### **CHAPTER I INTRODUCTION**

### A. Background

Water is essential for life, reproductive work and productive purpose. Reproductive work includes all activities related to biological reproduction, in addition to those related to the family's support, children's socialization and education, health care, feeding, and the corresponding tasks. Productive work includes the activities to generate income, goods, services or benefits for personal consumption or market commercialization, through which family reproduction is guaranteed (Aguilar and Castane, 2001). Farmers and fishermen need water for their productive work more than others because their livelihood depends on nature. Women play a central part in the provision, management, and safeguarding of water because women interact with nature directly (Huibers, 2004).

Disasters tend to hit the poorest and most marginalized demographics the hardest. Women and girls are particularly exposed to climate-related disaster risk. They are likely to suffer higher rates of mortality, morbidity and economic damage to their livelihoods. Women bring unique experiences and skills to disaster risk reduction and management, although these skills are often not acknowledged or tapped into sufficiently. Increased awareness of the drivers, pressures, stressors and opportunities associated with climate-related disasters is key to finding smart pathways to reduce and manage disasters. It is therefore imperative that disaster risk reduction and management strategies are gender-aware, taking into account both gender-based vulnerabilities as well as women's unique contributions (Habtezion, 2013).

There are indications of close linkages between poverty and vulnerability to natural disasters and of their mutually re-enforcing effects. The poorer communities tend to be the most vulnerable. The household level, poverty is the single most important factor determining vulnerability. This situation is exacerbated by rapid urbanization, environmental degradation and the increasing risk of environmental disasters, whether as a result of direct human impact and or from climate change (NDCC-republic of the Philippines, 2005).

Earthquake is one of the natural disaster that gives the impacts to the water utilization. The earthquake that happened in Padang City on September 30<sup>th</sup>, 2009 damaged the water resource. For several days, people in Padang lived without enough clean water and electricity (BPS West Sumatera 2009). It is observed that the 7.6 RS Padang earthquake caused degradation on water resources utilized by farmers and fishermen's family. Shortages of water and poverty are frequently linked because when nature does not provide easily accessible water, communities do not thrive and their development can be limited. As survival efforts, farming household and sea fishery household set up adaption on such matters. The shortage of water in Padang as the capital city of West Sumatera, is more crucial than in other cities or villages in West Sumatera, because water in urban areas is more crucial than in rural areas (Anton, 1993)

According to Goto Yozo, an expert of tsunami and earthquake from Japan, he said: "There will be an earthquake in Mentawai, West Sumatera. From our research, the earthquake intensity will be more frequent dan bigger. The vibration time will be longer including the duration" (Akbar, 2010). Consequently, the anticipation and prevention of the impacts of earthquake in the future by analyzing the impacts of previous earthquake is important.

## **B.** Problem Statement

The utilization of water resources after Padang earthquake on September 30<sup>th</sup>, 2009 was a critical point for most of Padang municipal mainly for farming and sea fishery households which are commonly considered as low income communities. So far, there is no study carried out on this issue especially in the point of view of gender analysis. The impact of earthquake on water utilization in city, in this case Padang city areas is necessary to study. The study and analysis of the marginal group in urban areas using gender perspective method is necessary to explore because the poor are generally the most vulnerable to the impact of natural disaster, and it is women and children among them who are often the hardest hit (Deare, 2004). There are questions that have been emerged in this case:

- 1. What are the impact of earthquake to water utilization in sea fishery and farming household from gender perspective?
- 2. How good is farming household and sea fishery household adapts to the change of water utilization to fulfil their daily need?

In order to answer those questions, the research about the impacts of earthquake to both households is important to ensure the real phemonena surrounding natural disaster, vulnerability, livelihood and gender.

## C. Objectives

This research has two following objectives:

- 1. To analyze and compare the impact of earthquake to water utilization in farming and sea fishery household from gender perspective.
- 2. To analyze and compare the adaptation in water utilization of farming and sea fishery households as the result of the earthquake.

# D. Significance of the Research

West Sumatera by virtue of its geographic circumstances is highly prone to natural disasters, such as earthquakes, volcanic eruptions and floods, making it one of the most disaster-prone provinces in Indonesia. Earthquake is the main issues needed to anticipate by government to reduce risk.

This research finding using gender analysis is expected to be able to help, change the direction of development pattern that currently tend to place women at a disadvantage position. Recording the differentiated effort of men and women will make visible responses to the disaster emergency and the role they play.

#### E. Scope and Limitation of the Study

- 1. This study focuses on earthquake impact on water utilization
- 2. The study focuses on farming household in Sungai Lareh and sea fishery household in Pasir Nan Tigo, sub districts of Koto Tangah, West Sumatera. The farming and sea fishery households were chosen to be observed because their livelihood depend on natural resource.