Governance and Capacity Building of Handling the Flood Issues in Bojonegoro Municipality, Indonesia

Mochamad Chazienul Ulum

A Thesis Submitted in Fulfillment of the Requirements for the Degree of

Master of Public Administration

Prince of Songkla University

2013

Copyright of Prince of Songkla University

Thesis Title Governance and Capacity Building of Handling the Flood Issues in Bojonegoro Municipality, Indonesia

Author Mr. Mochamad Chazienul Ulum

Major Program Public Administration

Major Advisor :

.....
(Asst.Prof.Dr. Bussabong Chaijaroenwatana)

Co-advisor :

.....
(Asst.Prof.Dr. Parichart Visuthismajarn)

Examining Committee :

.....Chairperson
(Assoc.Prof. Dr. Wichai Pantanahiran)

.....
(Asst.Prof.Dr. Bussabong Chaijaroenwatana)

.....
(Asst.Prof.Dr. Suwit Chanpetch)

.....
(Dr. Andy Fefta Wijaya)

The Graduate School, Prince of Songkla University, has approved this thesis as fulfillment of the requirements for the Master Degree in Public Administration

.....
(Assoc.Prof.Dr. Teerapol Srichana)
Dean of Graduate School

This is to certify that the work here submitted is the result of the candidate's own investigations. Due acknowledgement has been made of any assistance received.

……...……... Signature

(Asst.Prof.Dr. Bussabong Chaijaroenwatana)

Major Advisor

……..…….. Signature

(Mochamad Chazienul Ulum)

Candidate

I hereby certify that this work has not already been accepted in substance for any degree, and is not being concurrently submitted in candidature for any degree.

……...…….. Signature

(Mochamad Chazienul Ulum)

Candidate

Thesis Title Governance and Capacity Building of Handling the Flood Issues in Bojonegoro Municipality, Indonesia
Author Mr. Mochamad Chazienul Ulum
Major Program Public Administration
Academic Year 2012

ABSTRACT

Floods occur twice as often and affect about three times as many people as tropical cyclones. While earthquakes kill more people, floods affect more people (20,000 affected per death compared with 150 affected per death for earthquakes) (EM-DAT, 2006). Most of all global disasters related to hydro-meteorological events, including flood. It poses one of largest natural risks to sustainable development. Floods have hit Indonesia, especially during the rainy season. These disasters are also causing a devastating impact. One of flood disaster-prone areas in Indonesia is Bojonegoro, East Java Province. This region has a geographical condition in which the flow of the Bengawan Solo River. This area leads to increased opportunities to flood experiences. Therefore, the purpose of this research is to study the extent of the disaster management in Bojonegoro Municipality, in terms of governance and capacity building of all of stakeholders in handling flood issues. Qualitative methodology is applied to this study, which include research tools on document analysis, observation, and interview. This research was conducted in Bojonegoro Municipality, East Java Province, Indonesia. The time of research is during 2011.

Topography of Bojonegoro indicates that alongside drainage basin of Bengawan Solo River represent lowland area. Topography of the 18.71% area is situated at an altitude below 25 meters above sea level. Bengawan Solo River flowed to the partly of Bojonegoro throughout 143 km. Floods brought many impacts to some areas in Bojonegoro Municipality. Responding to a strong correlation between disasters and the high population density in Bojonegoro, the local government has established the BPBD on April 22nd, 2009. Bojonegoro is the first regency in East Java Province which initiated the BPBD formation. This agency

is expected to fix the disaster management system, including cross-sector coordination which was experienced by the local government. The Local Authority of Bojonegoro has organized the BPBD involving related institution/agencies and other stakeholders, as well as the (local) society. Collaborative efforts in handling flood issues in Bojonegoro Municipality, particularly between the local government and the local society, had been progressing well. Even, there is also cooperation among the members of the society. Only the local private sector had not been fully involved and participated in the process of disaster management. The local government suggested that all of local community elements should be fully involved in flood disaster management. Based on the operational system in handling Floods in Bojonegoro over years, including in the Municipality, the disaster management can be assessed tend to focus on emergency response.

In conclusion, it is important to make synergy among stakeholders and develop their capacity. This synergy and capacity can be realized in handling floods. Partnership among stakeholders is definitely needed in order to achieve and sustainable flood management. The common problem in handling the floods in Bojonegoro Municipality is it tends focus on emergency relief only. Therefore, it emphasizes that the government has to integrate structural and non-structural actions of disaster management phases. Successful strategies usually combine both of them.

ACKNOWLEDGEMENTS

Alhamdulillahirobbil'alamin. I would like to express my profound sense and praise to the Allah for giving belief, health, confidence, strength, and blessing for the writer to accomplish this thesis as a fulfillment of the requirement for the degree of Master in Public Administration, Prince of Songkla University, Thailand.

An undertaking as arduous as a thesis cannot be successfully completed without the help and support from many people. Therefore, I am indebted to the following outstanding individuals for their kind assistance.

Firstly, I would like to express my deepest appreciation to Asst.Prof.Dr.Bussabong Chaijaroenwatana as major advisor, Asst.Prof.Dr.Parichart Visuthismajarn as co-advisor, Dr. Suwit Chanpetch, Dr. Chulalak as the Director of MPA Program at Prince of Songkla University (PSU)-Thailand, Professor Sumartono, MS., the Dean of Faculty of Administrative Science at University of Brawijaya (UB)-Indonesia, and Dr.Andy Fefta Wijaya, the Head of MPA Program at UB, and the Committee Members, for their useful guidance and strong support throughout the undertaking and writing of the thesis. Moreover, all the professors/lecturers in the MPA program at Faculty of Management Sciences, PSU also deserve an extraordinary thank you.

Secondly, special thanks to all following people who supported and helped me gathering the valuable data and information regarding the study and also gave useful comments and suggestions during the conduct of the research in Bojonegoro Municipality, East Java, Indonesia: the Executive Head of BPBD (the

Local Disaster Management Agency), the Head of Municipality, the Head of Kauman Elementary School, Ainul Hamid-my friend who lives in the Municipality and others. I greatly appreciate all key informants for their opinions, suggestions and recommendations in the context of flood disaster management, which are valuable to this study.

I am also grateful to the UB, especially Faculty of Administrative Science for providing financial support during the study, and PSU for giving me an opportunity to be an international student; then my Indonesian friends, including Rizki Dewantara, Bayu, Handono, Riski Agung, Nizam, Fidia, Pak Cecep, and my friends from Thailand for many kinds of support, which made me relaxed and comfortable during my study.

Lastly, I wish to express my strong appreciation to my beloved mother, my wife and my children for all their support, understanding and love, encouragement, and patience over the years of my study in double degree program. Without their moral support and understanding, I may have been unable to overcome the difficulties that occurred during the study. I really love them all.

Mochamad Chazienul Ulum

Thesis Title Governance and Capacity Building of Handling the Flood Issues in Bojonegoro Municipality, Indonesia
Author Mr. Mochamad Chazienul Ulum
Major Program Public Administration
Academic Year 2012

ABSTRACT

Most of all global disasters related to hydro-meteorological events, including flood. Floods occur twice as often and affect about three times as many people as tropical cyclones. While earthquakes kill more people, floods affect more people (20,000 affected per death compared with 150 affected per death for earthquakes) (EM-DAT, 2006). Floods have hit Indonesia, especially during the rainy season. These disasters are causing a devastating impact. One of flood disaster-prone areas in Indonesia is Bojonegoro, East Java Province. This region has a geographical condition in which the flow of the Bengawan Solo River. This area leads to increased opportunities to flood experiences. Therefore, the purpose of this research is to study the extent of the disaster management in Bojonegoro Municipality, in terms of governance and capacity building of stakeholders in handling flood issues. Qualitative methodology is applied to this study, which include research tools on document analysis, observation, and interview. This research was conducted in Bojonegoro Municipality, East Java Province, Indonesia. The time of research is during 2011.

Topography of Bojonegoro indicates that alongside drainage basin of Bengawan Solo River represent lowland area. Topography of the 18.71% area is situated at an altitude below 25 meters above sea level. Bengawan Solo River flowed to the partly of Bojonegoro throughout 143 km. Floods brought many impacts to some areas in Bojonegoro Municipality. Responding to a strong correlation between disasters and the high population density in Bojonegoro, the local government has established the BPBD on April 22nd, 2009. Bojonegoro is the first regency in East Java Province which initiated the BPBD formation. This agency is expected to fix the disaster management system, including cross-sector coordination which was

experienced by the local government. Roles of the local government are the policy-maker and the principal stakeholder in FDM. The Local Authority of Bojonegoro has organized the BPBD involving related institution/agencies and other stakeholders, as well as the local society. There is community participation in handling flood issues in Bojonegoro Municipality although there is still a high dependence on the local government. Collaborative efforts, particularly between the local government and the local society, had been progressing well. Even, there is also cooperation among members of the society. Only the local private sector had not been fully involved in the process of disaster management.

In conclusion, it is important to make synergy among stakeholders and develop their capacity. This synergy and capacity can be realized in handling floods. Partnership among stakeholders is needed in order to achieve effective and sustainable flood management. The common problem in handling floods in Bojonegoro Municipality is it tends focus on emergency relief only. Therefore, it emphasizes that the government has to integrate structural and non-structural actions of disaster management phases. Successful strategies usually combine both of them.

ACKNOWLEDGEMENTS

Alhamdulillahirobbil'alamin. I would like to express my profound sense and praise to the Allah for giving belief, health, confidence, strength, and blessing for the writer to accomplish this thesis as a fulfillment of the requirement for the degree of Master in Public Administration, Prince of Songkla University, Thailand.

An undertaking as arduous as a thesis cannot be successfully completed without the help and support from many people. Therefore, I am indebted to the following outstanding individuals for their kind assistance.

Firstly, I would like to express my deepest appreciation to Asst.Prof.Dr.Bussabong Chaijaroenwatana as major advisor, Asst.Prof.Dr.Parichart Visuthismajarn as co-advisor, Dr. Suwit Chanpetch, Dr. Chulalak as the Director of MPA Program at Prince of Songkla University (PSU)-Thailand, Professor Sumartono, MS., the Dean of Faculty of Administrative Science at University of Brawijaya (UB)-Indonesia, and Dr.Andy Fefta Wijaya, the Head of MPA Program at UB, and the Committee Members, for their useful guidance and strong support throughout the undertaking and writing of the thesis. Moreover, all the professors/lecturers in the MPA program at Faculty of Management Sciences, PSU also deserve an extraordinary thank you.

Secondly, special thanks to all following people who supported and helped me gathering the valuable data and information regarding the study and also gave useful comments and suggestions during the conduct of the research in Bojonegoro Municipality, East Java, Indonesia: the Executive Head of BPBD (the

Local Disaster Management Agency), the Head of Municipality, the Head of Kauman Elementary School, Ainul Hamid-my friend who lives in the Municipality and others. I greatly appreciate all key informants for their opinions, suggestions and recommendations in the context of flood disaster management, which are valuable to this study.

I am also grateful to the UB, especially Faculty of Administrative Science for providing financial support during the study, and PSU for giving me an opportunity to be an international student; then my Indonesian friends, including Rizki Dewantara, Bayu, Handono, Riski Agung, Nizam, Pak Cecep, Pak Amin fatoni and Fidia for many kinds of support, which made me relaxed and comfortable during my study.

Lastly, I wish to express my strong appreciation to my beloved mother, my wife and my children for all their support, understanding and love, encouragement, and patience over the years of my study in double degree program. Without their moral support and understanding, I may have been unable to overcome the difficulties that occurred during the study. I really love them all.

Mochamad Chazienul Ulum

Contents

Contents (Continued)

Contents (Continued)

List of Tables

Page

List of Figures

Page

List of Abbreviations

BNPB	*Badan Nasional Penanggulangan Bencana* (The National Disaster Management Agency)
BPBD	*Badan Penanggulangan Bencana Daerah* (The Local Disaster Management Agency)
FDM	Flood Disaster Management
IDR	Indonesian Rupiah

Chapter 1

Introduction

Chapter 1 presents introduction, and it consists of 8 sections, namely Background, Conceptual Framework, Operational Definitions, Statement of Problems, Research Questions, Research Objectives, Research Significance and Benefits, and Scope of the Research.

1.1 Background

According to the Act of Republic of Indonesia Number 24 of 2007, disaster is an event or series of events that threatens and disrupts lives and livelihoods caused either by natural and/or non-natural and man-made factors to claim toll, environmental damage, lost of assets, and psychological impact.

Natural disasters have resulted in thousands of people dead and forever change the lives of millions victims in many places around the world. Natural disasters including earthquakes, volcanic eruptions, storms, floods, and others will continue to happen. This phenomenon is now a global portrait that requires a very serious attention in public administration and it has been focused on a possible increase in the frequency of natural hazards that are responsible for these disasters.

"Disasters involve considerable harm to the physical and social environment; they happen suddenly or are socially defined as having reached one or more acute stages; and something can be done to mitigate their effects before or after they happen" (Kreps, 1998). In other words, disasters involve a negative shock whose severity can be affected both before and after the crisis.

Disasters are seen as the consequence of inappropriately managed risk. These risks are the product of hazards and vulnerability. Therefore, serious thinking on these lessons can protect the lives of those who continue to live in circumstances, particularly vulnerable to disaster. About the vulnerability per se, as Blaikie et al. (1994) have clarified that by vulnerability we mean characteristics of a person or group in terms of their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard. It involves a combination of factors that determine the degree to which someone's life and livelihood are put at risk by a discrete and identifiable event in nature or in society.

A natural disaster is a consequence when a natural hazard affects humans and/or the built environment. Human vulnerability, caused by the lack of appropriate disaster management, leads to financial, environmental, or human impact. The resulting loss depends on the capacity of the population to support or resist the disaster.

> Developing countries suffer the greatest costs when a disaster hits – more than 95 percent of all deaths caused by disasters occur in developing countries, and losses due to natural disasters are 20 times greater (as a percentage of GDP) in developing countries than in industrialized countries. The Asia-Pacific region is exposed to almost every type of natural hazard. Sixty percent of the major of disasters reported in the world occur in this region. As vulnerability grows because of increasing population densities, urbanization and industrialization so will the risk of disaster. (ADB, 1991)

Asia tops the list of casualties due to the natural disaster. Almost half of disasters in the world occur in Asia making these regions as the world's most disaster-prone area. The report from ESCAP (2010), detailing a list of countries in the Asia Pacific region which experienced the natural disasters during the period 1980-2009.

For instance, Indonesia ranked the second in the list of highest number of deaths caused by natural disasters in the Asia-Pacific. For the past 20 years, various natural disasters in this country also have caused economic losses of at least U.S. $ 22.5 billion. This data contained in "The Asia Pacific Disaster Report 2010" prepared by the UN Economic and Social Commission for Asia and the Pacific (ESCAP) and The UN International Strategy for Disaster Reduction (UNISDR). Published on October 26, 2010, this is the first time the United Nations prepares a special report on natural disasters in the Asia-Pacific.

Indonesia ranked the fourth in the number of cases of natural disasters in the Asia-Pacific. During 1980-2009, the country experienced 312 cases. China placed the first rank (574 cases), followed by India (416), Philippines (349), and Indonesia. However, based on the number of deaths is the highest rating, Indonesia ranked the second, below Bangladesh. UN records contained at least 191,164 people killed by natural disasters in Indonesia during 1980-2009. For economic losses caused by natural disasters, Indonesia is ranked the eighth. During 1980-2009, the country suffered economic damage worth U.S. $ 22.5 billion. Meanwhile, in the category of survivors who suffered losses from disasters, Indonesia is in the ninth position. During 1980-2009, there were at least 18 million people in Indonesia who suffer from disasters even though they survived. ESCAP-UNISDR also reported those countries in the Asia-Pacific regions was hit four times more vulnerable to natural disasters than in Africa, even 25 times more vulnerable than Europe and North America (ESCAP-UNISDR, 2010).

Natural disasters cause much misery, especially in developing countries. The disaster caused major stress among low-income countries. Most of all

global disasters related to hydro-meteorological events. Flooding poses one of largest natural risks to sustainable development.

All of natural disasters, floods are the most frequent (46%) and cause the most human suffering and loss (78% of the population affected by natural disasters). They occurred twice as often and affect about three times as many people as tropical cyclones. While earthquakes kill more people, floods affect more people (20,000 affected per death compared with 150 affected per death for earthquakes) (EM-DAT, 2006).

Indonesia is a vulnerable developing country to suffer very often from various natural disasters, mainly flood. Floods have hit Indonesia, especially during the rainy season. Even the capital city of Jakarta also ever face big flooded at many times. For instance, flooding on 15-18 January 2013 which have impact to 248,846 of the population, as many as 18,018 people were displaced, and 14 of them killed (Detik Magazine, January 21, 2013).

These disasters are also causing a devastating impact on human life, economy, and environment.

> Flooding is natural process which can become catastrophic when the flood plain and catchment areas are occupied and constructed by humans being. Forested upstream area which has been changed to farmland and housings diminishes the function of the catchment area in infiltrating and catching the water. Good coordination among stakeholders such as the related institutions, private sectors, and local community is strongly required in preventing the floods. Therefore, cooperation and coordination among stakeholders is definitely needed in order to achieve integrated and sustainable flood management (Sebastian, 2008).

One of flood disaster-prone area in Indonesia is Bojonegoro, East Java Province (See the map at p. 59). According to the VIVAnews.com (2009) that

Bengawan Solo River ever flooded in three regencies in East Java Province, namely Ngawi, Tuban and Bojonegoro. The BNPB (National Disaster Management Agency) reported that on Friday, February 27, 2009, four people were killed in Bojonegoro. Flooding also caused 862 people to be evacuated and soaked 21,261 units of houses. It also soaked 4,136 hectares of paddy fields, 618 pulses, 33 units of worship houses, 5 units of bridges and approximately 24,200 meters of roads.

Bojonegoro has a geographical condition in which the flow of the Bengawan Solo River. This area leads to increase opportunities to flood experiences in some down-land of northern regions. Responding to a strong correlation between disasters and economic activities in Bojonegoro, then, the local government has established the BPBD (Local Disaster Management Agency) on April 22, 2009. Bojonegoro was the first regency in East Java Province which initiated the formation of BPBD. This agency is expected to fix the disaster management system, including cross-sectoral coordination which was experienced by the local government. At the same time, they have also made contingency plans with the assistance of BNPB. However, based on facts those efforts are not sufficient yet in handling floods.

Understanding of (flood) disaster management as a common problem requires a mapping the structure of interaction and involvement of various parties in direct contact with root causes and victims of disaster. Of course, various roles and responsibilities will be different. However, the integrated disaster management system requires synergistic interaction of all these actors is a prerequisite. No single actor has any comprehensive knowledge and ability to handle all things. Interactions are the basis at every phase of disaster management.

Therefore, responsible government organizations that should be in charge in reduce damages or losses and how they protect their people from flood disasters. Thus, it is very important to study this case, particularly in Indonesia as one of flood disaster-prone regions. The research also analyzes the extent of cooperation or collaboration among stakeholders, namely the (local) government, the society and private sectors.

1.2 Conceptual Framework

A Conceptual framework is arranged to describe the general plot or outline ways of thinking in doing research and illustrated in chart or scheme. The conceptual framework in this research can be explained as following:

Flood Disaster Management (FDM) in this research refers to the study that related to disaster management by Tun Lin Moe & Pairote Pathranarakul (2006). Based on its time, the event of disasters can be categorized in 3 (three) parts: before, during and after. At the same time, there are 4 (four) activities: mitigation and preparedness (before), response (during), and recovery (after).

