental stress caused by difficulties and hardships was that they tried to stay with other community members and help organize entertaining activities such as concerts and comedy shows. The activities could help them relax and release anxiety from the disrupted livelihood due to the flood.

Health issues during floods might be addressed by many relief sectors who provided health assistance to as many affected people, including marginalized people such as the poor or unregistered migrant workers, as possible. However, in the long run or when water receded, there is no extensive safety net that covers vulnerable and marginalized groups as mentioned above.

4.2.4 Personal, Community, Political Security

Community activities to reduce mental stress in Samphao Lom community was an example of community participation efforts that help cope with personal, community and political in security in the long run. Many in the community expressed that they found it very fun and enjoyable to participate in community activities and help out with different issues during the flood. They were aware that flood in 2011 was not similar to others they encountered before, but there was nothing they could do but wait until the water receded.

Many community members including youths, seniors and adults would gather at the community center every day and search for food and assistance. They would exchange information from different sources and roam around the community in order to assess other households and assist them for those who were able to help. In addition, the

role of military in providing emergency assistance, particular in transferring patients with serious conditions from the hospital, was recognized widely among community members in the sense that they felt secure by the operation.

4.3 Human Security during Reconstruction and Recovery

The post-flood condition of Ayutthaya has gradually been recovered to the degree where most sectors can resume their regular activities. Human security in the Hospital community has also been resilient considering people's livelihood which became normal. Reconstruction and recovery constituted by various factors and efforts from different sectors has brought about the reproduction of human security in the community.

4.3.1 Food Security

Food insecurity seems to be the first and fastest to become resilient given that relief operation was focused primarily on immediate assistance which food and water were provided throughout the affected areas across Ayutthaya. Furthermore, Thailand has been relatively facing less food insecurity. Therefore, access to sufficient amount of food after the flood is not a major concern.

Food security was threatened for a certain period of time in the community in the sense that they could not access to food as they required. When the situation began to abate, one of the most urgent issues concerning security of affected people was food. Food and products could be transported from other parts of the country more easily as water level decrease, addressing the need of affordable food and products.

Two years after the incident, food security was entirely restored in the Hospital community both in terms of sufficiency and affordability. Agricultural productivity in Ayutthaya contributes extensively to food security not only for the Hospital community but also for entire province. The reconstruction of infrastructure damaged well facilitates food and product logistics.

Relief operation did, more or less, help abate food insecurity during the flood. However, when the situation turned into physical normality, it is the affected community

and people that had to manage to access to food. This might not be a severe condition, being able to secure sufficient nutrition in particular community or family. But some family, especially the vulnerable or the poor had to rely on their capacity to restore their economic means in order that they can access to sufficient food. Meanwhile, the disruptions of food supply or allocation caused by the flood made it difficult for communities to access to sufficient amount of food as well.

4.3.2 Economic Security

One of the clearest findings is the economic insecurity that created immediate-to-short term impacts among the vulnerable. Generally speaking, the poor mostly found in the informal workers, were among the most economically affected groups given the capacity to access to financial sources comparing to those who works in the formal sectors. Some make a fair deal of income each day, but many do not. Some only profit a few hundred baht from selling food which the profit does not even reach the minimum wage as those in the formal sectors. Floods disrupted directly and totally the economic activities of the poor whose savings and access to financial credit are relatively limited.

The disaster created short-term economic insecurity in the community, particularly among the poor families which relied extensively on assistance from different sectors. Relief operation and recovery measures helped address the immediate needs while it also provided further channels of economic security among affected people. Many family members have access to more job opportunities two years after the flood in 2011. In short, economic security has been reproduced in the community by different factors as mentioned above. However, it is worth experimenting further if the poor have been better off comparing to the pre-flood condition.

4.3.3 Health Security

Overall, the community faced health insecurity like most areas in Ayutthaya. The insecurity has gradually been addressed by relief assistance since the onset of the disaster. Need in healthcare provision had been responded when water decreased as health facilities were reconstructed and able to provide the service. Some of the affected

community members underwent stress in the wake of recovery. It is worth noting that the Universal Coverage Scheme (UCS) has extensively benefited community members since 2011. It provides safety net, particularly to the vulnerable groups such as workers in informal sector, dependent elderly and general public. The UCS provides social protection to the majority of community members. It helps reduce burdens from family members in need of health service.