Furthermore, understanding of FDM as a common problem requires mapping the structure of interaction, involvement, and participation of various stakeholders in direct contact with root causes and victims of the disaster. As concepts of Governance such as from Kooiman (1993) and Pedroso (1999), stakeholders may include elements of government, and non-governmental actors, both private, Non Government Organizations, and communities. Of course, various roles and responsibilities will be different. However, the (local) government still has roles as the policy-maker and the principal stakeholder.

Then, the capacity building is generally understood as an effort to help governments, communities and individuals in building expertise and skills needed to achieve their goals. Capacity building programs are often designed to strengthen the ability in evaluating their policy options and enforce its decisions effectively. Capacity building could include education and training, regulatory and institutional reforms, as well as financial assistance, technology and science. Finally, by doing interaction, involvement, and participation among stakeholders that followed by developing their expertise and skills may enhance the capacity.

In this research, the researcher will describe roles of the local government to handle floods in Bojonegoro Municipality, Indonesia. Besides that, the researcher will identify the (local) capacity that already done by all stakeholders (the local government, private sectors, and the society). The conceptual framework in this research can be depicted at Figure 1.1 as following:

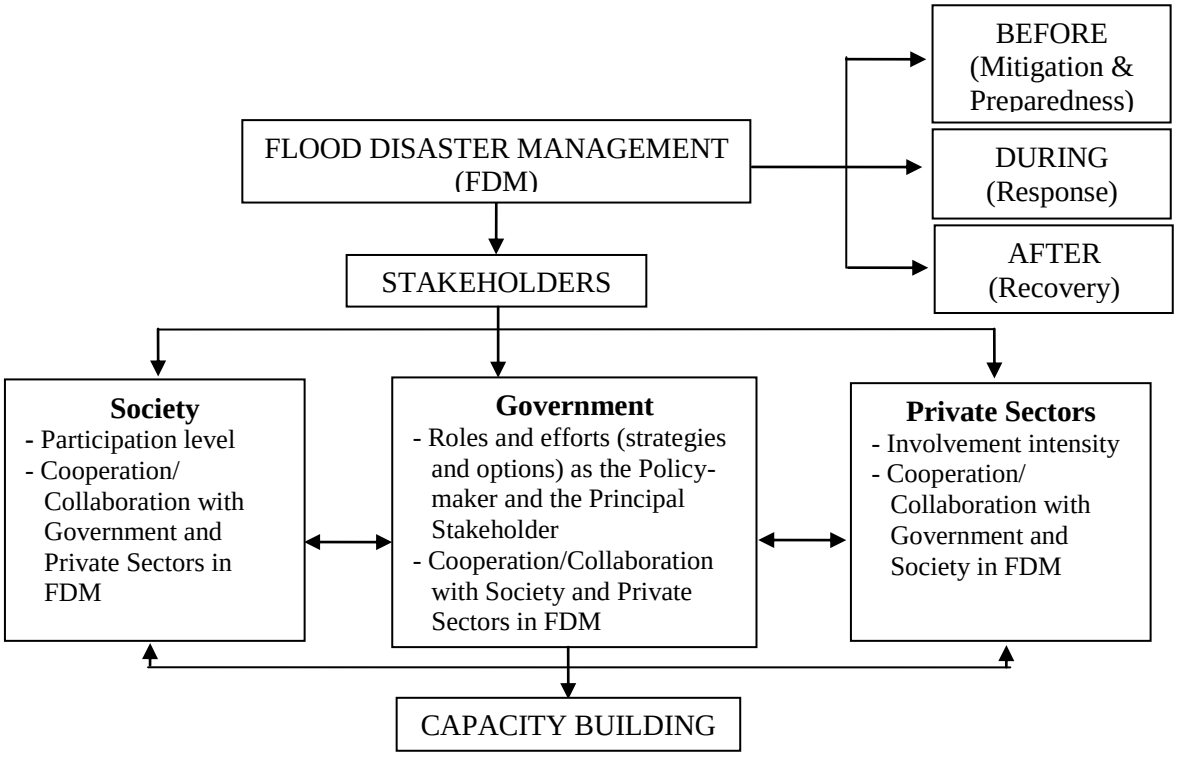

Figure 1.1 Conceptual Framework

1.3 Operational Definitions

1.3.1 Disaster Management

Disaster management is a process or strategy that is implemented when any types of catastrophic events takes place. Governments at all levels as well as many businesses create some sort of disaster management plans to overcome the catastrophe and return to normal function immediately. One of the essential elements of disaster management involves defining those types. Identifying those potential disasters makes it possible to create contingency plans, assemble supplies, and create procedures that can be initiated when and if a given disaster does come to pass (Tatum, 2011).

1.3.2 Governance

Governance relates to changing relationships between State and society and a growing resilience on less coercive policy instruments. The State is still the centre of considerable political power. Therefore, Governance as processes in which the State plays a leading role, making priorities and defining objectives. This is in line with the notion of the role of the State as that of "steering" society and economy (Peters and Pierre, 2000).

1.3.3 Local Government and Its Roles

The term "local government" generally denotes the units of government that provide direct services to citizens at the lower intermediate and lowest levels. Local government units are the constitutional creation and

responsibility of the provinces, although some countries (e.g., Mexico, Philippines and Thailand) provide for independent national capital regions (ADB, 1995).

While the role is a set of behavior expected by others against the government (particularly the local government) based on their position within a system. It may include tasks, responsibilities and efforts which should be done by the government. Thus, this research will describe the extent of local government's roles in handling floods through disaster management.

1.3.4 Capacity Building

Capacity is "the inherent endowment possessed by individuals or organizations to achieve their fullest potential" (Jurie, 2000). Then, capacity building is a conceptual approach to development that focuses on understanding the obstacles that inhibit people, governments, international organizations and non-governmental organizations from realizing their developmental goals while enhancing the abilities that will allow them to achieve measurable and sustainable results (http://en.wikipedia.org/wiki/Capacity_building).

Organizational capacity building is used by stakeholders to guide their internal development and activities. In the context of FDM, the local government, the (local) community and private sectors should develop their capacities in handling flood issues. Improving their capacities can be done through strengthen internal abilities and enhance cooperation or collaboration each other among them/stakeholders.

1.4 Statement of Problems

As aforementioned above that Bojonegoro Municipality-Indonesia has the geographical condition as a flood disaster-prone area, and the local government also plays some roles in handling floods. The first problem of this research is the extent of the local government in managing flood risks.

Secondly, considering the frequency of floods and various impacts, then flood disaster management requires more attention from all stakeholders, not only the (local) government but also the society and private sectors. Besides that, based on the need of this management, it is important to make synergy cooperation/collaboration among stakeholders and develop their capacity. This synergy and capacity can be realized in handling floods. We expect that all of them can apply the FDM effectively to reduce losses significantly.

1.5 Research Questions

Questions of this research are:

1.5.1 How are roles of the local government in handling floods in Bojonegoro Municipality, Indonesia?

1.5.2 How are cooperation/collaboration and capacities of the local government (Bojonegoro Municipality), local society, and local private sector in handling floods?

1.6 Research Objectives

Objectives of this research are:

1.6.1 To describe roles of the local government related to the flood disaster management (FDM) in Bojonegoro Municipality, Indonesia

1.6.2 To analyze cooperation/collaboration and capacities of the local government (Bojonegoro Municipality), local society, and local private sector in handling floods

1.7 Research Significance and Benefits

Practically, this research will provide an alternative perspective to local governments, private sectors and prominent figures of local community in order to manage the risk of flood disaster with mutual cooperation. This research also will provide suggestions to society in order to increase their participation in the context of disaster management. For the other actors (Civil Society Organization, Non Government Organization, and private sector) also know about their responsibility to sustainable of environment, particularly in FDM.

Theoretically, the result of this research will strengthen the concept of disaster management in the context in handling floods. We expect that the concept of (flood) disaster management can be considered in other regions/districts/cities.

1.8 Scope of the Research

Scope of the research is very important to make a limitation of study and source of data. Through the research scope, the researcher will not be trapped by abundance obtained data. The researcher also can select and scan the obtained data easily and accurately.

Scope of the research is focused on the local government as the policy-maker and the principal stakeholder that related to their roles in handling floods. In this context, the political commitment, a clear strategy and sustained efforts would help in creation of such institutions. Furthermore, FDM requires serious efforts from the (local) government, effective involvement from private sectors and active participation from the society. Therefore, mutual cooperation among them as stakeholders and its capacity building also is needed in handling floods.

The table 1.1 below identifies scope of the research based on research objectives. This scope of the research will be conducted in the research site in Bojonegoro Municipality, East Java Province, Indonesia.

Table 1.1 Scope of the Research

Research Objectives	Scope of the Research
1. To describe roles of the local government related to the flood disaster management (FDM) in Bojonegoro Municipality, Indonesia	1. Disaster management regulation and/or programs which implemented in the local site 2. The existence of the local governmental organization/agency in managing disasters, including floods 3. Efforts of the local government and related organizations in FDM
2. To analyze cooperation/ collaboration and capacities of the local government (Bojonegoro Municipality), local society, and local private sector in handling floods	1. Cooperation/collaboration among stake-holders (the local government, the local society, and the local private sector) in handling floods 2. The existing of local capacity and capacity building programs/activities related to the FDM 3. Problems which faced by stakeholders related to their capacity and cooperation/collaboration in handling floods

Chapter 2

Literature Review

This chapter consists of two sections, Theories and Previous Studies. Theories include Roles of the Local Government, Concepts of FDM, Governance in the Context of FDM, Capacity Building in Disaster Management, and Concepts of Participation. Previous Studies are related researches in FDM, Local Governments and Disaster Management in Southeast Asia, Collaboration among Stakeholders in Disaster Management, Capacity Building and FDM, and Community Participation in FDM.

2.1 Theories

2.1.1 Roles of the Local Government

According to Shah (2006:2), local government refers to specific institutions or entities created by national constitutions, by state constitutions, by ordinary legislation of a higher level of central government, by provincial or state legislation or by executive order to deliver a range of specified services to a relatively small geographically delineated area.

The role of governments as public policy-makers can be described as a set of processes, including at least (1) the setting of an agenda, (2) a problem analysis and goal setting, (3) the specification of alternatives from which a choice is to be made, (4) an authoritative choice among those specified alternatives, (5) the implementation of a decision and (6) finally evaluating the level of goal achievement (Vermeulen, W.J.V. et al., 2010).

Vermeulen et al. (2010) stated that in specifying the various roles taken by governments in these strategies it has to be remembered that even in the case of strong governance, governments have a position of public responsibility for solving public problems. The basic sequence of government policy activities as described in the policy cycle therefore continues to be relevant. This includes governments engaging in:

1. Analyzing the problem,
2. Formulating and communicating achievable goals,
3. Selecting, developing and implementing policy instruments,
4. Monitoring and evaluating performance and goal achievement

Therefore, related to roles of the government, Pande (2006) stated that the political will, a clear strategy and sustained efforts would help in creation of such institutions. The major elements are:

1. Development of organizations for collective decision making and management,
2. Promotion of organizational catalysts – national and international NGOs or government-sponsored cadres or social organizers – to induce and encourage the establishment of organizations and provide support mechanisms to facilitate local disaster management,
3. Provision of program packages that respond to the needs of the organization and motivate the members of action

2.1.2 Concepts of Disaster and Flood Disaster Management (FDM)

2.1.2.1 Disaster

According to Kumar (2000), a disaster is a term describing a whole range of distress situations, both individual and communal. While, IFRC and RCS stated that a disaster is an extreme disruption of the functioning of a society that causes widespread human, material, or environmental losses that exceed the ability of

the affected society to cope using only its own resources. Events such as earthquakes, floods, and cyclones, by themselves, are not considered disasters. Rather, they become disasters when they adversely and seriously affect human life, livelihoods and property. For instance, a hazard occurrence (the earthquake, the flood, or the cyclone, for example) becomes a disaster when it results in injuries, loss of life and livelihoods, displacement and homelessness and/or destruction and damage to infrastructure and property. A cyclone that surges over an uninhabited island does not result in a disaster; however, it would be a disaster if it hit the populated coast and caused extensive loss of lives and property (IFRC and RCS, 2000). Therefore, a disaster can be defined as any tragic event with great loss stemming from events such as earthquakes, floods, catastrophic accidents, fires, or explosions.

Disasters are classified into three types: natural, man-made, and hybrid disasters. Natural disasters are those disasters that result from natural forces. Natural disasters are of (i) geophysical origin such as earthquakes, volcanic eruptions, landslides and (ii) climatic origin such as drought, flood, cyclone, locust, and forest fire.

Furthermore, man-made disasters are those disasters that result from human decisions. Man-made disasters are classified into technological disasters, transportation accidents, public places failure, and production failure. Natural and/or man-made disasters sometimes lead to subsequent disasters (Disaster Prevention and Management, 2007).

Based on the level of speed or the time of occurrence, disaster divided into two parts (Boli, et al. 2004):

1. Slow onset disasters

   Slow onset disaster is related to situations in which the ability of communities to sustain their livelihoods is slowly declined to the point where the ability of survival is threatened. This situation is the result of deterioration in the ecological, economic, social and political.

2. Sudden onset disasters

   Sudden onset disaster is catastrophe that occurs rapidly due to natural phenomena. Generally it occurred without warning causing unpreparedness. One of disasters is flood disaster; it can be categorized as sudden onset disaster.

2.1.2.2 FDM

Floods occur frequently in some parts of the world. While for some areas flooding spells disaster, for other areas yearly flooding is necessary to sustain crops. Floods kill more people than any other weather phenomenon.

> Floods are excessive accumulations or flows of water which result from heavy rainfall, snow-melt or high tides and other causes, such as dam burst, embankment failure, etc. They include flash floods, which are rapidly rising and falling river and overland flows resulting from the rapid run-off of rainfall from upland areas (usually hilly) upstream; river floods in which river water spills over adjoining land; rainwater floods from the pond of rainfall run-off and the raised ground water-table flood plain depression; tidal flooding, usually saline from the overflow of coastal rivers at high tides; and storm surge floods associated with the passage of tropical cyclones (ADB, 1991)**.**

> Therefore, three general strategies for reducing flood losses are:
>
> 1. Modifying the flood in order to keep flood water away from developments and populated areas by decreasing run-off, by increasing channel capacity, or by containing, diverting or storing flood water;

2. Reducing the danger of, and susceptibility to, damage from flooding by keeping people and developments out of the flood hazard area or by making them more resistant; and
3. Reducing the financial and social impact of flooding through measures such as insurance and post-flood assistance (ADB, 1991).

Rising frequency, amplitude and number of natural disasters and attendant problem coupled with loss of human lives prompted the General Assembly of the United Nations to proclaim 1990s as the International Decade for Natural Disaster Reduction (IDNDR) through a resolution 44/236 of December 22, 1989 to focus on all issues related to natural disaster reduction. In spite of IDNDR, there had been a string of major disaster throughout the decade. Nevertheless, by establishing the rich disaster management related traditions and by spreading public awareness the IDNDR provided required stimulus for disaster reduction. It is almost impossible to prevent the occurrence of natural disasters and their damages.

Furthermore, disaster management includes generic five phases, namely, prediction, warning, emergency relief, rehabilitation, and reconstruction.

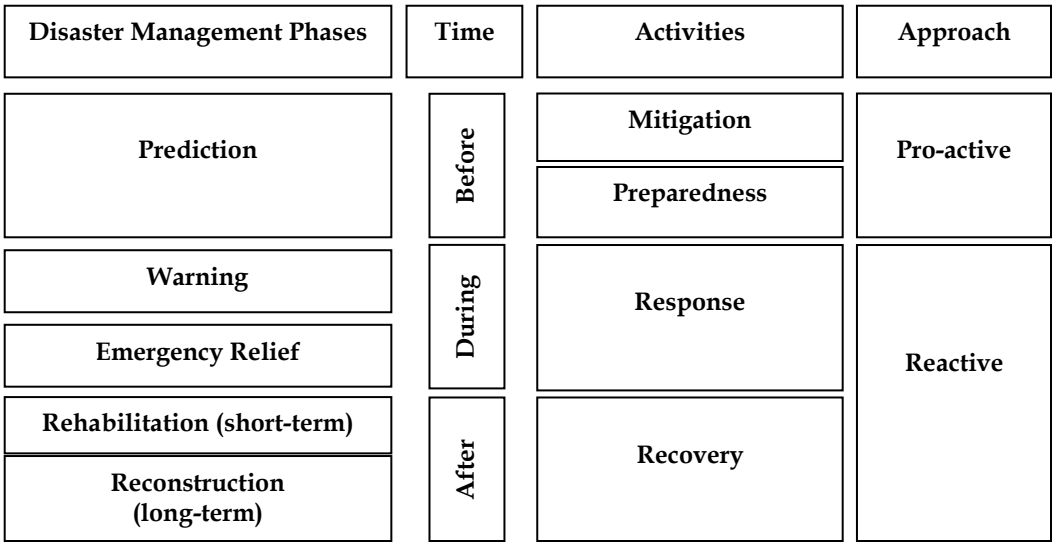

Figure 2.1 Disaster Management Phases
Source: Tun Lin Moe & Pairote Pathranarakul, 2006 (Adapted)

These phases can be further elaborated by referring to UN/ISDR (2002):

1. Prediction. In this phase, mitigation and preparedness activities are conducted in the prediction phase. This includes structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards and non-structural measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and temporary evacuation of people and properly from threatened locations.
2. Warning. This phase refers to the provision of timely and effective information, through identified institutions, that allows individual exposed to a hazard to take action to avoid or reduce their risk and prepare effective response.
3. Emergency relief. The provision of assistance or intervention during or immediately after the disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of immediate, short-term, or protracted duration.
4. Rehabilitation. This phase includes decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.
5. Reconstruction. This phase includes the essential activities conducted are mitigation, preparedness activities in prediction phase; response activities in warning and emergency relief phases; and recovery activities in rehabilitation and reconstruction phases.

Furthermore, it can be related to time compression. This perception is important for disaster management activities. Wilding (1999) stated that time compression is a method which aims at reducing and where possible eliminating time wasted on non-value-adding processes activities in order to reduce overall process or lead time. In his book, *Business at speed of thought*, Bill Gates stated that “If the 1980’s were about quality and the 1990’s about re-engineering, then the 2000’s will be about velocity”. To achieve velocity within organizations, time compression is

required in all processes. Time compression is not about making people work faster, thereby risking quality, safety and their livelihoods (In Wilding, 1999).

According to Yodmani (2001), proactive disaster management, focusing on reduction of disaster risks, can have a significant contribution to the goals of protecting vulnerable communities, their lives, assets and livelihoods. Disaster risk reduction is a proactive approach that needs to be integrated in regular development planning and poverty reduction program at all levels. Policymakers in the development and poverty reduction sector need to recognize that disasters are not just "setbacks" or "roadblocks" to development, but result from the paths that development is pursuing.