In the reconstruction and recovery process, health security has been addressed quite impressively by both relief assistance carried out since the wake of the flood and long-term measures to address health issues implemented by MOPH. Health security among affected people in the community has been engendered two years after the flood.

4.3.4 Personal, Community, Political Security

It is noted that the different political ideology also defined the degree of assistance community members would receive from community leaders during the floods. In other words, deep conflict driven by politics somehow ignited personal and community insecurity to a certain level. Many community members mentioned that they received less assistance from the community leaders because they have different political ideology. And the community leaders seemed to pay less attention in the areas where community members go against them in terms of politics. This conflict, however, was revealed that it did not bother or result in further community insecurity after the flood, partly because of community-based participation during the flood, they mentioned.

Personal insecurity caused by the damage and loss from the flood occurred in the form of anxiety of how community members would have to cope with when flood water receded. They could anticipate economic difficulty as well as the need to restore normalcy in the community which was addressed more or less by relief measures projected by the state. Almost all interviewees agreed that personal and community security linked with other components have been reproduced to a certain extent in spite of the fact that there are still issues in the community that need to be addressed by the state – poverty and corruption, to mention a few.

4.4 Summary

Before the 2011 flood, human security in the community around Ayutthaya hospital existed to a large extent given its location surrounded by government offices and numbers of landmarks such as world heritage sites, etc. Food, economic, health and personal security were not the major concerns among community members. It was until people were aware that water from other parts of Thailand started to move downwards and would flood Ayutthaya that people had first encountered personal security in preparing to deal with the incident.

Flood resulted in immediate impacts on food security because food supply was abruptly disrupted. Agricultural products were first lack given the difficulty to commute into the area. The shortage of food was addressed not long after the relief assistance was initiated which food was one of the most urgent issues taken into consideration by relief operation. Relief assistance in terms of food among Muslim community underlined the significance to consider other issues such as religion and gender in providing helps that address the needs. All economic activities had been stopped during three months of the flood, causing economic difficulty among most of the community members, especially those in the informal works who live off by trading products. Health insecurity was coped extensively with the relief efforts taken lead by MOPH while community-initiated entertaining activities helped reduced stress among community members to a certain extent.

When flood started to recede, human security, which had been slightly stable during three months, also began to gradually be restored. The relief measures in the form of compensation more or less contributed to reducing economic difficulties among affected people in the community. Food and products supplied into the area also brought about food security. In terms of health security, it is worth noting that the UCS has benefited people in the community since the situation began to recover. In short, human security – food, economic, health, personal and community – has been engendered in the community around hospital and Samphao Lom community two years after the flood.

CHAPTER V

CONCLUDING REMARK

5.1 Conclusion

The research aims to assess how floods in 2011 affected human security in Ayutthaya. The areas chosen represent tourism and community sectors which both were differently affected in terms of intensity and security in different dimensions. The Elephant camp where security of its staff relies greatly on tourists encountered food and economic immediate insecurity. Floods totally disrupted the livelihood of people at the camp, and people in surrounding community. Access to food was the first and most critical insecurity for the Elephant camp where assistance was carried out with difficulty.

While lack of food created immediate insecurity, the flood further led to short term economic difficulty for all involved. Together with the fact that it is important to provide sufficient food for animals, the lack of income put double burdens for the employers given that the expenditure, for both employees and animals, was still large without any source of income to balance the situation. Employees encountered this similar difficulty too. Without receiving any payment for three months, some employees were forced indirectly to seek other job opportunities in other parts of the country whereas family members dependent on job security of the camp employees later had faced economic hardships.

This condition seemed to create chains of human insecurity process. Community around the Hospital represents community livelihood where residents have been living with floods for decades. In this area, regular floods are common which usual rainfalls oftentimes result in floods, however, disaster in 2011 was so severe that people could not mitigate the intensity. Human security was threatened since the onset of the disaster including immediate impacts on food and household damages. The Hospital community did not face severe food insecurity during flood given its location and importance as it is surrounded by multiple government offices and historical sites which were attempted to be protected.

Flood resulted in economic insecurity in both communities as income was not generated among affected people for three months. Some who could manage to access to financial sources such as their savings to spend on basic needs such as food and water before relief assistance came into the areas. However, many vulnerable groups such as the poor were more affected by economic insecurity.