Thus, by changing our planning processes, and incorporating disaster risk assessment in the planning of all new development projects, we can make sure that the future natural hazards will encounter resilient communities that are capable of withstanding their impact and therefore remain mere emergencies rather than disasters. We need to recognize that we can mitigate the impact of disaster and make mitigation the cornerstone of our disaster management interventions. We have to shift the focus to the most poor and vulnerable sections of our society, and ensure that our interventions are community-based and driven (Yodmani, 2001).

WMO and APFM (2009) also introduced the concept of Integrated Flood Management (IFM). IFM is a process promoting an integrated –rather than fragmented- approach to flood management. It integrates land and water resources development in a river basin, and aims at maximizing the net benefits from the use of floodplains and minimizing loss of life from flooding.

The table 2.1 below displays the strategies and options generally used in flood management. Flood management plans should adopt strategies that are flexible, resilient and adaptable to changing conditions. Such strategies would be multi-faceted with a mix of options.

Table 2.1 Strategies and Options for Flood Management
Source: WMO and APFM (2009)

Strategies	Options
Reducing Flooding	Dams and reservoirs
	Dikes, levees and flood embankments
	High flow diversions
	Catchment management
	Channel improvement
Reducing Susceptibility to Damage	Floodplain regulation
	Development and redevelopment policies
	Design and location of facilities
	Housing and building codes
	Flood proofing
	Flood forecasting and warning
Mitigating the Impacts of Flooding	Information and education
	Disaster preparedness
	Post-flood recovery
	Flood insurance
Preserving the Natural Resources of Flood Plains	Floodplain zoning and regulation

Based on disaster management phases by Tun Lin Moe and Pairote Pathranarakul (2006), these strategies and options can be categorized in mitigation, preparedness, response, and recovery activities. It started from reducing flooding such as catchment management and channel improvement until preserving the natural resources of flood plains through floodplain zoning and regulation.

2.1.3 Governance in the Context of FDM

Kooiman (1993) emphasized the importance of governance. He stated that no single actor, public or private have all the knowledge and information that are

needed to solve complex problems, dynamic and diverse, there are no players who have an adequate view to the application required an instrument effectively, no one actor who has enough actions that have the potential to dominate unilaterally in a model of governance.

> The 21st century is an age of expanding citizen participation in all sectors at different level of governance. On the part of governance, this requires appropriate measures to strengthen participatory processes and mechanisms, making these processes more transparent, democratizing access to information and creating equal opportunities to everyone based on a framework that respects and protects human rights, the environment and social gender equality. Therefore, participation among stakeholders is one of the fundamental prerequisites in all development programs in every country (Pedroso, 1999).

Furthermore, in the context of disaster management, the government is the single too small to cope with the complexities of this issue. Particularly for developing countries, while not fully formal state actors have the necessary capacity, there is a potential and social energy of non-governmental actors for disaster management. The failure of government actors to act in a single monopoly is not only occurred in developing countries, but also in developed countries.

Therefore, the integrated disaster management system requires synergistic interaction of all these actors is a prerequisite. Not possible if disaster management unilaterally imposed only on the government. No single actor has any comprehensive knowledge and ability to handle all things in the context of (natural) disasters. Interactions are the basis at every stage of disaster management, especially the stages of disaster prevention is probably the most important effort that must be done with the collaboration of roles, responsibilities, values among governance actors.

In the context of actors there are three important actor components which are closely related to each other (www.isdm.univ-tln.fr/PDF/isdm27/isdmbalai.pdf):

1. First, State has taken an important role, especially to set up the strongly foundation for fairness, equity, peaceful, and to improve the conducive climate of law and politics for development.
2. Second, Civil Society has taken an important role in building a foundation for freedom, equality, and self actualization in such a way of responsibility.
3. Third, Private sector is very important to set up a foundation for economic growth and development. Private sector might have created the revenue and might have increased the production volume. It can also create an opportunity to work and increase the revenue, trade and human resources.

2.1.3.1 The State

The state is a field of power marked by the use and threat of violence and shaped by (Migdal, 2004):

1. The image of a coherent, controlling organization in a territory, which is a representation of the people bounded by that territory

In this context, state is described as “center”. "The image," he explained, "amalgamates the numerous institutions of which the performers are members and on behalf of which they exercise authority, into an *image* of a dominant and single center of society." In the definition here, the image of the *state* is of a dominant, integrated, autonomous entity that controls, in a given territory, all rule making, either directly through its own agencies or indirectly by sanctioning other authorized organizations - businesses, families, clubs, and the like - to make certain circumscribed rules. Image implies perception.

Here, perception of the state is by those inside and outside its claimed territory as the chief and appropriate rule maker within its territorial boundaries. The image posits an entity having two sorts of boundaries: (1) territorial boundaries between the state and other states, and (2) social boundaries between the state - its (public) actors and agencies - and those subject to its rules (private).

2. The actual practices of its multiple parts

The second key aspect of the definition of state is practices. The routine performance of state actors and agencies, their practices, may reinforce the image of the state or weaken it; they may bolster the notion of the territorial and public-private boundaries or neutralize them. Practices may serve to recognize, reinforce, and validate, not only the territorial element of state control, but also the social separation between the state and other social formations (the public-private divide) in numerous ways.

2.1.3.2 The Private Sector

The private sector generates jobs and income; civil society facilitates political and social interaction - mobilizing groups to participate in economic, social and political activities. When most governments gained independence, it was assumed that the private sector, (left to itself, would neither generate nor allocate investment resources optimally and that government would have to take the lead role for guiding the transformation of the economies (Agere, 2000).

Industry is one of considerable strategic economic activities to increase incomes and economic activities are characterized such as by rapidly increasing employment and technology transfer. However, in addition to providing a positive

impact on the development of industrial sector was also a negative impact of industrial waste/pollution which if not managed properly will disturb the environmental balance, so that environmentally sound development can not be achieved.

As a part from the corporate ethics, then, the concept and movement of "CSR" (Corporate Social Responsibility) for disaster and environmental management has been growing rapidly in the world, particularly among corporations located in disaster-prone areas. The commitment of private sectors needs to be improved through the implementation of CSR that community or social activities can be done in various forms. Implementation of CSR usually still far from expected. The problem is, most corporate perception which assume that the allocation of funds for the benefit of CSR as a burden because it is a cost factor. Besides, they already feel responsible enough to pay the taxes that those funds will be used for development. In fact, some study results indicate a positive correlation between profits and CSR, or financial goals and social goals of the corporation. Corporations which recorded the highest profits are the pioneers in the CSR.

However, we look at activities that are practiced as CSR they are mainly from short-time and response, rather than proactive activity. It means that the interaction of corporations in the field mainly focus on the type of assistance, and just something to do with the physical reconstruction and recovery. Without appropriate approaches at pre-disaster and precautionary level, a truly lasting impact from CSR activities will not be seen. It certainly is not a wise option to only invest corporate capital and human resources to post and responsive-relief activities. With proper

precautionary involvement and activities, communities will be more resilient and better prepared for the future disaster and environmental hazards (Twigg, 2001).

2.1.3.3 The Civil Society

In Western Countries, there are many answers to explain what the meaning of civil society is. However, in exploring the meanings of this concept used in scholars, Tangcharoen (2006, p: 1) distinguishes four points:

1. First, as it appeared, for example, in the works of Locke and Tocqueville, civil society is democratic society, the private sphere which dominates the state.
2. Secondly, civil society equates capitalist society, as we can find in the works of Adam Smith, Hegel, and Marx. Here it is the sphere of egoistic individual, while, rightly or wrongly, the state is the sphere of the public.
3. Thirdly, civil society can be regarded as modern organized society, as "civil society *as Gessellschaft*". It is the troubled modern society, as opposed to the traditional and "good" society.
4. Fourthly, writers such as Gramsci and Althusser suggested that civil society refers to the mechanism of ideology and domination, a cultural and ideological battlefield of the war of position or counter hegemony, while the state is the oppressive mechanism.

The examination of meanings of the concept leads to the contemporary meaning that "civil society" stands for the people's sector which is analytically distinguishable from the domain of the state and the economic sector (Tangcharoen, 2006). The civil society denotes the aggregate of various groups of people, which are the basis of the democratic state and the basis for the process of democratization in that nation. These various groups are civil society groups or civil society organizations. Tocqueville (in Tangcharoen, 2006) mentioned that regarding the diversity or pluralism of social groups, each and every group must be taken as a

member of civil society. Civil society denotes the immense diversity of social group/associations.

According to Tangcharoen (2006), civil society may be defined as the macro-domain/sphere of the overall aggregate of diverse groups of people in society, the macro sphere which forms a basis of a democratic state, or a basis of democratization. Even though it is analytically possible to separate civil society or people sector from the state and the economy, in reality this separation is not clear-cut. Civil society and government are interdependent in a democratic society wherein there exist a plurality of groups and the values of freedom and equality are cherished. In a non-democratic society, or a democratizing one, the emergence and growth of civil society is the basis for democratization. Each group in civil society can be considered a part of civil society and a concrete indicator of the existence of civil society.

Tangcharoen (2006) also mentioned 'indicators' as 'criteria' for evaluating the extent to which civil society exists in Thai society and/or the extent to which there exists conditions amenable to the emergence and/or growth of civil society there in. Those criteria are *the rule of law*, *constitutional processes*, *popular political participation*, *'voluntaries' or voluntarism*, *human dignity*, *political freedom*, *market freedom*, *cultural freedom*, *private property*, *resource utilization rights*, *ideational struggle*, *conscientization*, and *civility*.

These can be refashioned for use appropriate for the purposes of this section as follows (Tangcharoen, 2006):

1. Groups which are component parts of civil society can be labeled 'civil society organization.'

2. Participation in civil society organizations must voluntary so as to ensure their autonomy from other sections of civil society and from the state. If state coercion or social sanction is involved, then the organizations credentials as civil society organizations are in doubt.
3. Civil society organizations conduct themselves internally and externally according to norms of civility. These involve peaceful means and toleration of differences. 'It does not require us to like those we deal civilly, and as such contracts with the warmth of communal, religious or national community'.
4. Civil society organizations operate in the public sphere, in collective action for the public interest more than for private or group interest (of the family, kinship groups, client groups and other 'parochial' interest, for instance). Though autonomous of the state, they relate to the state in a number of ways, from pressuring for policy and policy implementation to the limitation of the state and its exercise of power but importantly, does not seek to take control of the state. They may also conduct their affairs without reference to the state.
5. The rule of law constitutes both conditions necessary for the emergence and growth of society and outcome of the civil society. The rule of law is the opposite of arbitrary rule since it imposes universal rules indiscriminately. It is thus conducive to equality before the law or freedom from fear. However, it must be emphasized that the rule of law is not to be construed as strict adherence to the letter of the law. On the contrary, it demands that the law itself be just. Therefore, for the rule of law to operate, attention must be paid to the process of legislation to ensure just laws and to designing structures and procedures so as to ensure just judicial decisions.

The concept of civil society has a long tradition and has been given many interpretations, from being identified with political community by Aristotle to meaning nearly the opposite since Hegel, namely a differentiation of society in which civil society is defined as more or less formalized institutions which form an autonomous social sphere that is distinct from the State (Smismans, 2006). In contrast to this dualistic model, in today is complex modern society it has become more common to define civil society as a social sphere distinct from both State and market.

Smismans (2006) stated that civil society has been attributed different roles in a democratic society.

2.1.4 Capacity Building in Disaster Management

Some scientists interpreted the capacity building as capacity development or capacity strengthening, suggesting an initiative on the development of capabilities that already exist. While others refer to constructing more capacity as a creative process to build capacity that is not visible (not yet exist). In principle both have the same discussion that is characteristic capacity analysis as other initiatives to improve government performance (Soeprapto, 2003).

Brown (2001) stated the definition of capacity building as a process that can enhance the ability of a person, an organization or a system to achieve certain goals. While, according to Morison (2001), capacity building as a process to do something, or a series of movements, changes in multi-level individuals, groups, organizations and systems in order to strengthen the ability of individuals and organizations so that adjustments can be responsive to changes in the existing environment.

Then, UNDP defined 'capacity building' as *the creation of an enabling environment with appropriate policy and legal frameworks, institutional development, including community participation (of women in particular), human resources development and strengthening of managerial systems*, adding that, *UNDP recognized that capacity building is a long-term, continuing process, in which all stakeholders participate*. While, the WCO defined capacity building as "activities which strengthen the knowledge, abilities, skills and behavior of individuals and improve institutional

structures and processes such that the organization can efficiently meet its mission and goals in a sustainable way." It is, however, important to put into consideration the principles that govern community capacity building. (http://en.wikipedia.org/wiki/Capacity_building)

Furthermore, Milen (2001) stated capacity building as a special task, because the special duties related to various factors within an organization or system at any given time. Capacity building can also be defined as a process to (i) improve the ability of individuals, groups, organizations, and communities to analyze their environment, (ii) identify the problems, interests, and opportunities, (iii) formulate strategies to solve a problem and these interests and to seize opportunities that are relevant, (iv) designing a plan for the programs, and (v) to effectively utilize the basic resources that support implementation, monitoring and evaluation plan programs, and (vi) use reverse flow to study the results of the evaluation (ACBF, 2001).

The World Bank emphasized that capacity building focus attention on: a) Development of human resources: recruitment, training, and termination of professional employees, managerial and technical, b) Organizational, the setting up structures, processes, resources and management style, c) Networking, the form of coordination, event organization, network functions, as well as formal and informal interaction, d) Environmental organizations, namely the rules and laws (legislation) that govern the public service, responsibility and powers between the institutions, policies that impede development tasks, as well as financial and budgetary support, e) Environment broader other activities, including political factors, economic situations that affect performance. While UNDP focuses on three dimensions, namely, (1) labor (human resources dimension), namely the quality of human resources and how human

resources utilized (2) Capital (physical dimensions), concerning the means of material, equipment, materials required and space/building, (3) Technology, the organization and management style, function planning, policy determination, control and evaluation, communication, and management information systems (Edralin, 1997).

From the literature it seems to be summarized that several dimensions of capacity building for the bureaucracy: (1) human resource development, (2) strengthening the organization and management, (3) provision of resources, facilities and infrastructure, (4) network, (5) environment, and (6) mandate, fiscal capacity, and programs. Capacity Building is much more than training and includes the following (Linnell, 2003):

1. Human resource development, the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively,
2. Organizational development, the elaboration of management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community),
3. Institutional and legal framework development, making legal and regulatory changes to enable organizations, institutions and agencies at all levels and in all sectors to enhance their capacities.

Therefore, capacity building should be done in every phase in disaster management, including in the mitigation step.

> Increasing the disaster mitigation capacity of a country or a community through strengthening its social structure is the most difficult. It can best be accomplished through extending normal development work in three ways. The first is institution building. Organizations that serve as coping mechanisms can be identified and strengthened. A deliberate effort can be made to increase their institutional capacities and skills, thus enhancing their ability to deal with a crisis. The second is to increase the number of coping mechanisms within a country or a community. By developing formal

> institutions and linking them to outside resources, means are established for intervention and the provision of assistance. The third activity is to encourage actions that promote cooperation among different groups within society. Such cooperation can considerably reduce the social impact of disasters. (ADB, 1991)

2.1.5 Concepts of Participation

Participation principles tend to focus on the inclusion of local views, indigenous knowledge and local wisdom in the implementation and evaluation of development programs. The traditional thought developed: hence it noted that the participation should attach in the whole process of development. Community participation is defined as community involvement in the whole process of development, which is ranging from these following activities, such as: (1) involvement in the problem identification; (2) involvement in the necessity identification; (3) involvement in the planning program; and (4) involvement in the monitoring and evaluation (Soetomo, 2006).

The application of participation is not only on the development process itself, but also it covers various contexts including the disaster risk management.

> In the context of disaster risk management study, local capacity building and participation is applied significantly. There are some key policies should be attached to promote it, such as participation, government accountability, decentralization, freedom and access to information, legally enforceable obligations, access to justice, national coordination and cooperation and international cooperation and coordination (ActionAid & AyudaAccion, 2005).

In disaster management, there is another growing trend: the shift from a top-down to a bottom-up approach. This is due to, on one hand, communities taking a much stronger role in disaster management to reduce risk. On the other hand, the aid and development agencies are finding new approaches to disaster management

that attempt to merge the disaster reduction strategies defined by policy makers with the needs and resources of the local community (Yodmani, 2001).

Then, public participation is "the direct involvement of ordinary people in local affairs." Midgley (1986) clarified the definition of participation of this community by referring to one of the definitions contained in the UN resolution in the early 1970's. The definition is "the creation of opportunities to enable all members of a community and the larger society to actively contribute to and influence the development process and to share equitably in the fruits of development".

Furthermore, Conyers (1992) stated that the success and failure is caused by the participation of two things. First, the public awareness that his involvement could determines the outcome of a plan. Secondly, the feeling that participation has a direct influence can be felt. Society will not be interested in the activity that is incompatible with the aspirations or who do not have influence to change the fate of society.

According to WMO and APFM (2009), Integrated Flood Management should encourage the participation of users, planners and policy-makers at all levels. The approach should be open, transparent, inclusive and communicative; should require the decentralization of decision-making; and should include public consultation and the involvement of stakeholders in planning and implementation. Representatives of all the upstream and downstream stakeholders need to be involved.

All institutions necessarily have geographical and functional boundaries. It is necessary to bring all sector views and interests to the decision-making process. All activities of local, regional and national development agencies should be coordinated at the appropriate level. The challenge is to promote

coordination and cooperation across functional and administrative boundaries (WMO and APFM, 2009).

2.2 Previous Studies

2.2.1 FDM

Tun Lin Moe & Pairote Pathranarakul (2006) developed an integrated approach for effectively managing natural disasters. It has three research objectives: First, it provides a framework for effective natural disaster management from a public project management perspective. Second, it proposes an integrated approach for successfully and effectively managing disaster crisis. Third, it specifies a set of critical success factors for managing disaster related public projects.

This study's unique contribution to the knowledge body of public project management or disaster management is an integrated approach to managing disaster with a basic goal to minimize effectively the impact of the disaster. In addition, basing on lessons learned from managing tsunami disaster impacts, which were recently caused by a hard-hit tsunami in December 2004; the study identifies the problems associated with disaster management in Thailand. Then, comprehensive recommendations are made for those concerned authorities and organizations.

The principal key stakeholder of the disaster management is the governmental unit, namely Department of Mitigation and Preparedness Center (DMPC). The assessment of impact levels is critical because it can be used for rehabilitation and reconstruction. The main purposes are to identify damage level of disasters effected areas and locations in terms of social, economic, and environmental

assessments, to prioritize effected communities for rehabilitation and reconstruction, and to design and plan for implementation of reconstruction process. Levels of impacts can be classified into high, medium, and low. Responsible governmental unit can be in a hierarchal order in national, provincial, district, sub-district, and village for high, medium, and low levels of disaster effected areas, respectively.

Managing disasters with the integrated approach can receive valuable gains. First, the proactive approach allows mitigation, preparedness, and warning for disasters before they take place. Natural hazards are normally classified by their onset time. Some are slow-onset and provide lead-time for mitigation action. Slow-onset hazards include droughts, floods and volcanic eruptions. Other events, such as flash floods, tsunamis and cyclones, provide little or no lead-time for mitigation and preparedness measures or appropriate warnings. Sufficient lead-time increases the potential for saving lives, livestock, property and livelihoods of a population at risk. These potentials can be realized as gains when proactive approach is adopted.