Human Security/ Community	Elephant Camp	Hospital Community
Food	Limited access to food for human and animal.	Many could access to sufficient food through relief assistance provided by multiple sources.
Economic	Camp workers faced economic difficulty as income was not generated for three months. People used limited savings for basic needs.	Economic insecurity most affected informal workers. Savings helped abate economic difficulty during flood.
Health	No major outbreak. Flood caused stresses and traumas among affected people.	No flood-related outbreak. Drowning caused some fatalities.
Personal/Community/Political	Personal insecurity was caused by damage and loss concerning all family members.	Community-based activities helped reduce stresses among community members.

Table 2: Summary of Human (In)Security during the Flood

Relief operation delivered by multiple actors helped address human insecurity from the very onset of the disaster. Flood relief assistance was carried out by different

sectors – government agencies including civil and military, inter-governmental agencies, international organizations, civil society organizations and public-minded people. All these contributed tremendously to countering rescue missions as well as immediate and short-term insecurities. The research findings suggest that it is necessarily critical for different sectors to coordinate among one another to reduce confusion and crossovers in providing assistance. Thailand can enhance its civil-military preparedness and response through its partnerships including inter-government agencies, IOs, CSOs, etc. The relief operation and humanitarian assistance is also the very key factor that brings about the reproduction of human security during and after the disaster in both areas.

However, human insecurity has obviously been reproduced when water began to recede. The very immediate and obvious characteristic of post-flood condition of both communities is the structural damage including built structure and other properties. Damages vary by the degree of impacts. Having been flooded for roughly three months resulted in the damaged house structures. Many households were partly damaged while some were totally destroyed. Much of the house construction has not complied with the building codes and official plans. As a result, the affected areas were encountered severe impacts in terms of structural damages.

The need to reconstruct and renovate house structure was addressed partly by financial assistance from the government which allocated differently according to the damages. The fact that financial support was not enough for many, they had to find other sources of finance for households spending on necessary items. Structural damages as well as property losses, which required a great amount of financial recovery, had resulted in the immediate and short-term economic difficulties which doubled up other existing human insecurity such as food and health.

Relief operation did, more or less, help abate food insecurity at the beginning and during the flood. However, when the situation turned into physical normality, it is the affected community and people that had to manage to access to food. This might not be a severe condition, being able to secure sufficient nutrition in particular community or family. But some family, especially the vulnerable or poor, have to rely on their capacity to restore their economic means in order that they can access to sufficient food.

Meanwhile, the disruptions of food supply or allocation caused by the flood made it difficult for communities to access to sufficient amount of food in some areas.

Health issue can be one of the most serious concerns in the disaster-affected areas. The spread of diseases can cause impacts on human lives providing that health infrastructure is destroyed or not able to provide healthcare service of any kinds. In other words, the lack of access to healthcare can lead to human health insecurity. The highly prone to illness especially the most vulnerable groups are risky to be affected by the spread of communicable diseases while unsafe food and physical traumas produce immediate and long-term insecurity. Therefore, flood-related health issues are as much urgently critical as food insecurity during and after the disaster. People in many flooded areas suffer largely from water-related diseases. Floods may also lead to an increase in vector-borne outbreak through the expansion of vector habitats. And the fact that many, especially the vulnerable, may not be able to access to healthcare provision makes health insecurity a threat to affected people in both a short and long run.

Impacts on environment could explicitly be seen during and after the disaster. Environmental impacts driven by the floods put not only human but also natural habitats at risk. Biodiversity is obviously threatened, altering natural equilibrium especially in areas where density of natural habitat is high. In addition, the construction of water management project such as dam, levee bank and catchment can possibly create more impacts on environment in Ayutthaya.

Natural disasters can disrupt not only physical ability of human, but also mental hardships and psycho-social traumas. These conditions are considered personal insecurity which can create long-term impacts on human livelihood. Disasters that cause loss of lives leave behind the traumas for those who survive, having to encounter with the very fact that their family members or someone they know lose their lives. Destruction of property during and after floods no doubts result in the subsequent personal insecurity. Many affected people had a difficult time reflecting what they had been through during the flood. Thinking about what they would have to do when situation returned to a normal condition also worried some of the affected people because they knew it would be quite overwhelming. Such characteristics might be founded in particular areas. It could have magnified should there had been limited assistance in terms of psychological counseling,

apart from physical assistance carried out by different agencies. This is to conclude that one way to cope with psycho-social traumatic conditions, affected people should be reached out and provided psychological counseling in order to reduce stresses in the immediate circumstance and long-term condition.