This study has proposed an integrated approach for disaster management. The integrated approach includes both proactive and reactive strategies aimed for disaster management before, during and after periods. Disaster management can be conceived as public project management. Similar project life cycle phases are compared between the disaster management and project management. It is common that many developing countries, which are mostly prone to disaster lack proactive strategies for early warning, mitigation and preparedness. This study analyzes and specifies the problems and discusses the lessons learned from the recent case study of tsunami in the country. Above all, the principal stakeholder of the disaster management is the government. Thus, motive and commitment of those political leaders and their

willingness to adopt the proposed integrated approach is critical for saving people's lives, natural resources, and personal property and promoting sustainability for disasters prone areas in the country (Tun Lin Moe & Pairote Pathranarakul, 2006).

Then, the study by Tanavud et.al (2004) assessed the risk of flooding and identifies efficient measures to reduce flood risk in Hat Yai Municipality, southern Thailand using GIS and satellite imagery. The destructive floods were detrimental to its vulnerable social and economic development due to the loss of life and destruction of property. Since the 2000 flood, considerable structural mitigation measures have been undertaken to prevent and alleviate future flooding of the municipality. Flooding on 10 December 2003, caused by a storm like that experienced in 2000, indicates that structural mitigation efforts undertaken so far inadequate to withstand natural threats. Hat Yai Municipality will continue to be extremely vulnerable to future flood disasters. This shows the compelling need to increase the municipality's resilience against flooding through adoption in the coming year of non-structural disaster reduction schemes to supplement existing efforts. Risk assessment based on hazard and vulnerability analysis is needed to identify and implement adequate and successful non-structural alternatives.

Due to geographical characteristics, unplanned urbanization and deforestation in the upland watershed, Hat Yai Municipality has a high level of flood risk. Flooding has become a regular phenomenon and continues to threaten the vulnerable social and economic infrastructure of the municipality. Extreme flood events have had devastating effects on the standard of living of the population and on development prospects. In attempts to prevent and mitigate catastrophic flooding,

considerable mitigation works have been undertaken in Hat Yai Municipality, most of them are structural.

2.2.2 Local Governments and Disaster Management in Southeast Asia

According to Takeda and Helms (2006), they presented a critique of the bureaucratic model of emergency relief using the Indian Ocean tsunami catastrophe as an example. Primary references, in the form of news reports and websites following the disaster, were used as a basis of analysis. By presenting assumptions of the bureaucratic management approach as they related to the nature of catastrophic disasters, this study raises awareness of the need for possible reform of current emergency management approaches in use by government today.

These reports from the tsunami disaster highlight the key problems of bureaucracies, including slow decision-making, inability to absorb and process outside information, and escalation commitment to failed courses of action. Then, an alternative explanation to the idea that escalation-of-commitment in bureaucratically managed system leads to paralysis in times of crisis is the phenomenon of "bystander" behavior. According to this approach, an inability to respond in time of crisis is not product of devotion to the system, but rather the result of an ignorance of or an unwillingness to take responsibility to intervene. Further study, particularly the idiosyncratic innovative activities is needed, particularly in times of intense crisis.

Then, a case study in Semarang-Indonesia by Dewi (2007) also related to the local government and disaster management. Flooding within the city is still a major problem for the Local Government of Semarang City. Many parts of Semarang, especially along the rivers and along the shore, are suffering from flooding.

Dewi (2007) mentioned that many efforts have been made by the Local Government of Semarang City to deal with, and to minimize the negative impact of frequent flood in this area, consisting of structural and non-structural measures. The local government believes that joint use non-structural measures and structural is the best alternative of coping with flood. Unfortunately, those efforts have not been sufficient to overcome problems caused by frequent flood in this city.

This research revealed that there is a lack of acceptance by the local government of local people's knowledge and their response to flood mitigation measures and management. Cooperation between the local authorities and affected population assumes a key role with regard to the flood hazard. Recent problems related to the effective management of flood are seen to require an approach which should incorporate an integrated view of strategies, policies, plans, and others measures of social and institutional character (Dewi, 2007).

2.2.3 Collaboration among Stakeholders in Disaster Management

Freeman (in Fontaine, 2006, p: 3) stated that the traditional definition of the stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives". The general idea of the Stakeholder concept is a redefinition of the organization. In general, the concept is about what the organization should be and how it should be conceptualized. The organization itself should be thought of as grouping of stakeholders and the purpose of the organization to manage their interests, needs and viewpoints.

Natural disasters are a concern for people from all sectors and walks of life. Therefore, the task of disaster risk mitigation and management must be

collectively shouldered and shared by public and private agencies and individuals as well as communities (Gopalakrishnan & Okada, 2007). In the disaster management field, successful collaboration among parties is required.

According to the research by Yi-Huang Tao & Chih-hung Sun (2011), when a government body takes a series of actions in response to disasters, a well-defined work model focusing on the multi-level and multi-agent features can strengthen the whole response operation, making disaster response activities a collaborative effort. A Disaster Management Collaboration Network (DMCN) institutes a suitable and dynamic collaboration mechanism, where involved organizations have mutual understanding and agreement, a clear collaboration model, and simple relationship with their partners. This study applies this method to a case of flooding disaster response in the city of Taipei. Then, four aspects of disaster response collaboration are summarized by the National disaster prevention and protection system of Taiwan as below (Yi-Huang Tao & Chih-hung Sun, 2011):

1. Organizational system
   Lack of a definition of accountability for each individual organization or agency in different levels of jurisdiction of disaster response, and unclear agreements among them, causes difficulties in collaboration,
2. Operational processes
   Lack of an explicit mechanism of work management (including monitoring, control, communication, checking of work procedures, and sharing and integrating tasks and responsibilities) causes both internal and external collaborative procedural problems,
3. Demands and needs for resources
   Problems emerge in resource integration when the demands and needs for both manpower and physical resources cross agencies,
4. Information system
   Fragmentation of information systems hinders the collaboration of response teams and the sharing of resources information.

Furthermore, according to Nurjanah et al. (2012), a strong capacity to deal with the threat of disaster is related to programs/activities for enhancing the capacity of society. The ultimate goal is a society capable of anticipating and alerting disasters; able to handle emergencies and able to recover from disasters. Therefore, programs/activities can be done such as:

1. Education and training, research and development of science and technology of disaster, disaster management through the application of technology and spatial mapping;
2. Early warning system of various types of disaster;
3. Disaster socialization through the mass media;
4. Disaster management training;
5. Provision of technical and non-technical support, increasing the active public role in disaster management, community capacity building on the introduction of threats and vulnerabilities in its territory;
6. Awareness of mitigation methods can be applied, and community participation in disaster preparedness programs.

2.2.4 Capacity Building and FDM

Related to the capacity, there is a study by Allen (2006) about Community-based disaster preparedness (CBDP). These approaches are increasingly important elements of vulnerability reduction and disaster management strategies. They are associated with a policy trend that values the knowledge and capacities of local people and builds on local resources, including social capital. One means of promoting the type of synergistic, 'mutually supportive' state-civil society relations described by Evans (in Allen, 2006) is for civil society organizations to seek to implement Community-based Disaster Preparedness initiatives in partnership with government agencies.

The study above focuses on the potential of CBDP initiatives to alleviate vulnerability in the context of climate change, and their limitations. It

presents evidence from the Philippines that, in the limited forms in which they are currently employed, CBDP initiatives have the potential both to empower and disempower, and warns against treating CBDP as a panacea to disaster management problems. Jalali (2002, p. 120) stated that less popular in mainstream capacity building discourse is the notion that in order to address fully the needs of vulnerable people, both collaborative and adversarial state-civil society relations may be required.

Then, various mechanisms are employed to build coping and adaptive capacities at the local level. The CBDP projects studied focused on short-term project outputs, including the construction of emergency shelters and training in disaster management skills. In the case study projects, capacity building can be broken down into four key areas (Allen, 2006):

1. Technical information dissemination and training role

   CBDP creates a space in which information (for instance on possible funding sources or mitigation measures) is disseminated to local participants by disaster managers and other officials and in which technical knowledge and training can be provided, usually to a select group of local participants. In practice, initial training sessions have tended to follow an organizational blueprint, with additional training sessions provided to support subsequent project developments, such as livelihood initiatives or mangrove planting for coastal defence purposes.

2. Raising awareness of risk and vulnerability

   According to Davis (2004), the CBDP forum is employed to ‘raise awareness’ of local hazard risks and the causes of vulnerability. In the cases studied, this was achieved primarily through local mapping exercises as well as vulnerability and

capacity assessments involving the participation of local people. The latter method in particular is viewed as having the potential to unlock *'powerful forces from within vulnerable communities to address their own vulnerabilities'* (in Allen, 2006).

3. Accessing local knowledge and resources

   The CBDP forum allows disaster managers to access local knowledge and ideas, to build on local coping and adaptive strategies and to mobilize local resources. As funding is scarce, community resource inputs have tended to be limited to labor (often paid a basic rate) and freely available local materials like sand.

4. Mobilizing local people

   Howell (2003) stated that in implementing CBDP projects, disaster managers engage in a process of 'community organizing' or mobilization. The implementation of project measures provides a focus for the introduction of new or adapted forms of local-specific planning and organization. One example is the emergence of community-level early warning systems which are linked to regional or national information systems but which incorporate elements of local knowledge and whose functioning is not dependent on remote structures (in Allen, 2006).

There is a danger that community-based initiatives may place greater responsibility on the shoulders of local people without necessarily proportionately increasing their capacity to formulate initiatives according to community understandings and priorities. Therefore, local capacity building is an important part of the process of empowering vulnerable people not only to cope and adapt, but also to shape social institutions and contribute to policy (Allen, 2006).

Based on the study above, this research also focuses on the extent of the local capacity in handling floods. It means that the local capacity can influence the effectiveness of FDM. In this context, the capacity refers to management activities by local stakeholders and the cooperation among them, particularly the local government.

2.2.5 Community Participation in FDM

According to Bifulco (2008), as for its outcome in terms of participation, he explained the main questions concern the following:

1. The first is who participates, that is, the degree of inclusivity. The subjects of participation can be extremely varied, and it is not necessarily true that the participation of citizens as individuals is the one mostly promoted. On the contrary, organized forms of local society tend to register greater presence. Besides, people's capacity to participate in decisions is not equally distributed. The consequent risk is that of giving an advantage to whoever has the most significant levels of *agency* and *voice*.
2. The second question concerns what actors are participated in: what are the problems currently on the agenda, how they are structured, to what extent one contributes to their revision and solution. In this case, the issue is the degree of accessibility of problems to participation. If whoever participates is called to speak on a given problem (problem-solving), this is actually different from a situation where the participant is called to speak on the definition of the problem (problem-setting). Citizens' positions in participation can be very distant from one another: for instance, those linked to hearing procedures are of a completely different nature from those involved in the co-participation in decision-making.
3. A third issue is where: which are the spaces of participation and their level of legitimization, formalization and institutionalization. This implies certain crucial conditions to participation with respect to the possibility of developing social and institutional learning processes.
4. The final issue concerns to the question of how: the rules for access to participation particularly whether citizens' participation is direct or mediated by organizations.

Related to the floods, empirical studies conducted in other parts of Vietnam suggested that the community participation in disaster management planning

and implementation stages play a key role in dramatically reducing flood damages, and thereby enhancing their resilience. Yet, they have not provided a thorough understanding about other institutional factors such as the interaction among different stakeholders and the power division among them, and the possible relationship between those institutional factors and community resilience (Viet Hien Bui and Thi Phuong Vinh Nguyen, 2006).

The participation of each and every component of society in practicing flood management is the key to success. It is important to understand that the involving of community in flood management in order to enhance all of capacity in minimizing the risk of disaster. It requires all the possible resources to make it more effective and sustainable. Therefore, Pande (2006) stated that the government can create a policy environment, can communicate a sense of stability and mental confidence among the workers and the people at the local level, and can allow the freedom to organize and take collective decisions.

Chapter 3

Methodology

The methodological framework presented in this chapter which consists of five main sections. The following sections are Type of the Research, Methods of Data Collection, Data Analysis, Type and Source of Data, and Reliability and Validity.

3.1 Type of the Research

Social researchers use many different methods in order to describe, explore, and understand social life. Research methods are needed to help the researcher to analyze the data to overcome the problem. This research that the researcher will conduct to complete this study is descriptive research that uses qualitative approach.

Denzin and Lincoln (2000) stated that qualitative research is a field of inquiry that crosscuts disciplines and subject matters. Qualitative researcher aims to gather an in-depth understanding of human behavior and the reasons that govern such behavior. The discipline investigates the *why* and *how* of decision making, not just *what, where, when*. Qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomenon in terms of the meanings people bring to them.

According to Miles and Huberman (1994), qualitative data are a source of well grounded, rich descriptions and explanations of processes in identifiable local contexts. With qualitative data one can preserve chronological flow,

see precisely which events led to which consequences, and derive fruitful explanation. Qualitative study also often uses case study especially to gather data and information regarding to the social and administrative issues and according to Moleong (2005), a qualitative approach directed to the situation and individual as a whole. They can not be isolated to the variable or hypothesis. As the field advancement, qualitative approach with is flexible where this research is determined by the result from data gathering.

Furthermore, the term qualitative describes a set of non statistical inquiry techniques and processes used to gather data about social phenomena. The strategies in qualitative research can be grouped into three broad strategic classes, namely *explanatory research studies*, *interpretive research studies*, and *critical research studies* (McNabb, 2002).

In this research, researcher uses interpretive research studies strategic to investigation of social phenomena. According to White (cited by McNabb, 2002), interpretive research helps us understand people's actions in social circumstances and situations. McNabb (2002) mentioned that a primary goal of the interpretive research approach is to provide many layered descriptions and interpretations of human experiences. To achieve this goal, interpretive research looks at the way humans make sense out of events in their lives as the events happen, not as they are planned. Interpretive research is important for the study of government organizations and agencies (McNabb, 2002).

According to Creswell (2007) there are five approaches in conducting qualitative, namely *narrative, phenomenology, ground theory, ethnography,* and *case studies*. Based on those approaches, case studies approaches will be used in this

research. Creswell (2007) explained that the case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, documents, and reports), and reports a case description and case based themes.

Creswell (2007) mentioned types of qualitative case studies are distinguished by the size of the bounded case, such as whether the case involves one individual, several individuals, a group, an entire program, or an activity. There are three variations types of qualitative case studies Creswell (2007):

1. Single instrumental case study

   In this type, we have to focus on an issue or concern and then select one bounded case to illustrate this issue.

2. Collective or multiple case studies

   This type requires the researcher to focus on an issue or concern but the inquirer selects multiple case studies to illustrate the issue. The researcher might select for study several programs from several research sites or several programs within a single site. As a general rule, qualitative researchers are reluctant to generalize from one case to another because the contexts of cases differ. To best generalize, however, the inquirer needs to select representative cases for inclusion in the qualitative study.

3. Intrinsic case study

   The focus in this type is on the case itself because the case presents an unusual or unique situation. This resembles the focus of narrative research, but the case study

analytic procedures of a detailed description of the case, set within its context or surroundings, still hold true.

Based on those types, the researcher uses the single instrumental case study related to flood disaster management during 2011 (particularly in November) in Bojonegoro Municipality, East Java, Indonesia. There are five procedures for conducting a case study by Stake, 1995 (cited by Creswell, 2007):

1. A case study approach is appropriate to the research problem. A case study is a good approach when the inquirer has clearly identifiable cases with boundaries and seeks to provide an in-depth understanding of the cases or a comparison of several cases.
2. Researchers next need to identify their case or cases. These cases may involve an individual, several individuals, a program, an event, or an activity. In conducting case study research, investigators first consider what type of case study is most promising and useful. The case can be single or collective, multi-sited or within-site, focused on a case or an issue.
3. The data collection in case study research is typically extensive, drawing on multiple sources of information, such as observations, interviews, documents, and audiovisual materials.
4. The type of analysis of these data can be a holistic analysis of the entire case or art embedded analysis of a specific aspect of the case. Through this data collection, a detailed description of the case emerges in which the researcher details such aspects as the history of the case, the chronology of events, or a day-by-day rendering of the activities of the case. When multiple cases are chosen, a typical format is to first provide a detailed description of each case and themes within the case, called a within-case analysis, followed by a thematic analysis across the cases, called a cross-case analysis, as well as assertions or an interpretation of the meaning of the case.
5. In the final interpretive phase, the researcher reports the meaning of the case, whether that meaning comes from learning about the issue of the case or learning about an unusual situation.

3.2 Methods of Data Collection

In the qualitative research, data collection can take place in a variety of ways. In this research, the researcher will conduct these methods:

1. Interviews

Gathering data by interview may take one of several different forms. McNabb (2002) mentioned that the method used most often in public administration research is the in-depth personal interview. In this research, the researcher chooses semi-structured interviewing as a type of interview to collect the data from key informants.

In order to collect data by semi-structure, the researcher as an interviewer and respondents engage in a formal interview. The researcher develops and uses an 'interview guide' that contains a list of questions and topics that need to be covered during the conversation. The interviewer follows the interview guide, but is able to follow topical trajectories in the conversation that may stray from the interview guide when the researcher feels this is appropriate. The table below presents about the list of interview guide.

Table 3.1 Scheme of Interview Guide

Research Objectives	Scope of the Research	Detail Information	
		Questions	Sources
1. To describe roles of the local government related to Flood Disaster Management (FDM) in Bojonegoro Municipality, Indonesia	1.Disaster management regulation and/or program implemented in the local site	1. What is the regulation in this region related to FDM? 2. Is the regulation in compliance with all aspects of FDM (before, during and after the flood)? 3. What is rationalizing the existence of regulation about FDM in this region? Why the regulation to be implemented? 4. To what extent is the socialization of the regulation	The local/ municipality government

		concerning FDM can be done?	
	2.The existence of the local governmental organization/ agency in managing floods	1. Who is / are responsible for FDM in this region during this time? 2. What is the government organization/agency that deals with FDM in this region? 3. What are main tasks of the responsible agency in FDM?	The local/ municipality government
	3.Efforts of the local government and related organizations in FDM	1. Is there a strategic plan for FDM in this region? 2. How is implementation of FDM to be done by the local government (strategies and options)? 3. Does the local government has the fixed system and procedure of FDM? 4. To what extent is the local government provides FDM related infrastructures? 5. How is the budget related to FDM in this region? What is the main expenditure in the context of FDM?	The local/ municipality government
2. To analyze cooperation/ collaboration and capacities of the local government, local com-munities, and local private sectors in overcoming floods	1. Cooperation/ collaboration among stakeholders in managing flood disasters	1. Is there any cooperation/collaboration to be done by among stakeholders? If any, who is the initiator? 2.How is the form of the cooperation/collaboration among them?	All of local stakeholders (the govern-ment, the community & the private sector)
	2. The existing of the local capacity and capacity building programs/ activities	1. How many personnel who have a permanent post in FDM? What are such	All of local stakeholders

	related to FDM	jobs should be done by them? 2. How are the expertise and experience and involvement in disaster? What are the types and forms of education and training in FDM that followed by permanent personnel? 3. Are people given access to information about the overall FDM program/ activity plan? 4. To what extent is the participation from society/ community and private sector in overcoming floods? Is there any participation in all of FDM phases? 5. Does the community participate in decision -making process in FDM activities?	
	3. Problems which faced by stakeholders related to their capacity in overcoming flood disasters	1. Are there institutional constraints (authority, discretion, cooperation, etc.) in FDM during this time? 2. What are possible suggestions to enhance the local capacity?	All of local stakeholders

2. Observation

Observation is conducted as a direct observation to the location and changing surrounding the location. Observation results must be written in a clear report to support the researcher to solve the problem and to provide additional data that support the result. Pictures create descriptive data which are useful to analyze the

subjective sides and the result which are analyzed in an inductive way. Pictures are used to record the reality situation in the field. There are two kinds of pictures namely those made by another person and made by himself (Bagdan and Biklen, 1982).