Human Security/ Community	Elephant Camp	Hospital Community
Food	Limited food was provided by relief operation in the area.	Food was overprovided by relief assistance from many sources.
Economic	Financial relief measures reduced some burdens, however, limited access to other financial sources caused economic difficulty.	Compensation was used to cope with economic insecurity among the poor.
Health	Health need assessment was periodically carried out. Relief operation reduced flood-related health risks.	Fair access to health relief assistance given its location.
Personal/Community/Political	Relief operation reduced personal and community insecurity in terms of short-term economic difficulty.	Relief operation brought about community disparity driven by politics.

Table 3: Summary of Human (In)Security during the Relief Operation

To understand the post-disaster human (in)security, one has to comprehensively consider different characteristics in particular area where ones can further analyze how secure or insecure that particular area can be. By assessing those characteristics in the realm of human security in affected areas, it can be concluded that human security in the

post-disaster circumstance has been reproduced, however, merely in certain dimensions. Long-term economic impacts require long-term efforts and time to be recovered. Industry, business, agricultural and tourism sectors were all economically affected. Those who were involved in the sectors, not surprisingly, have had to deal with economic insecurity which happens to be linked with others such as food, health and personal insecurity. Or poor relief operation due to the lack of good governance and corruption can disrupt community security where tension among different communities can most certainly be stirred up. Having mentioned all these, it is worth noting that different elements that constitute human insecurity are interrelated, and in many cases, interlocked. Therefore, it is important to approach human security from all perspectives in order to identify the very characteristics of the post-disaster environment.

The Hospital community face regular floods so frequently that community members regard such flood as a common event which can be anticipated and adapted. The adaptation can simply be seen firstly through house structures built to reduce risk from floods. The high space under the structure allows water to flow freely, reducing the potential damage caused by flood. In addition, many households have boats to commute during flood.

In contrary, the Elephant Camp community was not as prepared and adaptive. This finding is quite obvious between the two communities considering structures, preparation and adaptation. Learning driven by disaster varies by the frequency and severity of particular crisis where people realize that it is critical to bring in skills of adaptation and management to deal with natural changes such as natural disasters.

The selected areas demonstrate that flood, in other words natural disaster, can be adapted to by improving capacity of community and people to cope with the impacts. It can be done through the emphasis on human adaptation to live with natural changes as well as by increasing resilience to environmental changes. People and communities as the institutions being able to adapt to changing disaster risks is a focal point of development implication when coping with natural disasters.

Human Security/ Community	Elephant Camp	Hospital Community
Food	Food security has been restored after two years, however, higher cost of living more or less alters pattern of food consumption.	Food security has relatively been restored after two years.
Economic	Employees recovered the economic security. Poverty is still eminent.	Economic activities have become fully normal. Higher cost of living has been coped with.
Health	Health security has been improved.	Health security has been improved with full access to healthcare provision.
Personal/Community/Political	Disaster has still stigmatized some community members. Community security was strengthened. No politics-driven controversy.	Concerns over economic difficulty cause some personal insecurity. Community-based disaster preparation was improved. Deep political disparity exists.

Table 4: Summary of Human (In)Security in the Reconstruction and Recovery

Research findings suggest that, two years after the disaster in 2011, human insecurity has also been reproduced among affected people, particularly the poor who are vulnerable in different aspects. The very dominant factor constituting human insecurity is economic difficulty. Economic insecurity interlocks other insecurities to the very large extent. Being able to engender sufficient income on a regular basis defines the degree to which various dimensions of human insecurity can possibly be coped with. Having

mentioned this, it is worth noting that economic insecurity is the key component of the reproduction of human insecurity in the post-flood Ayutthaya.

Community as an institution has different learning processes. In one community where floods are prevalent, they have learned from experience to better cope with and adapt to the realities of natural disasters. They have endured hardships from which they gain experiential learning, which in turn makes the community a type of institution. This type of institution has been very beneficial to the human security of the community, as they are better equipped to deal with changes in environment, as has been demonstrated before. In another community where floods are not common, they experience a higher rate of insecurity due to the lack of institutional learning from the community. This exemplifies the direct correlation of risk factors from the environment to the human security of communities in Thailand.

As stated above, natural disaster risk is connected to human security and human development. The reproduction of human security in the post-disaster environment depends on different factors. One of the key factors that contribute to the restoration of human security is the capacity to become resilient which can be constituted in different communities by learning experience and ability to adapt. In other words, human development can lead effectively to the reduction in disaster risk. Disaster mitigation, preparation and adaptation help reduce risk and increase resilience, recovering human security in the post-disaster scenario. The research findings emphasize chiefly on these three elements as they potentially bring about more consistent production of human security in the post-disaster resilience, long-term and sustainable development which, by and large, is still an unanswerable question that Thailand has to put more effective efforts.

5.2 Recommendation

This section elaborates on the recommendation primarily based on the fieldwork study and documentation and concludes with the needs to be taken into consideration by different stakeholders in dealing with disaster-related human security. It is the researcher's solid hope that some of these recommendations will be more or less useful

for interested stakeholders in coping with the issues so that human security can successfully and sustainably be reproduced in the aftermath of such natural disaster.

- **Focus on Disaster Risk Reduction**

Even though research findings obviously underline different degree of capacity to resist and deal with floods of the two communities, the catastrophe was so severe that both were not able to be secure. It suggests that reducing risk can be one effective strategy in encountering floods, and other natural changes. Some structures built around the flood-prone areas comply with the official housing plan, however, many structures are still risky to be damaged by floods. Disaster risk reduction provides a useful basis for adapting to natural disasters such as floods. Bringing adaptation and risk reduction agendas together should be a priority.

Houses along the banks are constructed with high space under the ground floor, allowing water to flow through. However, houses situated a bit further from the River built inappropriately are risky to be destroyed by the floods. Proper building and housing codes, especially in the flood-risk areas, are important to minimize physical damages. Oftentimes, it is difficult, in spite of the most advanced technology employed today, to predict the intensity and severity of certain natural disaster. By minimizing physical structure, affected people can get recovered relatively effective in terms of economic security, particularly when the situation turns normal. Government may provide financial assistance for relief and recovery, but for many it may not be sufficient to cover all expenditures and properties destroyed.

The inner sections where flash floods are not common necessarily have to learn and prepare for any possible disaster in the future. Housing and building codes must seriously be regulated. It should be established protection elevations for the first floors of structures while electrical outlets should be equipped above the flood level. The minimum standard should appropriately be set can seriously be complied with. In addition, waterways must be cleared at all time to allow floods to flow. Drainages, especially in the inner sections, usually have waste disposals which obstruct water to flow. Clearing drainages must be collaboratively done by both authorities and communities while the

flood-control infrastructure such as dikes, levees and floodwalls have been constructed. These structures, however, may have adverse as well as beneficial effects. Environmental impacts must also be anticipated in the short and long run. The fact that sometimes the intensity of particular flood is unpredictable and barriers may not be properly constructed, building flood barriers may be grave given the consequences of overtopping and failure to protect communities, especially during the major disaster.

Focusing on risk reduction requires integrated approach to minimize the loss potentials. Besides knowledge and technology as such, it also needs commitment of all stakeholders, particularly residents in the flood-risk communities who directly have to face the anticipatable impacts themselves. Being able to respond immediately to natural changes is more critical and demanding than having to wait for external helps.

- **Create Long-Term Resiliency**

Natural disasters cause insecurities of different kinds. Climatic risks like floods usually affect wide range of communities where the sense of human security is perhaps on the verge of being threatened from the very onset of crisis. Affected communities can be fragile and vulnerable in the aftermath where the most crucial urgency to restore the sense of security is purposely attempted. To recover, affected communities and people necessarily have to be resilient in order that human security of different dimensions is reproduced in each context.

Economic insecurity is most likely the root cause of other insecurities such as food, health, personal and perhaps political too. By creating economic resiliency, affected people tend to recover faster and more effectively. The vulnerable groups should be focused in terms of relief and recovery assistance, especially the financial measures that should be included effectively the poor and socio-economically marginalized groups. The government is directly responsible for ensuring that it carefully estimates spending needs in the aftermath of disaster. While financial assistance is provided in the form of compensation, loan or tax adjustment, issues of transparency in operating such assistance must also be monitored to ensure that local people can genuinely and fairly access to those financial sources.