3. Document analysis

The study of documents and archival data is usually undertaken to supplement the information the case study researcher acquires by interview or by observing in a situation (McNabb, 2002). These may be official government records, internal organizational reports or memos, or external reports or articles about a case subject. The technique that is usually used in document analysis is content analysis, which may be either qualitative or quantitative, or both.

Document contents in this research as following:

Table 3.2 Document Contents

No.	Items
1.	Maps and charts related to the site descriptions
2.	The structure of the local governmental organization/agency which manage disasters
3.	Implemented regulations in disaster management
4.	Implemented regulations in FDM
5.	Records related to the occurrence of floods

In this research, the researcher sets down three principles of data collection based on the theory explained by Yin (2003) as following:

1. Use multiple sources of evidence

The sources of evidence are collected by the researcher from the interview process, observation, and document analysis.

2. Create case study database

In this research, the database is described in notes, documents, and photograph

documentation.

3. Maintain a chain for evidence

The researcher will make the conclusions in a case study report related to flood disaster management in Bojonegoro Municipality, Indonesia. The report itself should have made sufficient citation to the relevant portions of the case study database by citing specific documents, interviews, or observations.

3.3 Data Analysis

According to Miles and Huberman (1994), concurrent flows of data analysis as following:

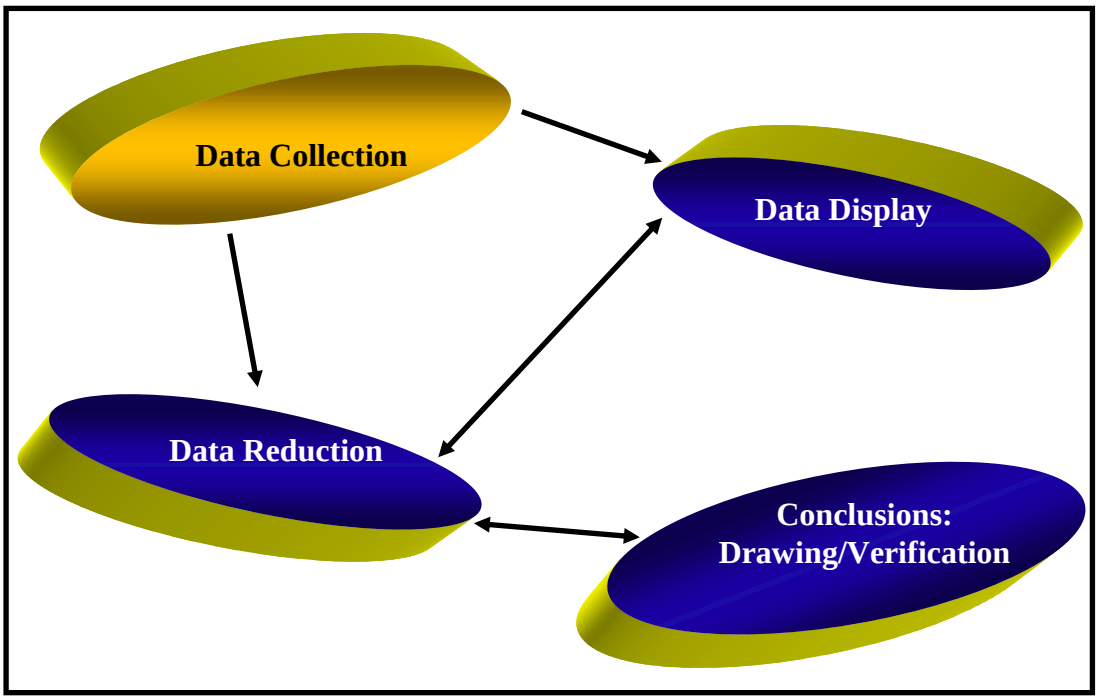

Figure 3.1 Components of Data Analysis: Interactive Model
Source: Matthew B. Miles and A. Michael Huberman (1994)

1. Data Collection

In this research, data collection process involves three methods which mentioned in methods of data collection. Methods include interview, observation, and

document analysis. Each method has explained by detail in methods of data collection.

2. Data Reduction

   Data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes. Data reduction occurs continuously throughout the life of any qualitatively oriented project. With this process, the potential universe of data is reduced in an anticipatory way as the researcher chosen a conceptual framework, research question, cases, and instruments.

3. Data Display

   Data display is the third major activity which the researcher should go through, and this means taking the reduced data and displaying it in an organized, compressed way so that conclusions can be more easily drawn.

4. Conclusions (Drawing/Verification)

   Conclusion drawing and verification involve the researcher in interpretation: drawing meaning from displayed data. The range of tactics use appears to be large, ranging from the typical and wide us of comparison/contrast, noting of patterns and themes, clustering, and use of metaphors to confirmatory tactics such as triangulation, looking for negative cases, following up surprises, and checking result with respondent (Miles & Huberman, 1994).

3.4 Type and Source of Data

Data source is an important factor to be considered in determining the method of data collection. The definition of data sources in research is the subject of

any data can be obtained. There are two types of data sources, namely primary and secondary data (McNabb, 2002). *Primary data* are original data that researcher gathers from original sources such as responses to a questionnaire or interview. *Secondary data* are data that have been collected by someone else for another purpose such as government statistical reports, articles in professional journals or agency records.

Primary and secondary data are important or necessary for the accuracy of information that relevant to the data for simplifying the research and data to be collected, so that research can make conclusions from the data collected.

1. Primary data collection is necessary when a researcher cannot find the data needed in secondary sources. The primary data collection may often be necessary when looking at effects of regulations or procedures and needs of specific groups/ institutions/ subsectors. This is conducted using some means of questioning usually via a survey or interview and the information can be gathered through observation. Primary data in this research is collected from key informants related with the main focus of this research.

   Choosing the informants based on the subjects that master the issue related to the topic, research focus and also problems, owning some data and ready to give them to the researcher such as officer of the local government in Bojonegoro Municipality, Indonesia, or other officers from related institutions, private sector representatives, and head of civil society/village. The researcher uses interview and observation to get the data from informants. The data from informants are the main source in the qualitative method.

Therefore, there are 4 (four) criteria to determine several informants of this research:

1. Local governments as the policy/decision maker and the actor that has to exist in flood disaster management. In this context, informants who will be interviewed are local authorized officers;
2. Private sectors who are affected disasters and/or involve in efforts to overcome those disasters;
3. Local civil society as the target group and the main element simultaneously in flood disaster management. Prominent figures (such as the head of society/village) are needed to be informants.

   All of those stakeholders are parties who can influence the supporting factors of flood disaster management.

Based on the criteria of informants, then, this is the list of them who should be identified and interviewed:

Table 3.3 List of Stakeholders and Informants

No.	Stakeholders	Informants
1.	Government	- Head of the Local Disaster Management Agency - Head of the Municipality - Head of the Local School
2.	Private Sector	Private Sector Owner/Staff
3.	Civil Society	- Head of the (Local) Society/Village - Community Member

2. Secondary data gathers information which has already been collected. This is a valuable way to start a research project if possible, as it identifies any relevant data before time and money are spent on new primary research, which may result

in duplication. Secondary data usually refers to commentaries or claims made on other data by other researchers, reporters or commentators. In this research, secondary data is collected from relevant laws, statutes and regulations, documents, archival records, and literatures related to the chosen case. Examples of secondary data such as published disaster management research reports, articles downloaded from the e-journal, publications in libraries, and institutions reports and data.

3.5 Reliability and Validity

3.5.1 Reliability

Although the term 'Reliability' is a concept used for testing or evaluating quantitative research, the idea is most often used in all kinds of research. A good qualitative study can help us "understand a situation that would otherwise be enigmatic or confusing". Reliability is a concept to evaluate quality in quantitative study with a "purpose of explaining" while quality concept in qualitative study has the purpose of "generating understanding" (Stenbacka, 2001).

On the other hand, Patton (2002) states that validity and reliability are two factors which any qualitative researcher should be concerned about while designing a study, analyzing results and judging the quality of the study. This corresponds to the question that "How can an inquirer persuade his or her audiences that the research findings of an inquiry are worth paying attention to?" (Lincoln & Guba, 1985).

3.5.2 Validity

The concept of validity is described by a wide range of terms in qualitative studies. This concept is not a single, fixed or universal concept, but "rather a contingent construct, inescapably grounded in the processes and intentions of particular research methodologies and projects" (Winter, 2000). Although some qualitative researchers have argued that the term validity is not applicable to qualitative research, but at the same time, they have realized the need for some kind of qualifying check or measure for their research. For instance, Creswell and Miller (2000) suggest that the validity is affected by the researcher's perception of validity in the study and his/her choice of paradigm assumption.

According to Creswell, procedural perspective recommended for research proposals is to identify and discuss one or more strategies available to check the accuracy of the findings. In ensuring internal validity, the following strategies will be employed based on Creswell's concept (Creswell, 2003):

1. Triangulation of data

   Data will be collected through multiple sources, including interviews, observations and document analysis.

2. Member checking

   An ongoing dialogue regarding interpretations and meanings of the informant's reality will ensure the truth value of the data.

3. Long terms and repeated observations at the research site

   Regular and repeated observations of similar phenomena and settings will occur on-site over a research period time.

Chapter 4

Results and Discussion

This chapter is divided into two main sections, Results and Discussion. Results present General Information of Flood Issues in the Research Site, Policy in (Flood) Disaster Management, Roles of the Local Government in FDM, Governance in Handling Flood Issues, and Capacity Building in FDM. The last section will discuss Roles of the Local Government in FDM, Governance in Handling Flood Issues, and Capacity Building in FDM.

4.1 Results

4.1.1 General Information of Flood Issues in the Research Site

Indonesia region is located in the tropical climate with two seasons, dry season and rainy season. It characterized by a change in weather, temperature and wind direction that quite extreme. Such climatic conditions combined with surface topography and diverse rock types, both physically and chemically, producing a fertile soil conditions. Conversely, those conditions can cause some bad consequences for humans such as hydro-meteorological disasters, namely floods, landslides, forest fires and droughts. Along with the development time and increased human activities, environmental degradation tends to get worse and lead to increased incidence and intensity of hydro-meteorological disasters, which in turns in many regions in Indonesia, including in Java Island.

Figure 4.1 Map of the Java Island, Indonesia
Source: www.welt-atlas.com

Bojonegoro is located in East Java Province, Indonesia, also has two seasons, namely the rainy season and the dry season. Natural phenomena also affect rainfall patterns in Bojonegoro. Floods usually occur at the peak of rainy season, particularly from January to March. The interaction between these two natural phenomena proficiency level can be seen on the events of late 2007 until early 2008 led to most parts of Indonesia experienced high rainfall (above normal), including in Bojonegoro. This resulted in a major flood hit.

Figure 4.2 Map of Bojonegoro, East Java Province
Source: www.google.com

Topography of Bojonegoro indicates that alongside drainage basin of Bengawan Solo River represent lowland area. Topography of the 18.71% area is situated at an altitude below 25 meters above sea level. Bengawan Solo River flowed to the partly of Bojonegoro throughout 143 km. The figure below is Bengawan Solo River.

Figure 4.3 Bengawan Solo River in Bojonegoro
Source: Researcher's Document (2nd November 2011)

In the event of rain in the area of the river downstream from past events, Bengawan Solo River did not able to accommodate the water that enters the river and cause flooding.

Table 4.1 Travel Time of Bengawan Solo River Flood
Source: The BPBD Document

Location	Distance (km)	Travel Time (hours)
Jurug (Solo) – Karangnongko	165	25 - 26
Karangnongko – Bojonegoro	80	14 - 15

It exacerbated by low topography position, tree roots covering some parts of the trench as the flow of water, poor drainage, and the deforestation of the mountains (Contingency Plan of Bojonegoro in Overcoming the Floods, 2010).

Furthermore, floods brought many impacts to some areas in Bojonegoro Regency, including in the municipality. The number of floods prone villages as follows:

Table 4.2 Number of Floods-Prone Villages in Bojonegoro Regency
Source: The BPBD Document

No.	Name of Municipality	Number of Floods Prone Villages
1.	Margomulyo	2
2.	Ngraho	9
3.	Padangan	13
4.	Kasiman	7
5.	Purwosari	1
6.	Malo	18
7.	Kalitidu	21
8.	Trucuk	12
9.	Dander	3
10.	**Bojonegoro**	**18**
11.	Kapas	10
12.	Balen	9
13.	Sumber Rejo	1
14.	Kanor	22
15.	Baureno	21
Total		167

Then, one of the villages in Bojonegoro Municipality is Kauman Village. This village is the city municipality; the center of economic/business and governmental activities. It also has high number in terms of population. As consequences, Kauman Village will be vulnerable region if flooding occurred.

Related to the late major flood, Mr. Bintarto as the Vice Head of Kauman Village described as following:

> "The situation when the big flood occurred in Bojonegoro, including Kauman Village, at the end of 2007 to early 2008 was very chaotic. Flood came like a tsunami with a height of about 2 meters. Everyone rushes to save themselves. Several helicopters passed to provide assistance to disaster victims. Flooding also drowned city center for nearly two weeks, starting on December 24, 2007 until January 5, 2008, and the water level reached 1.5 meters. Consequently, there was no office to operate. The peak

> flood occurred on December 31, 2007. As long as it is indeed very high rainfall that caused collapse of the levee. It compounded by political factors, the transition government of Bojonegoro. To help members of the community, some public building used as a place of refuge, such as the village hall of Kauman, the Darussalam Mosque, and the second floor of the building at State Junior High School 1 of Bojonegoro. Even though at that time there were no fatalities in Kauman but a huge loss for the village site located in the lowlands. I myself suffered losses reaching IDR 1 billion from my drugstore. In 2009-2010 a major flood again but the rainfall is not high, despite a radius of 100 meters from the river remains flooded a half of meter. But this is very common, as usual. For Kauman, Northern and Western are flood-prone areas. That is why there is a levee at those sites."
> *(Interview conducted on November 1st, 2011)*

In addition, the number of casualties that was been evacuated for ten days (26th December 2007 to 4th January 2008) reach 66,332 refugees. The government evacuated them to the several points on higher ground, including the mosque and the city center square. The government was also provides the emergency public kitchens and health services.

Then, one of efforts to overcome Bengawan Solo River floods by the central government is constructing the new dam as the national project in Bojonegoro Regency (It can be seen at Figure 4.4). Actually the dam also has benefits, at least for the agricultural sector (especially irrigation), and fisheries.

Figure 4.4 New Dam in Bojonegoro Regency
Source: Researcher's Document (2nd November 2011)

However, that effort is not sufficient yet. Although no longer as severe as before, floods are still occurred in some areas of Bojonegoro, including in the Municipality.

4.1.2 Policy in (Flood) Disaster Management

4.1.2.1 Disaster Management Act

The series of disasters suffered by Indonesia has developed an awareness of the vulnerability for communities. Reactive attitudes and patterns of disaster management are done felt no longer adequate. Therefore, it takes to develop a new attitude that is more proactive, comprehensive, and fundamental in addressing the disaster.

The pattern of disaster management to take a new dimension to the issuance of Act Number 24 of 2007 concerning Disaster Management which is followed by some technical rules. Contents of the Act are as follows:

Section I	General Provisions
Section II	Base, Principle, and Purpose
Section III	Responsibilities and Authorities
Section IV	Institutional
Section V	Social Rights and Obligations
Section VI	Role of Business Organizations, and International Agencies
Section VII	Organization of Disaster Management
Section VIII	Funding and Management of Disaster Assistance
Section IX	Supervision
Section X	Dispute Resolution
Section XI	Penal Provisions
Section XII	Temporary Provisions
Section XIII	Closing Provisions

During several years (since 2007), this act requires not only understanding the importance of disaster management but also enforcement in every phase of its implementation.

4.1.2.2 Existence of the Local Disaster Management Agency

Disaster management requires the existence of an organization that can coordinate all programs and activities in disaster management phases. To that end, the local government has established the BPBD (*Badan Penanggulangan Bencana Daerah*/Local Disaster Management Agency). With the existence of the BPBD, expected disaster management can be performed more effectively.

As Mr. Kasiyanto, the Executive Head of the BPBD in Bojonegoro Regency, said as following:

> "Before the BPBD, it formerly handled by the Disaster Management Executing Unit (*Satlak PB*). The difference is significant. First is responsiveness; response of *Satlak PB* is slow because of the mechanism should be set up first, while the BPBD can immediately move at any time. Second, coordination problems - *Satlak PB* is a committee that it is difficult to coordinate, while the BPBD is the coordinator of all related government units on disaster affairs. In addition, operational funds will not be granted if the local government does not have the BPBD."
> *(Interview conducted on November 1st, 2011)*

Furthermore, the BPBD has the structure. It consists of:

1. The Head

   The head of BPBD held in a multiple (ex-officio) by the Secretary of local government

2. Steering elements, consists of:

   a. (Local) Agency

   b. Professional / Expert

3. Implementing/organizing elements, such as:

   a. Chief executive

   b. Executing elements of the Secretariat

   c. Section of prevention and preparedness

   d. Section of emergency and logistics

   e. Section of rehabilitation and reconstruction

Organizational structure of the BPBD can be seen at the figure below:

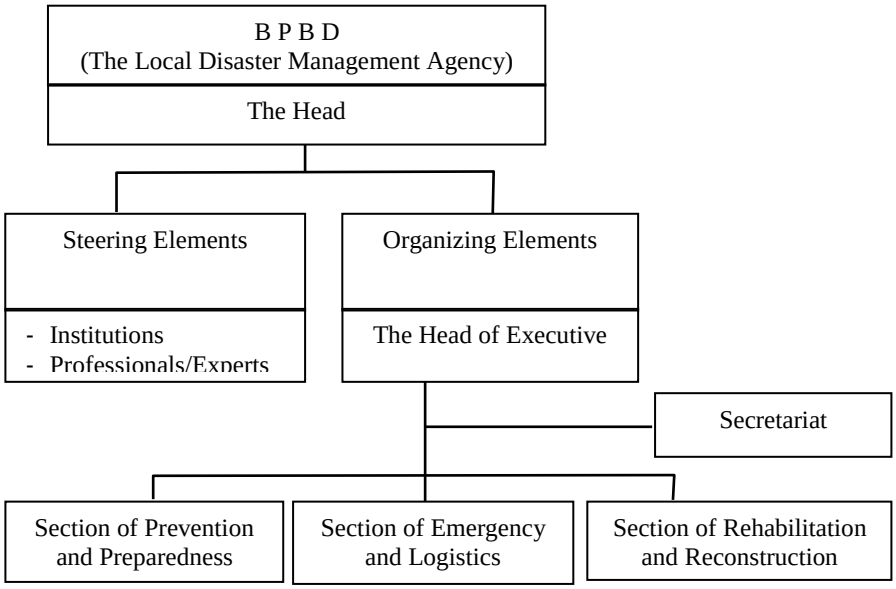

Figure 4.5 Organizational Structure of the BPBD

According to the Local Regulation Number 11 of 2010 Bojonegoro that BPBD is structurally based institution under and directly responsible to the Regent. The BPBD has following tasks:

1. Establish guidelines and directives of the disaster management effort that includes disaster prevention, emergency treatment, rehabilitation, and reconstruction in a fair and equitable,
2. Establish standards and requirements based on disaster management legislation,
3. Develop, establish and inform the hazard maps,
4. Develop and establish permanent procedures of disaster management,
5. Report on disaster management to the Regent area once every month under normal conditions and at any time in a state of disaster emergency,
6. Supervise the collection and disbursement of money and goods,
7. Account for the use of funds that received from the Local Budget, and
8. Implement other duties in accordance with legislation.

Then, to execute its duties, the BPBD has two functions:

1. Formulation and establishment of disaster management policy to act quickly and appropriately, effectively and efficiently; and
2. Coordinating the implementation of disaster management activities in a planned, integrated and comprehensive.

4.1.2.3 Local Policy and Strategy in Handling the Flood

Disaster management efforts in the region need to start with a local policy that aims to cope with disasters in accordance with existing regulations. The strategy sets out in tackling the disaster area

need to be tailored to local conditions. Disaster relief operations are necessary to ensure effective, efficient and sustainable.

Furthermore, Mr. Kasiyanto said:

> "Local regulation Number 11/Year 2010 about the BPBD is already existed. For the execution of the task, there is Regent Regulation Number 14 of 2010 concerning the transfer of part of the authorities to the head of municipality. One was about the disaster. So, the vanguard is the head of municipality because he/she was to have the head of villages. Right of initiative comes from the head of municipality."
> *(Interview conducted on November 1st, 2011)*

In the face of the possibility of occurrence of Bengawan Solo floods, the Local Government of Bojonegoro adopted policy and strategy as follows:

Policy

1. All sectors responding to the emergency quickly and accurately

   This clearly requires effective coordination at all levels of government.

2. Minimizing the number of casualties / losses

   The government should be prepared to evacuate casualties and property if necessary at any time.

3. Optimizing the use of local resources from various sources, both public and private

   Increasing cooperation/collaboration between public and private sector is a must.

4. Optimizing the distribution of emergency aid

   The government has to undertake mapping populous areas that affected by a disaster immediately.

5. Providing health services free of charge in health centers and hospitals for disaster victims

   During disaster strikes, victims are permitted to obtain health care at the nearest location.

6. Establishing the emergency kitchens and optimize the distribution of food aid in a fair

   Government ensures kitchen locations that are accessible to victims of disaster and food aid distribution efforts on target.

Strategy

1. Activating the command post as the coordination and operational center

   During the period of (flood) disaster, the command post operated 24 hours. The central (permanent) post is located in the city municipality center.

2. Setting up the basic need in the field of food, clothing and health

   Preparedness of those needs has to be done before flood disasters occurred.

3. Collecting data on the number of casualties and losses (quick response teams)

   - Alerting personnel to be deployed in the handling of flood victims
   - Distributing a plastic bag to a location that requires it
   - Providing facilities and infrastructure for the evacuation of flood victims at evacuation points

4. Ensuring the distribution of victim assistance in accordance with pre-determined criteria

   Victims were high priority are those who are directly affected by the floods.

5. Providing health services in health centers and in hospitals for disaster victims free of charge

   - Appointing a public hospital and private hospitals as referral
   - Establishing health posts in the field
   - Distributing medical and paramedical staff and medicines to health posts in the field

6. Optimizing the distribution of food aid in a fair

   It is also related to preparedness of personnel in charge to reach flood-affected areas.

The strategy is implemented through field work: Preparedness, Evacuation Area, Displaced Persons Affairs, Health and Hygiene, Management (and Coordination) Division.

(Contingency Plan of Bojonegoro in Overcoming the Flood, 2010)

4.1.3 Roles of the Local Government of Bojonegoro Municipality in FDM

4.1.3.1 Efforts of the Local Government

Responding to a strong correlation between disasters and the high population density in Bojonegoro, the local government has established the BPBD on April 22nd, 2009. Bojonegoro is the first regency in East Java Province which initiated the formation of BPBD. This

agency is expected to fix the disaster management system, including cross-sector coordination which was experienced by the local government.

In general, many efforts have been done by the Local Government of Bojonegoro in order to overcome the negative impacts of frequent flood in Bojonegoro. It started from prediction up to reconstruction phase. For instance, the local government formulated the contingency plan, made estimation boards in the Bengawan Solo riverside (it can be seen at Figure 4.6), and held training or simulation to anticipate the flooding. Government perceived those efforts as the part of flood disaster management actions.

Figure 4.6 Estimation Boards in Bengawan Solo River
Source: Researcher's Document (2nd November 2011)

The Local Authority of Bojonegoro has organized the BPBD involving related institution/agencies and other stakeholders, as well as the (local) society. Within the BPBD, it is clear who in charge and

what issues should be responded to, however the implementation need the more active cooperation/collaboration from each related stakeholder.

Furthermore, several aspects in (flood) disaster management can be clarified into 5 points:

1. Aspects of Regulation

   Bojonegoro has enacted the Local Regulation Number 11 of 2010 concerning the Organization and Administration of Other Institutions in Bojonegoro; it contains the BPBD. The Local Government of Bojonegoro also has Contingency Plan in overcoming Floods. Its content is such as hazard assessment to hazard monitoring and action plan.

2. Aspects of Institutional

   Bojonegoro is the first regency in East Java Province that has the BPBD. The existence of this agency supports disaster management at the local level. This is a significant advance because it has become a necessity for Bojonegoro region as the flood disaster-prone area.

3. Aspects of Management

   Disaster management policies still tend to focus on emergency response phase itself. Then, related to the infrastructure in order to support flood management, Mr. Kasiyanto said as following:

   "For infrastructure, such as inflatable boats, communication equipment, and operational car are still limited. However, for the village are expected to have their own boat. We also have not provided assistance in the form of communication tool because of funding constraints. Our priority is the addition of personnel for tasks because their work overload."
   (Interview conducted on November 1st, 2011)

4. Aspects of Human Resources

The BPBD of Bojonegoro is a newly formed institution; it is necessary to increase skills among other officials in charge of education and training, both at the level of managerial and technical-operational.

5. Aspects of Budget

The total budget for disaster management is relatively adequate. However, it focused on the allocation phase only when a disaster occurs. In other words, the budget allocation policies are still more on emergency response and post-disaster activities. Mr. Kasiyanto stated:

> "Sources of fund for disaster-budget come from the local budget and the national budget. In 2010 and 2011, the local budget allocated IDR 750 million. In 2009, Bojonegoro ever obtain fund IDR 11, 4 billion from the national budget. Special allocation for rehabilitation and reconstruction is the largest."
> *(Interview conducted on November 1st, 2011)*

In contrast, Bojonegoro Municipality does not provide the special budget for disaster management. The Head of Bojonegoro Municipality (Mrs. Sri Nurma) said:

> "The municipality budget that allocated to the disaster management programs does not available. Actually the budget already provided at the regency and the village level. Nevertheless, we are the coordinator of the villages in our area of operations. So, the head of villages have to give contribution to disaster management."
> *(Interview conducted on November 2nd, 2011)*

Therefore, in the context of roles (and efforts) of Local Government, it can be generally depicted in Figure 4.7.

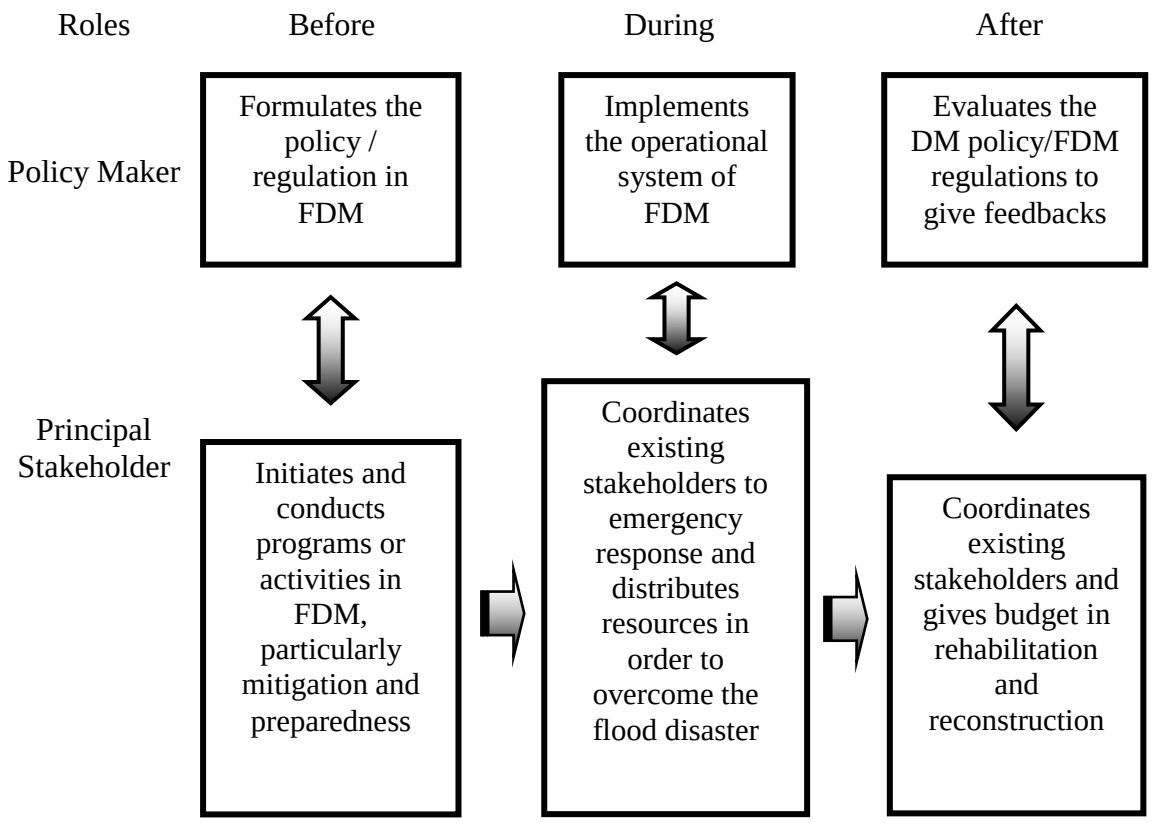

Figure 4.7 Flowchart of Local Government's Roles in FDM

4.1.3.2 Operational System of FDM

Based on the interview with the Head of BPBD Bojonegoro, November 1st, 2011, he stated that the local government must be sensitive to the disaster that could come any time and anywhere. In the same year (2009), the local government/BPBD has also made contingency plan in the response to flooding with the BNPB assistance.

Then, stages of disaster management in the contingency plan described as follows:

Before Disaster

- Hold a meeting with all parties/components involved in disaster preparedness in the face of the flood disaster of Bengawan Solo River because it is the responsibility of government, private and public,
- Perform data collection / personnel inventory, facilities, infrastructure, resources and funding,
- Conduct mapping of flood areas of Bengawan Solo River

During Disaster

- Establish flood disaster control posts of Bengawan Solo River,
- Organize each side, elements, components that can play an active role according to their roles, responsibilities, and functions.
- Establish a Rapid Response Team (TRC),
- Move all relevant components in order to carry out their duties quickly and on target

After Disaster

- Perform continuous monitoring of the implementation team of disaster management activities,
- Prepare the (activity) report, both technical and administrative, which was obtained from each element,
- Make a statement and an emergency situation determination by the Regent and the Parliament and statements safe condition (state of emergency has ended)

These stages also reflect the framework of time compression.

Furthermore, about the particular committee (number) in disaster management, Mr. Kasiyanto said:

> "The total personnel in charge in the BPBD are 32 people. It is in it including 17 personnel for the Fire Department. We think that personnel are still limited. This number is not possible to reach all of Bojonegoro area. Therefore, it needs the active participation of communities from all parties in disaster management."
> *(Interview conducted on November 1st, 2011)*

Bojonegoro Regency has a widely area of 2,307 km². This regency also has the high population density, mainly in the municipality (*see at appendix 1*).

In addition, according to Mrs. Sri Nurma:

> "There is no obstacle in disaster management at the municipality level. The tasks and activities of disaster management ran smoothly. Village officials and the public may be invited to work together so that the activity is going well. Regarding the number of personnel, there is a unit of the civil service and police unit in charge of disaster management in the municipality as many as 10 people."
> *(Interview conducted on November 2nd, 2011)*

Thus, in terms of personnel in charge at the municipality level, both of them always available at their post permanently for handling (flood) disasters.

4.1.4 Governance in Handling Flood Issues

4.1.4.1 The Local Government

Coordination of the BPBD horizontally with agencies / bodies in the pre-disaster, disaster and emergency response, conducted in the following forms:

1. Preparation of disaster management policy and strategy,

   The BPBD formulates the policy-strategy that appropriate with policy and regulation of the central government.

2. Preparation of disaster management planning,

   The BPBD makes the contingency plan with assistance from the BNPB.

3. Determination of minimum standard requirements,

   The BPBD determines standard requirements in order to support the implementation of disaster management.

4. Preparation of emergency response procedures,

   The BPBD prepares determined operational procedures in emergency situation, including procedure to save and evacuate the disaster victims.

5. Disaster risk reduction,

   The BPBD has disaster risk reduction program/project in minimizing flooding, and it needs to work together with related public sector organizations.

6. Making the map of hazard/disaster-prone areas,

   The BPBD makes the map as accurate as possible to present credible information.

7. Budgeting the disaster,

   The BPBD has sources of fund from local and national budget.

8. Provision of disaster management resources,

   The BPBD provides and distributes resources in implementing disaster management, including personnel in charge.

9. Conducting disaster simulation, education and training

   Simulation, education and training are routine events that followed by related public sector organizations.

Furthermore, Mr. Kasiyanto said as follows:

> "So far, there is no significant issue in disaster management. We constantly coordinate with the head of municipality and other officials. People are also easy to work with. We arrange disaster preparedness or mitigation training program and it was also invited the society. There is no problem with community participation. Their outstanding participation support disaster management. For example, they perform mutual aid to clean waterways along their settlements. However, we do not always invite the community to participate in the decision-making process because the situation is an emergency that needs to take action as soon as possible."
> *(Interview conducted on November 1st, 2011)*

It shows that the local government tried to fulfill disaster management tasks. Thus, based on this research, in the context of Governance the Local Government of Bojonegoro is the initiator in all phases.

4.1.4.2 The Local Society

According to the research results, the local society experiences in handling floods as follow:

1. Disasters that were often experienced and worried by people in Bojonegoro are floods. In general, people help each other and

responsive to the (emergency) situation of flood disaster because it is annual event. For instance, they gave sufficient contribution in flood preparedness such as making early warning instrument.

Figure 4.8 Early Warning Instrument by the Local Society
Source: Researcher's Document (2nd November 2011)

2. Apparently not many people who know about the existence of BPBD so it does not understand forms of participation that can be done together with the local government in the context of disaster management. Therefore, mostly floods can be overcome with the help of the community itself.
3. Most of them have understood stages/steps in flood disaster management. They have been identified or mentioned it, namely, Disaster Risk Reduction, Response, and Recovery.

   Disaster Risk Reduction

   Disaster Risk Reduction done by (local) community such as:

1. Cultivating in every house

   This activity massively can be perceived by the community to reduce the abundant of water volume in the rainy season.

2. Constructing of emergency embankments

   Embankments constructing has to be done, at least to maintain them before the rainy season comes, particularly in flood-prone areas.

3. Doing forest management

   It means rehabilitation the existing forest to minimize the flood risk. It is also useful program/project to prevent drought disasters in the dry season.

Indeed, they still need to anticipate flooding through the disaster management training so that its risk can be reduced.

Response

News is often published through the mass media when the flooding is that aid has not been received and yet to reach flood-affected communities. It shows that the community still has a high dependence on aid from outside so that when the aid is yet to come later became a problem. Therefore, they have to coordinate mutual cooperation each other, with good enough response from the local community itself, including the distribution of rice aid.

However, there is a special team to overcome floods. Mr. Bintarto clarified:

"There is a flood response team in anticipation of flooding that established permanently, both in the regency and the municipality. They will serve any time if it needed. The team and the local

community can work together to build artificial levees. Each village sends around 10 people. In our opinion, there is no significant barrier in coordination and cooperation, both among governments and government agencies with the local society."
(Interview conducted on November 1st, 2011)

Furthermore, local communities at the village level also have own financial support. A community leader from Banjarejo Village said:

"At the village level, there is a special budget. It called 'ADD' or '*Alokasi Dana Desa*' (Village Fund Allocation) that can be used in accordance with the emergency needs of disaster, particularly flooding. The existence of ADD is compulsory. So, every village in Bojonegoro has ADD."
(Interview conducted on November 1st, 2011)

Recovery

The most serious thing was the post-flood, especially in the health sector-many diseases, and also the economic sector. Many people ensnared money-lenders to purchase the fertilizer and seeds because their plants have been destroyed. It is not anticipated by the government. If indeed there is such a relief package, it is necessary for the plant rehabilitation/diversification. This is most severe issues. Mediocre economy, nutrition was insufficient, and this continues from year to year. Therefore, post-flood rehabilitation becomes very important.

Overall, it can be seen at the table as following:

Table 4.3 FDM Phases by the Local Society

Time	Before Disaster	During Disaster	After Disaster
Activity	Disaster Risk Reduction	Response	Recovery
Specific Actions (such as)	- Cultivating in every house, - Constructing of emergency levees,	Mutual cooperation to distribute the rice aid	Improving the economic sector with plant rehabilitation /

	- Doing forest management		diversification.

4. The community agreed with the idea of a balanced division of roles in disaster management or a shared responsibility with local governments as a consequence of living in flood-prone areas. The community stated that if the local government has the initiative, then they will support it.

4.1.4.3 The Private Sector

According to the Vice Head of the Kauman Village in Bojonegoro Municipality, private sectors also distribute their aid, including foods and other needs at emergency response phase. When flooding occurs, the aid can come from many private sectors.

Even one of them, Mrs. Nur Asih as the owner of furniture business, said as following:

> "Although there are several places that determined by the Local Government of Bojonegoro, my furniture showroom also became a refugee camp and public kitchen for hundreds of flood victims. During the emergency situation, around the end of December 2007 up to the early of January 2008, we have spent as much as 1.5 tons of rice for cooking. We have trouble with but I am glad because it can help the local people. At that time I only expected that the aid can relieve their suffering because of major flooding."
> *(Interview conducted on November 2nd, 2011)*

On the other hand, the private sector has to do self service to overcome floods. As Legiwati, an employee of Maju Trisno Inn in Bojonegoro Municipality, said that:

> ”Experience during a big flood in 2007-2008, of course this inn did not get any relief, either renovation or financial supports, from the Local Government of Bojonegoro. However, we can understand. At that time the government was so busy for doing emergency response to evacuate people and distribute aid to them. We anticipate a flood by ourselves with elevating our place.”
> *(Interview conducted on November 2nd, 2011)*

However, Mrs. Sri Nurma-the Head of Bojonegoro Municipality stated that in general it has not yet cooperation/collaboration significantly with the private sector. The role of them is still limited. It may be only giving the aid for emergency response phase. Therefore, the local government suggested that all of local community elements should be fully involved and participated in flood disaster management.