The property catastrophe risk insurance can further create economic resilience in the post-disaster. The catastrophe risk insurance market in Thailand has still been underdeveloped as only 1 percent of private dwellings are insured against natural disaster (UNDP, 2012). The government can promote and support the catastrophe risk insurance by attracting the insurance industry to take part in the risk pooling. Catastrophe risk insurance can reduce economic difficulties in the post-disaster condition for all sectors, public and private particularly in the disaster-risk areas. In addition, other kinds of insurance can also be promoted such as livestock and agriculture which are usually severely affected during the floods.

Resiliency can be restored through integrated approach. It is important for stakeholders to take into account human security of all aspects in order to create long-term resilience in the post-disaster conditions. Affected communities and people need to, first and foremost, reach out to possible assistance provided by various sectors. While food, economic and health security can concretely be achieved, psycho-social conflicts during a disaster must carefully be dealt with. The state authority is mainly obligated to resolve disaster-driven conflict among affected communities and people as it possibly leads to further community insecurity, especially in areas where socio-political difference is obvious, and can ignite exiting conflict to some certain extent.

Learning experience is associated with ability to find resiliency, particularly in places affected repeatedly by disaster. It can possibly constitute to adaptive ability for communities to better prepare for future disruption. Timely post-disaster adjustment in terms of behavioral, physical and institutional efforts contributes to long-term resiliency and the restoration of human security (Lioa, 2012). Community members are responsible for the adjustment after the disaster themselves while authority can take in part in the process by supporting and promoting through different channels. For instance, handbook detailing relief and recovery guidelines in the time of disaster may be effectively conducted and distributed so that community members are aware of what can possibly be prepared during and after the disaster while assessing impacts and needs by authority must also be comprehensive and deliverable.

Psycho-social security dimension matters considerably for affected people to become resilient. Individual security is disturbed by multiple impacts that cause

psychological traumas, especially ones having to confront losses of all kinds. To become resiliently secure, one needs to manage to find the component. While community members can reach out for supports during the time of tragedy, psychological counseling service should also be included in the recovery assistance so that long-term disaster-related traumatic conditions can be minimized and healed in the post-disaster livelihood of affected communities.

Ayutthaya, unlike Bangkok, may be considered quasi-suburban city where industry and agriculture make up of provincial productivity. State aiming to create resiliency in disaster-affected areas like Ayutthaya requires inclusively integrated and effectively comprehensive approach which are able to bring in the sense of security to all sectors, not merely any particular group. While relief can help immediate emergencies, recovery and resilience take time, besides tremendous efforts and commitments from all stakeholders.

- **Improve coordination and communication**

Humanitarian assistance and emergency relief have been seen nationwide every time Thailand is hit by natural disasters. In many events, relief and recovery operation is usually carried out by external public minded entities and people whose wills and commitments helps relieve affected communities to the largest extent. However, there have been cases that the overlapping more or less obstructs the operation by creating confusion among different actors. From the top-down perspective, it is worth suggesting that communication and risk awareness should be continuously improved by among all sectors.

State authority can take lead in strategizing communication development among government agencies while strengthening disaster-relief coordination with IOs such as UN agencies, national and local CSOs whose roles in providing assistance is eminent and effective. The communication strategy should include early warning, hazard awareness, emergency plan as well as guidance for post-disaster recovery. It is essential that communication or messages sent from coordinating center through different channels must be consistent and accurate. Being able to disseminate reliable information not only

help safe all kinds of loss, it also create trust and restore resilience in the aftermath of a disaster.

One of the very explicit research findings is the role of the defense in relief operation. This suggests that the engagement with military sector of other disaster-related institutions is necessary in enhancing capacity to deliver assistance. Resource sharing in terms of human, knowledge, finance, technology, etc., can double up capability of each agency which contributes to the more effective operation. For example, Ministry of Public Health (MOPH) has to request assistance from MOD to evacuate patients, etc. By strengthening coordinating and having a clear line of operation, confusion among different sectors can most certainly minimize loss and damage caused by disaster.

Disaster prevention and mitigation demand knowledge to cope with. Scientific knowledge is not doubts vital to predict, prevent and protect communities from certain disaster. In addition, socio-economic assessment is also significantly needed given that disaster affects human livelihood directly. And so, social and crosscutting issues such as social protection, health, gender or even political stance must be evaluated in order to improve the safety net and produce human security. To do this, the government must engage academic and research institutions, community development organizations and private sectors both inside and outside Thailand. The practices create information and knowledge sharing from different lessons learned in different countries. In conclusion, all abovementioned recommendations do require sound and solid commitments from all stakeholders to achieve.