4.1.5 Capacity Building in FDM

According to the Head of BPBD of Bojonegoro, to develop the institutional capacity for managerial interests, for example, they send personnel to disaster management training activities that held at the provincial or central level. As for training in the district/regency, they invite heads of municipality to show evacuation, first aid, and emergency kitchens. They also recommend to heads of municipality who set up the potential that exists for the disaster management to the lowest level (*Rukun Tetangga / Rukun Warga*).

Related to the aforementioned above, the Head of Bojonegoro Municipality (Mrs. Sri Nurma) said:

> “During this time we always attend the training that held by the BPBD. The participant is open to the public, including community in the municipality. However, there is no cooperation

> with the private sector. It may be just giving aid during emergency response. They will distribute the food aid or another aid that required by the flood victims."
> *(Interview conducted on November 2nd, 2011)*

In addition, issues in pre-disaster time which need to be considered such as improving and maintaining drainages in order to reduce the abundant water, mainly in the rainy season. The (local) society also has to aware and has own initiative because they are as flood victims. It requires the integrated strategy for implementing structural and non-structural actions, and precise measurements.

Then, in the formal education sector, Mrs. Nur Asih as the Head of State Elementary School of Kauman 1 in Bojonegoro Municipality said that in 2009 there was an additional local curriculum, namely swimming lesson at elementary schools of Bojonegoro. It is very useful for students in Bojonegoro region as the flood-prone area. At least they are not surprised in the face of the threat of flooding.

Overall, based on the research results, it can be seen at the figure 4.9 below:

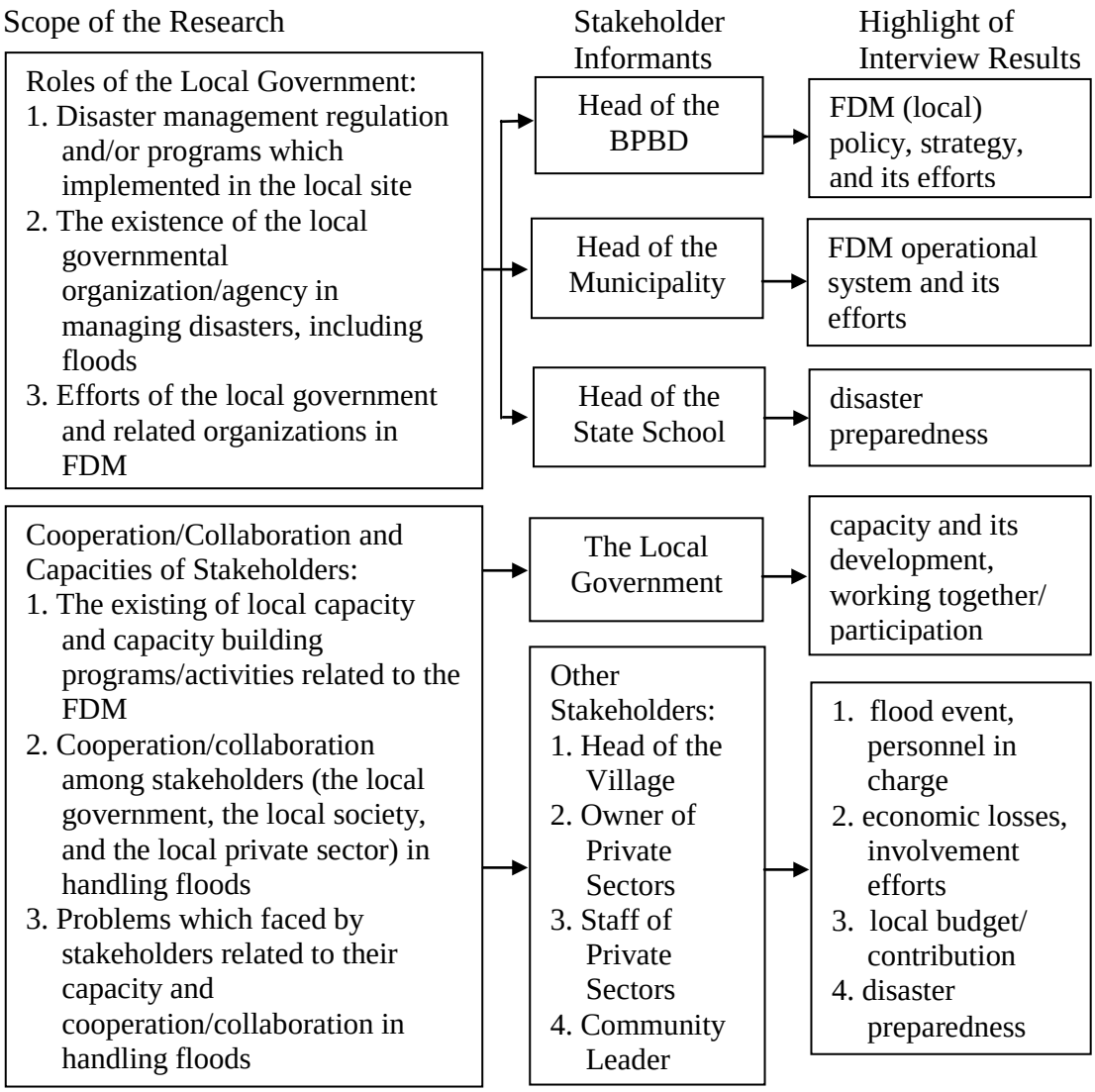

Figure 4.9 Flowchart of the Relationship among Scope of the Research, Stakeholder Informants, and Interview Results

4.2 Discussion

4.2.1 Roles of the Local Government of Bojonegoro Municipality in FDM

4.2.1.1 Efforts of the Local Government

According to Gopalakrishnan and Okada (2007), key elements for designing effective institutions for integrated disaster risk management:

1. Awareness/access
   It is essential to have comprehensive and reliable information that is available and accessible in a timely fashion to all parties concerned.
2. Autonomy
   Local agencies must have the authority to make immediate decisions based on information available, as the disaster is occurring –without having to get permission from higher level authorities. Thus, autonomy in decision making is central to successful crisis response.
3. Affordability
   Financial assistance by public or private agencies therefore becomes critical to implementing disaster mitigation measures.
4. Accountability
   The lack of follow through and follow up by legislative bodies as well as by autonomous commissions, citizen's watchdog group, and so on has aided and abetted flawed and faulty practices throughout the bureaucratic hierarchies responsible for disaster risk management.
5. Adaptability
   Successful implementation of disaster risk management requires that proposed measures have a high degree of adaptability to the local conditions. It is crucial to take into account the cultural context of the affected localities and regions. The customs, traditions, local practices and racial and ethnic composition of an area should all be factored in when devising an appropriate user-friendly package for effective and easy implementation.
6. Efficiency
   Enhanced efficiency will call for significantly improved coordination and coherence between the multiple agencies involved in disaster management. Major efforts have to be made to increase local participation, the involvement of private agencies and the provision of adequate finances to pay for the cost of implementation.
7. Equity
   Although efficiency is a critical component, equity should not be sacrificed in project design, even if this involves a reduction in efficiency.
8. Sustainability
   Given the certainty that natural hazards will occur in the future, it is imperative that measures, approaches, techniques, policies and institutional mechanisms are put in place that are sustainable in the long term. Sustainability gives residents of disaster-prone areas a sense of security and preparedness.

However, in fact this response is not sufficient yet. Floods often occur continually. Each party pays little attention to the flood mitigation than during that disaster. It means that most of disaster-related activities to be done, particularly by the local government, are still in emergency relief phase that tends to reactive approach.

Thus, the issue that needs attention is the institutional orientation of disaster management in general is still more focused on handling emergency and not on aspects of prevention and disaster risk reduction. The Act Number 24 of 2007 about Disaster Management has indeed been a paradigm shift from responsive disaster management (focus on emergency response and recovery) to preventive (risk reduction and preparedness), but the implementation is still a bit of risk reduction programs are planned. Disaster risk can be reduced through development programs that use risk reduction perspective and disaster risk assessment.

4.2.1.2 Operational System of FDM

Based on the operational system in handling Floods in Bojonegoro over years, including in the Municipality, the disaster management can be assessed tend to focus on emergency response. For example, in the context of disaster management budget policy, the use of funds for the stage before the disaster is still limited.

Then, the important thing that needs to be maintained or improved is the social empowerment. Preparation of contingency plans, for example, usually related to how well to prepare the organization of

disaster rather than on their potential victims of disaster. Efforts that done still tend to be directed to make a more effective organizational structure, not directed at how to improve the effectiveness of which will benefit to the community members who reside in flood-prone areas. Though social cohesion as a social force can affect a community's readiness, toughness, and ability to survive in the face of disaster. Of course, social cohesion can be conditioned in order to become stronger.

4.2.2 Governance in Handling Food Issues

Governance will be realized only if it appears collaboration, partnership and networking among the elements of governance, namely the state, private sector and civil society. Networking has become an important feature of the development of today's modern organizations, whether public or private organizations. Public policy is no longer an exclusive process that involves state actors only, but is a product of networking, collaboration, and partnership among elements of governance (policy networks).

One of issues encountered in the field of flood disaster management in Bojonegoro Municipality, East Java – Indonesia, is performance still not optimal yet. In general it can be stated that governments, communities and relevant stakeholders are not fully ready to face the disaster that resulted in a high number of material losses caused by the flooding. It is not only occurred in Indonesia, but also in other developing countries. The issue is quite similar related to the handling of disasters. According to Tun Lin Moe and Pairote Pathranarakul (2006), one of common problems in the disaster management in

Thailand is lack of effective collaboration among institutions at the different level.

Moreover, the massive potential and actual loss of life and property due to floods push parties to improve upon existing disaster readiness, response plans and actions to minimize devastating consequences. The technical, resource, political, and bureaucratic problems that surfaced seemed to be eclipsed by the lack of coordination and collaboration among key elements. Therefore, effective flood management requires collaboration among public and private sectors and related organizations at the local, provincial, and national level.

4.2.2.1 The Local Government

According to the BNPB, in terms of disaster preparedness, existing problems are still concerned with:

1. Limitations of disaster management policy at the local level,
2. Limitations of institutional capacity in disaster management at the local level,
3. Limitations of the funding allocation for disaster management which is based on the allocation of the local government

Therefore, there are several factors to consider in disaster management, as following:

1. Clear commitment from key stakeholders,

   Key stakeholders have to do coordination and share the tasks among them in disaster management.

2. Appropriate institutional arrangements,

   The existing of organizations and their characteristics should appropriate with the need of local community.

3. Mechanisms of information and effective communication,

   It is not only related to mechanism of information and communication but also provision of reliable contents immediately (real time) and accurately.

4. The rule of law enforcement,

   The law enforcement is required to reduce/minimize disaster risks and to maintain the environmental conservation.

5. Management and distribution of existing resources

   In disaster issues, particularly in emergency response, the related stakeholders have to work together and determine high priority to solve the problems.

According to this research, actually the Local Government of Bojonegoro (Municipality) is trying to do best efforts in the implementation of disaster management. In the context of governance, the government has been holding the society to work together. However, the government also should invite the private sector to involve or participate in them since this sector has not been empowered.

4.2.2.2 The Local Society

People at the local community level have more to lose because they are the ones directly hit by disasters. They are first ones to

become vulnerable to the effects of such hazardous events. On the other hand, they have the most to gain if they can reduce the impact of disasters on their own community with the support, particularly from the local government.

According to this research, it can be stated that there is community participation in the case of floods in Bojonegoro Municipality although there is still a high dependence on the local government. Participant of education and training in Indonesia often chosen or recruited by local officials, rather than coming forward as an independent volunteer. They / participants said that their daily job as a reason for not participating in the implementation of disaster management activities.

Actually the local society can also learn from the way the previous flood disaster. When they have enough self-supporting and able to build the capacity of mutual cooperation among the residents, the disaster was carried out effectively. It depends on how they preserve mutual cooperation as social capital in overcoming the disaster. It also involves understanding how and what forms of participation that can be done together with the local government in disaster management.

Experiences in the implementation of disaster management-oriented community empowerment and self-reliance refer to:

1. Disaster risk reduction efforts with communities in areas prone to disasters, in order to further the community is able to manage disaster risk independently,

2. Avoid the emergence of new vulnerabilities and dependency disaster-prone communities in the region to outsiders,
3. Multi-sector, multidisciplinary, and multicultural approach. No approach that effective if only a perspective of problem solving.

4.2.2.3 The Private Sector

Based on the results, private sectors are not fully involved yet in handling floods in Bojonegoro Municipality. The (local) government should encourage them continually to participate in flood disaster management activities/programs. They may join the certain simulation or training, even as the organizer.

Private sectors themselves also can conduct and enhance the CSR (Corporate Social Responsibility) programs. The movement of CSR for environmental and disaster management have been growing rapidly in the world, especially among companies in disaster-prone areas. Nowadays more companies are involved in various CSR activities for environmental and disaster management.

However, there are many obstacles to achieve corporate responsibility, including in developing countries. For instance, implementation of CSR practices in Indonesia generally is still far from the expected. The problem is the perception that some companies consider that the allocation of funds for the benefit of CSR as a burden because it is a cost factor. Therefore, they are still reluctant to spend their

profits for CSR budget. They also perceive enough of 'responsible' by paying taxes for development.

Then, if we look at the activities that had been practiced as a CSR, they are primarily for emergency response and progress in the short term rather than more proactive activities. It means that the interaction of the corporation primarily focused only on the type of assistance and associated with physical reconstruction and recovery. Without proactive approach, the impact is really significant from CSR activities will not be visible. Certainly not a wise choice if it is intended only to invest the company and human resources for emergency relief and post disaster. By the involvement of appropriate preventive activities, the public will be more resilient and better prepared to face hazards and environmental impacts in the future.

4.2.3 Capacity Building in FDM

Institutional orientation of disaster management in Indonesia, including in Bojonegoro Municipality, generally are more focused on handling emergencies, and yet on aspects of prevention and disaster risk reduction. The Act Number 24 of 2007 about Disaster Management was disaster has changed the paradigm of responsive (focused on emergency response and recovery) to the preventive (risk reduction and preparedness), but in actual still few programs that disaster risk reduction or preparedness planned and programmed. Disaster risk can be reduced through development programs of risk reduction perspective and arrangement of space-based mapping and disaster risk assessment.

Education and ongoing training on environmental conservation and disaster risk reduction have to be held. Obviously the charge material tailored to the unique circumstances of the situation-the potential for disaster is very likely to happen and based on the experience of previous disasters. Education and training about (flood) disaster are the right of people to obtain it.

Furthermore, flood disaster risk management process will not be effective without the participation of vulnerable communities. Community participation is necessary to reduce the risk of flooding. It required several approaches such as the following:

1. Flood warning deployed at the village level,
2. Projects to improve river embankments, clean the dirt that clog waterways, build dikes, and plant area along the river,
3. Planning for post-flood agricultural recovery.

Flood disaster risk management requires not only the participation of the individual within the vulnerable community, but also the involvement of related government institutions, Non Government Organizations and private sectors. It has to be supported with effective management strategies through operational planning, education and training of vulnerable groups and related formal and informal institutions.

Development of disaster response system can be started from policy formulation in the government to the community preparedness. It is an unexciting process that requires updated legislation and emergency operations plans at many levels and in many sectors. A variety of often disparate stakeholders have to plan together, competing goals and highly variable

capacities must be reconciled and training programs must be required. These initiatives require perseverance and unified focus by a capable team as well as consistent commitment.

Thus, implementation of measures to flood risk management requires the cooperation of all stakeholders. Close relationship with the community at each stage is a key success factor. The closeness of the relationship increased application of standards, resulting in increased capacity and reduce conflict. This needs to be combined with strong leadership and bold decision making, and the political commitment of national and local governments.

Finally, actions of flood risk management are usually distinguished as structural and non-structural. Structural actions aimed at reducing the risk of flooding by controlling the flow of water from outside or from within the urban residence. This action is complementary to the actions of non-structural work to ensure that the public is safe against flooding by having the planning and management of urban development. Comprehensive integrated strategy should be linked to urban planning and policies and practices before. Successful strategies usually combine both of them, structural and non-structural actions.

Chapter 5

Conclusion and Recommendations

Conclusion and Recommendations are presented in Chapter 5. This chapter includes Main Findings and Conclusion. It consists of policy and roles of the local government in FDM, governance in handling flood issues, and capacity building in FDM. This chapter also includes recommendations based on the research results in the last section.

5.1 Main Findings and Conclusion

5.1.1 Policy and Roles of the Local Government in FDM

Actually the Act Number 24 of 2007 about Disaster Management has signaled a paradigm shift from the emergency response to disaster prevention paradigm. At the local level in Bojonegoro, disaster management policy has been stated in the Local Regulation Number 11 of 2010 concerning its institution. Roles and efforts by the Local Government of Bojonegoro, East Java Province, Indonesia, can be perceived quite effective. One of roles of governments as public policy-makers is stated by Vermeulen WJV et al. (2010).

Bojonegoro is the first regency in East Java Province that established the BPBD (Local Disaster Management Agency). This is a permanent body that replaces the Disaster Management Executing Unit (*Satlak PB*). Since the existence of the BPBD, volume and impact of flooding in Bojonegoro Regency and the municipality can be reduced significantly.

Furthermore, several aspects in (flood) disaster management can be identified into 5 aspects, namely regulation, institutional, management, human resources, and Budget. Then, according to Gopalakrishnan and Okada (2007), key elements for designing effective institutions for integrated disaster risk management: awareness/access, autonomy, affordability, accountability, adaptability, efficiency, equity, and sustainability.

5.1.2 Governance in Handling Flood Issues

No single actor has any comprehensive knowledge and ability to handle all things, including in the context of overcoming disasters. Once, interactions are the basis at every phase of disaster management, particularly the phases of disaster prevention or disaster risk reduction, is probably the most important effort. It has to be done with the collaboration of roles, responsibilities, and values among governance actors. Kooiman (1993) stated it as the importance of governance.

Collaborative efforts in handling flood issues in Bojonegoro Municipality, particularly between the local government and the local society, had been progressing well. Even, there is also cooperation among the members of the society. Only the local private sector had not been fully involved and participated in the process of disaster management.

Thus, one of issues encountered in the field of flood disaster management in Bojonegoro Municipality, East Java – Indonesia, is performance still not optimal yet. In general it can be stated that governments, communities and relevant stakeholders are not fully ready to face the disaster that resulted in a high

number of material losses caused by the flooding. It is not only occurred in Indonesia, but also in other developing countries. The issue is quite similar related to the handling of disasters. Therefore, the local government of Bojonegoro suggested that all of local community elements should be fully involved in flood disaster management.

5.1.3 Capacity Building in FDM

According to ACBF (2001), capacity building can be defined as a process to (i) improve the ability of individuals, groups, organizations, and communities to analyze their environment, (ii) identify the problems, interests, and opportunities, (iii) formulate strategies to solve a problem and these interests and to seize opportunities that are relevant, (iv) designing a plan for the programs, and (v) to effectively utilize the basic resources that support implementation, monitoring and evaluation plan programs, and (vi) use reverse flow to study the results of the evaluation. This definition is quite relevant with this research.

Capacity building to overcome flooding in Bojonegoro Municipality had been done through various forms, such as simulation, training (including on the managerial aspects), and education. The local government often invites other communities/parties to join disaster management programs or activities.

However, there is still a problem in the development of capacity such as lack of human resource in charge and lack of budget for the whole of the disaster management phases. The number of personnel in the BPBD is 32 people. This number is still limited because it is not possible to reach all of Bojonegoro

area. It requires the active participation of communities from all parties. Besides that, sources of fund for disaster-budget come from the local budget and the national budget. In 2010 and 2011, the local budget allocated IDR 750 million. Special allocation for rehabilitation and reconstruction is the largest. It is not fully yet to cover all disaster management phases.

Several supporting factors in FDM in the research site are political commitment of the government, institutional, disaster management information system, participation of the local community, mobilization and distribution of existing resources. These factors can determine the successful implementation of disaster management.

According to this research, it can be concluded that there is community participation in the case of floods in Bojonegoro Municipality although there is still a high dependence on the local government. Participant of education and training in Indonesia often chosen or recruited by local officials, rather than coming forward as an independent volunteer. They / participants said that their daily job as a reason for not participating in the implementation of disaster management activities.

Based on the need identification of FDM, it is important to make the synergy among stakeholders and develop their capacity. This synergy and capacity can be realized in handling floods. Finally, FDM can be achieved more effective and sustainable.

5.2 Recommendations

Based on the research results, the important recommendations can be addressed to governments that divided into three levels as following:

The central government has to maintain the commitment in disaster risk reduction, including in terms of the national budget provision to cover all of disaster management phases, particularly mitigation and preparedness. The national project of dam development in Bojonegoro is one of efforts in flood risk management.

The provincial government can invites and facilitates local governments at regency or city levels which have geographical condition with the same characteristics as flood-prone areas to cooperate/collaborate in disaster management. For instance, the Local Government of Bojonegoro Regency may be work together with the Local Government of Ngawi Regency in overcoming floods of Bengawan Solo River.

The local government of Bojonegoro can implement these recommendations in order to improve the flood management, such as:

First, the BPBD as disaster management local authority has to conduct periodically evaluation by involving stakeholders simultaneously it used to determine the need of parties to work together in flood management. One of evaluation issues is on flood relief operations. This evaluation is very important. The goal of evaluation is to adjust the relief operations strategy so that similar problems can be avoided in the future. Distinctive elements that have to be evaluated is the communication among different parties, logistics operations, speed of response, preparation of all parties to floods, and using of personnel in

charge during the operation. Cooperation with the (local) private sector can have a positive effect on the operation. This sector can play the certain role to support implementation of the flood management.

Second, the common problem in handling floods of Bengawan Solo River is it tends focus on emergency relief only. Actually this is the reactive, not applying the proactive approach. The local government and other stakeholders have to pose the flood risk reduction as the priority. Therefore, paying more attention is needed within all phases of the disaster management. In the context of governance, partnership among stakeholders is definitely required in order to achieve integrated and sustainable flood management.

Finally, planning a rapid recovery after the flooding is needed to enhance the capacity of communities. By the flooding will continue to make people suffer although there is practice of flood risk management. The local government needs to learn and plan for quick recovery (rehabilitation and reconstruction). It includes the availability of resource planning and funding sources. Briefly, the government has to responsible in optimizing resources of disaster management. The best recovery plan is to use the opportunity of reconstruction to build safer and stronger local communities in Bojonegoro region and to have the capacity for coping floods better in the future. It will be expected to reduce possible losses by flood impacts significantly.

References

ActionAid, and AyudaAccion. (2005). *People-Centered Governance: Reducing Disaster for Poor and Excluded People*. Japan: Action Aid & Ayuda Accion.

ADB. (1991). *Disaster Mitigation in Asia and the Pacific*. Manila.

African Capacity Building Foundation (ACBF). (2001). *Capacity Needs Assessment: A Conceptual Framework,* in ACBF Newsletter Vol. 2.

Agere, Sam. (2000). *Promoting Good Governance: principles, practices, and perspectives*. UK: Commonwealth Secretariat.

Alexander. (2002). *Principles of Emergency Planning and Management*. Harpended: Terra Publishing. ISBN 1-903544-10-6.

Allen, Katrina M. (2006). Community-based disaster preparedness and climate adaptation: local capacity building in the Philippines. *Disasters,* 30(1): 81−101. Blackwell Publishing.

Amcross, Care, MedCorps, Rescue, MercyCorps, Plan, et al. (2006). *A Synthesis Report of NGO Impact Initiative: An Assessment of the International Humanitarian NGO Community*.

Bankoff, G., G. Frerks, D. Hilhorst (eds.). (2003). *Mapping Vulnerability: Disasters, Development and People*. ISBN 1-85383-964-7.

Bifulco, Lavinia and Laura Centemeri. (2008). Governance and Participation in Local Welfare: The Case of the Italian Piani di Zona. *Social Policy and Administration* ISSN 0144–5596 DOI: 10.1111/j.1467-9515.2007.00593.x, Vol. 42, No. 3, June 2008, pp. 211– 227.

Blaikie, P. et al. (1994). *At Risk: Natural Hazards, People's Vulnerability and Disasters*, London: Routledge.

Boli, Yoseph et al. (2004). *Panduan Penanganan Risiko Bencana Berbasis Masyarakat (Guidance of Community-based Disaster Risk Management).* FKPB Kupang-NTT.

Brown, Lisanne; LaFond Anne; Macintyre, Kate. (2001). *Measuring Capacity Building.* Carolina Population Centre/University of North Carolina, Chapel Hill.

Conyers, Diana. (1992). *Perencanaan Sosial di Dunia Ketiga: Suatu Pengantar (Social Planning in the Third World: An Introduction)*. Translater: Susetiawan. Editor: Affan Gafar. Yogyakarta: Gadjah Mada University Press.

Creswell, J. W. and Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice.*

Creswell, John W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (Second Edition)*. USA: Sage Publications, Inc.

_____. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. California: Sage Publications, Inc.

Denzin, N.K. and Lincoln, Y. (2000). *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.

Detik Magazine, 60th Edition, 21st January 2013.

Dewi, Anggraini. (2007). *Community-Based Analysis of Coping with Urban Flooding: A Case Study in Semarang, Indonesia*. Enschede-Netherlands: International Institute for Geo-Information Science and Earth Observation.

Finn, J.L., and Checksowai, B. (1998). Young People as Competent Community, Builders: A Challenge to Social Work. *Social Work*, Vol. 43.

Fontaine, Charles et al. (2006). *Stakeholder Theory*. Access at http://www.edalys.fr/documents/Stakeholders%20theory.pdf [27th October 2012].

GB Edralin, J.Sl. (1997). *The New Local Governance and Capacity Building: A Strategic Approach,* Regional Development Studies, Vol. 3.

Gopalakrishnan, C and Okada, Norio. (2007). Designing new institutions for implementing integrated disaster risk management: key elements and future directions. *Disasters*, 2007, 31(4): 353-372.

Jalali, R. (2002). Civil society and the state: Turkey after the earthquake. *Disasters*. 26(2). pp. 120-139.

Jurie, J. (2000). Building Capacity: Organizational Competence and Critical Theory, *Journal of Organizational Change Management* 13(3): 264–74.

Kooiman, Jan. (1993). Modern governance. *Social-political Governance*. London: Sage.

Kreps, Gary A. (1998). Disaster as Systemic Event and Social Catalyst. In: Quarantelli, E.L. (Ed.) *What Is A Disaster? Perspectives on the Question.* New York: Routledge.

Lincoln, Y. S., and Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills, CA: Sage.

Linnell, D. (2003). *Evaluation of Capacity Building: Lessons from the Field*. Washington, DC.

Luna, EM. (2000). *NGO Natural Disaster Mitigation and Preparedness: the Philippine Case Study*. Report for research project entitled 'NGO Natural Disaster Mitigation and Preparedness Projects: An Assessment and Way Forward.'

Midgley, James. (1986). Community participation: history, concepts, and controversies. In Midgley, J., *et.al*. *Community Participation, Social Development and the State*. London: Methuen.

Migdal, Joel S. (2004). *State in Society*. UK: Cambridge University Press.

Milen, Anni. (2001). *What Do We Know About Capacity Building?, An Overview of Existing Knowledge and Good Practice.* Geneva: World Health Organization (Department of Health Service Provision).

Miles, Matthew B., and A. Michael Huberman. (1994). *Qualitative Data Analysis: A Sourcebook of New Members.* Beverly Hills, CA: SAGE.

Moleong, Lexy J. (2001). *Metodologi Penelitian Kualitatif (Qualitative Research Methodology)*. Jakarta: Rosda Publisher.

Morrison, Terrence. (2001). *Actionable Learning – A Handbook for Capacity Building through Case Based Learning.* ADB Institute.

Nurjanah, et al. (2012). *Manajemen Bencana (Disaster Management)*. Bandung: Alfabeta.

Pande, Ravindra K. (2006). Participation in practice and disaster management: experience of Uttaranchal (India). *Disaster Prevention and Management Journal Vol. 15 No. 3 2006 (pp. 425-428)*. Emerald Group Publishing Limited.

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Pedroso, Leonora. (1999). *Eastern Regional Organization for Public Administration: From Government to Governance.* World Confrerence on Governance.

Pierre, Jon and Guy B. Peters. (2000). *Governance, Politics and the State*. New York: St. Martin's Press.

Sebastian, L. (2008). Pendekatan Pencegahan dan Penanggulangan Banjir (Flood Prevention and Control Approach). *Dinamika Teknik Sipil Vol. 8 No. 2 July 2008: 162-169*.

Shah, Anwar. (2006). *Local Governance in Developing Countries*. Washington DC: The International Bank for Reconstruction and Development/World Bank.

Smismans, Stijn. (2006). *Civil society and Legitimate European Governance*. UK: Edward Elgar Publishing Limited.

Soeprapto, Riyadi. (2003). *Pengembangan Kapasitas Pemerintah Daerah Menuju* Good Governance *(Local Government Capacity Building towards Good Governance)*. Malang: FIA Universitas Brawijaya.

Soetomo. (2006). *Strategi-Strategi Pembangunan Masyarakat (Strategies of Society Development)*. Yogyakarta: Pustaka Pelajar.

Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. *Management Decision.*

Takeda, M.B. and Helms M.M. (2006). "Bureaucracy, meet catastrophe", Analysis of the tsunami disaster relief efforts and their implications for global emergency governance. *International Journal of Public Sector Management vol. 19 No. 2 2006*. Emerald Group Publishing Limited.

Tanavud C., et.al. (2004). Assessment of Flood Risk in Hat Yai Municipality, Southern Thailand, Using GIS. *Journal of Natural Disaster Science, Volume 26, Number 1. 2004*. Prince of Songkla University.

Tangcharoen, Choltis. (2000). The Environmental Law Center Thailand.. *Executive Summary: Legal Measures to Enhance the Capacity of Civil Society in Thailand.*

Tatum, M. (2011). *What is disaster management*. Access at http://www.wisegeek.com/what-is-disaster-management.htm [27th October 2012].

Tun Lin Moe and Pathranarakul P. (2006). An integrated approach to natural disaster management. *Disaster Prevention and Management Journal.* Vol. 15 No. 3.

Twigg, J. (2001). *Corporate Social Responsibility and Disaster Reduction: A Global Overview*. Benfield Greig Hazard Research Center, University College London.

Vermeulen, W.J.V. et al. (2010). *Roles of Governments in Multi-Actor Sustainable Supply Chain Governance Systems and the effectiveness of their interventions: An Exploratory Study*. Netherlands Environmental Assessment Agency (PBL), The Hague/Bilthoven.

Viet Hien Bui and Thi Phuong Vinh Nguyen. (2006). *Institutionalized Capacities and Practices and Community Resilience to Flood Risk in Central Vietnam.*

Wikipedia. (2011). *Capacity Building*.
Access at http://en.wikipedia.org/wiki/Capacity_building [27th October 2011].

_____. (2011). *Pembagian Administratif di Indonesia*.
Access in http://id.wikipedia.org/wiki/Pembagian_administratif_Indonesia [27th October 2011]

Wilding, R. (1999). The Role of Time Compression and Emotional Intelligence in Agile Supply Chains. *Supply Chain Practice* Vol. 1. No. 4: 14-25.

Winter, G. (2000). A comparative discussion of the notion of validity in qualitative and quantitative research. *The Qualitative Report*, *4*(3&4).

WMO and APFM. (2009). *Integrated Flood Management Concept Paper*. WMO.

www.google.com

www.welt-atlas.com

Yi-Huang Tao and Chih-hung Sun. *A Methodology of Establishing Disaster Management Collaboration Network: A Case Study on Flooding Disaster Response in Taipei City*.
www.ncdr.nat.gov.tw/2ICUDR/2icudr_cd/PDF/5_2_3.pdf [21st August 2011].

Yodmani, Suvit. (2001). *Disaster Risk Management and Vulnerability Reduction.* Manila: Asia and Pacific Forum on Poverty: Reforming Policies and Institutions for Poverty Reduction.

Appendix

Research Site

The research site is in Bojonegoro Municipality, East Java Province, Indonesia. This area leads to increased opportunities to flood experiences in some down-land of region. Hence this place has the geographical condition as floods disaster prone area.

The local government refers to administrative authorities over areas that are smaller than a state. The term is used to contrast with offices at nation-state level, which are referred to as the central government, national government, or (where appropriate) federal government. "Local government" only acts within powers delegated to it by legislation or directives of the higher level of government and each country has some kind of local government which will differ from those of other countries. (www.wikipedia.org)

Then, district/regency is not a subordinate of the province, so the regents or mayors are not accountable to the governor. District/regency and the city is an autonomous region which is authorized to regulate and take care of their own government affairs. In general, administrative division in Indonesia can be seen in the figure below.

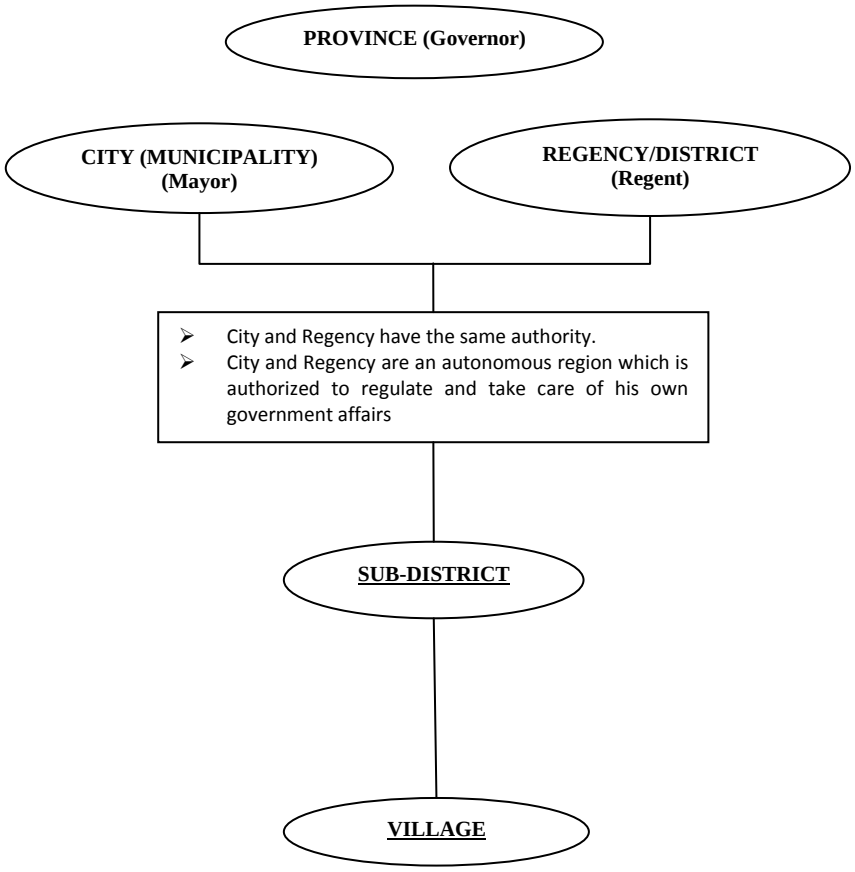

Figure of Administrative Division in Indonesia
Source: http://id.wikipedia.org/wiki/Pembagian_administratif_Indonesia

Bojonegoro Municipality, East Java Province, Indonesia

Geography

Bojonegoro refers to the name of district/regency and municipality in East Java Province, Indonesia. Geographical location of Bojonegoro Regency is East Latitude: 111º25'; 112º09' and South Latitude: 6º59' and 7º37'. Bojonegoro Regency is a part of the territory of East Java Province-Indonesia, distance of 110 km from Surabaya (capital of East Java Province) which has an area of 2,307 km². Geographical conditions of Bojonegoro Regency in which the flow of the Bengawan Solo River,

this area lead to increased opportunities to experience annual floods in some northern regions (*Source: Statistics of Bojonegoro Regency, Bojonegoro in figures 2009*).

Bojonegoro Municipality includes in the geographical territory of Bojonegoro Regency and it consists of 18 Villages/*Kelurahan*. This municipality is located in an eastern of the center of Bojonegoro Regency Government, and it covers ± 26 km².

Population

Bojonegoro Municipality has a population of inhabitants 84.537 (2009)

Administration

Bojonegoro Municipality administratively has boundaries:

Areas	Border on
South	Kapas Municipality
West	Kalitidu Municipality
North	Tuban District/Regency
East	Balen Municipality

Furthermore, Bojonegoro Municipality consists of 18 Villages/*Kelurahan*:

1. Ledok Kulon
2. Ledok Wetan
3. Jetak
4. Klangon
5. Kalirejo
6. Semanding
7. Sumbang
8. Banjarejo
9. Kauman
10. Mulyoagung
11. Campurejo
12. Mojokampung
13. Ngrowo
14. Pacul
15. Karangpacar
16. Kadipaten
17. Sukorejo
18. Kepatihan

(*Source: Bojonegoro Municipality in Figures, 2009*)

VITAE

Name Mochamad Chazienul Ulum

Student ID 5310520513

Educational Attainment

Degree Graduation	Name of Institution	Year of Graduation
Bachelor of Public Administration	University of Brawijaya, Malang, Indonesia	2002

Scholarship Awards during Enrolment

University of Brawijaya, Malang, Indonesia

Work-Position and Address

Lecturer at Department of Public Administration, University of Brawijaya, Malang, Indonesia

List of Publication and Proceeding

Ulum, Mochamad C., 2012. Flood Disaster Management and Governance Mindset. (Presented on the 2012 Thailand International Conference on Public Administration and Public Affairs: Challenges and Prospects in ASEAN and Beyond. August 30-31, 2012; Public Administration Association of Thailand (PAAT), Bangkok).

Ulum, Mochamad C., Chaijaroenwatana, B., 2012. Governance and Capacity Building of Handling the Flood Issues in Bojonegoro Municipality, Indonesia.

(Presented on the National and International Graduate Student Conference: Community and Environmental Management for Sustainable Development in ASEAN. May 14, 2012; College of Politics and Governance, Mahasarakham University, Thailand).

Ulum, Mochamad C., 2011. Community Participation in Flood Disaster Management (A Case Study in Bojonegoro, Indonesia). (Submitted and accepted to Academic Journal of Administrative Science, University of Brawijaya, Indonesia, in 2011).