5.3 Direction for Future Research

Future research is worth focusing on vulnerability, marginalization and resilience of disaster-prone community. It can also bring in issues of migration, social resilience and translocality in the context of natural change or disaster. Future research can contribute to the understanding of patterns of migration at local level as well as what factors drive vulnerability and resilience in the post-disaster environment, particular in Thailand. In addition, long-term disaster management plan of the state and impacts on human security, particularly the environment, is worth being studied in the near future.

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APENDICES

APPENDIX A
LIST OF INTERVIEWS

Interview	Function/Role	Place	Date
Chuleekorn Chompoo	Assistant Manager	Elephant Camp	June 1, 2013
Chonlada Boonkasem	Coordinator	Ayutthaya Health Security Center	June 2, 2013
Piyaporn Chobtamkiy	Assistant Chief District Officer	Ayutthaya Provincial Hall	June 6, 2013
Wacharapol Kakanopas	Assistant Chief District Officer	Chulalongkorn University	August 3, 2013
Camp Staff 1	General Work	Elephant Camp	June 7, 2013
Camp Staff 2	Mahout	Elephant Camp	June 9, 2013
Khun Joom	Owner	Roti Samai, Ayutthaya Hospital	June 11, 2013
Roti Samai	Owner	Roti Samai Ayutthaya Hospita	June 14, 2013
Taxi Motorcycle 1	Family Leader	Chao Prom Market	June 16, 2013
Taxi Motorcycle 2	Family Leader	Wat Mongkon Borpit	July 19, 2013
Vendor 1	Owner	Wat Pra Sri San Petch	July 20, 2013
Vendor 2	Owner	Chao Prom Market	June 22, 2013
Muslim Vendor 1	Owner	Sam Pao Lom Community	June 24, 2013
Muslim Vendor 2	Owner	Sam Pao Lom Community	June 24, 2013
Muslim Senior 1	Family Leader	Sam Pao Lom Community	June 24, 2013
Muslim Senor 2	Family Member	Sam Pao Lom Community	June 24 ,2013
Youth 1	Son	Elephant Camp	June 29 , 2013
Youth 2	Daughter	Elephant Camp	June 29 , 2013

APPENDIX B

LIST OF QUESTIONS

Community _____ Sex _____ Age _____

Occupation _____ Role _____

Questions	Note
1. How long have you been living in Ayutthaya?	
2. How did flood affect your livelihood? For how long?	
3. How did flood affect your family?	
4. What was the most needed thing during flood?	
5. Who was the first person/group that came to help?	
6. During 3 months, how frequent did you receive relief assistance? From who?	
7. What were in the relief bag?	
8. What did you think the most needed item? Why?	
9. How did you manage to access to enough food?	
10. How did you manage to deal with economic difficulty during and after flood?	
11. Did you receive government's compensation? If yes, how much?	
12. What did you use compensation for?	
13. How did you find other sources of finance if compensation was not enough?	
14. Did you or other family members have any health problem during flood? How did you deal with it?	
15. How did you find people in the community during flood?	
16. Was there any problem, concern or tension among community members?	
17. How did you interact with other community members?	
18. How has your livelihood been since flood in 2011? How about your family?	
19. Has it been recovered? If yes, how? If no, why?	
20. How could have flood been dealt with?	
21. Two years after the flood, do you think human security has been reproduced?	

BIOGRAPHY

Mr. Tananchon Suttichuay holds his undergraduate degree in International Relations from Chulalongkorn University. Prior to completing his M.A. in International Development Studies, he worked as a Language/Integration Facilitator at Peace Corps of the United States. He served in the military where he was stationed at the Hydrographic Department, Royal Thai Navy for six months.

Mr. Tananchon was awarded the 2008 JAL Scholarship Program sponsored by Japan Airline and JAL foundation where he was trained in development as well as international relations in Japan. He was an intern at the United Nations Office of the Resident Coordinator (UNRC). His other experiences include a restaurant manager in Silver Spring, Maryland, an international cooperation officer, Office of International Affairs at Chulalongkorn University.

Mr. Tananchon is actively interested in international relations, democratization, development, gender equality, human security, development project management, conflict resolution, women empowerment, capacity building as well as LGBT issues.