

CHAPTER I

INTRODUCTION

1.1 Problem Identification

Natural disaster-related problems have become rife in Indonesia lately. The nation of Indonesia, located in Southeast Asia, is positioned at the meeting point of the Indo-Australian, Eurasian, and Pacific plates. These plate boundaries have the potential to generate seismic activity when they contact. Indonesia is also home to 127 active volcanoes, 76 of which are dangerous. In addition, the country frequently experiences man-made disasters such as social unrest, technical failures, tsunamis, hurricanes, floods, landslides, and droughts. (BNPB, 2016).

Large-scale natural disasters including earthquakes, volcanic eruptions, tsunamis, and monsoon storms are all quite likely to occur in Indonesia. These disasters occur for various reasons, Table 4. 1 including the fact that Indonesia is crossed by two mountain ranges, the Pacific Circumpolar Mountains and the Mediterranean Circumpolar Mountains, which cause many volcanoes. Volcanic activity causes volcanic earthquakes, while the shifting of continental plates causes tectonic earthquakes. Additionally, Indonesia has more active volcanoes than any other region with 130, and it is situated in the "ring of fire," the seismically most active area in the globe. Nine volcanic eruptions, two tsunamis, and 23 earthquakes, floods, and landslides occurred in the nation between 2003 and 2013 (N. Sattler et al., 2018).

Between 1900 and 2021, Asia saw 90 disasters annually on average. China suffered more calamities than any other country during this time. Japan, Pakistan, Afghanistan, Iran, Bangladesh, Vietnam, Indonesia, the Philippines, India, and Bangladesh are among the other nations with the greatest rate of disasters.

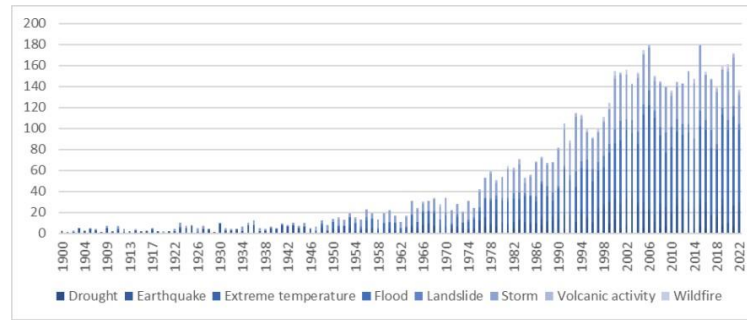


Figure 6 Trend of natural disaster occurrence in Asia 1900-2022 (EM-DAT/CRED, 2023)

Source : ADRC, 2023

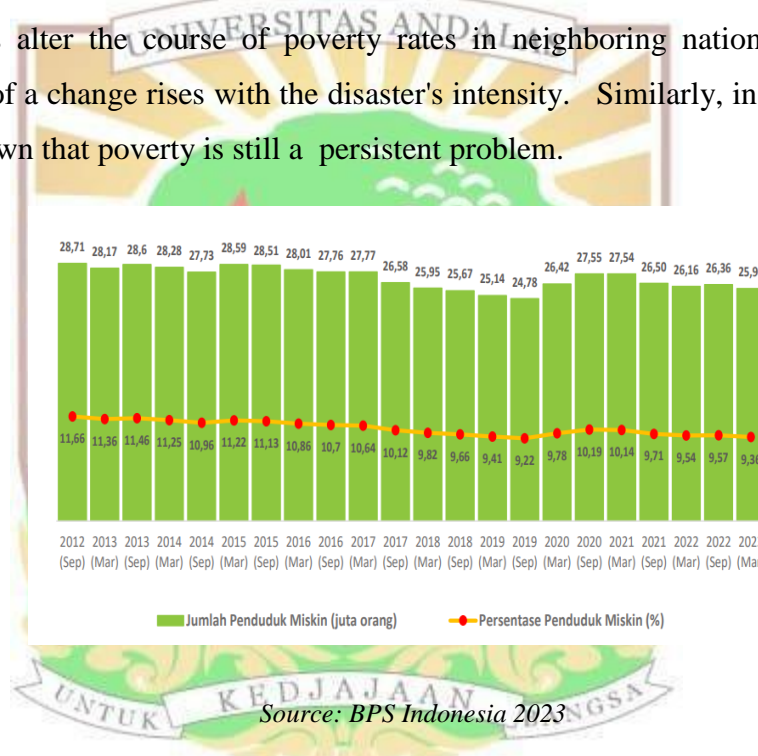
Graph 1.1 Trend of natural disasters occurrence in Asia 1900-2022

According to (Asian Disaster Reduction Center, 2023), there are 10 countries with the highest number of disasters occurrences in 2023 including Indonesia (20 events), Philippines (12 events), China (12 events), Thailand (11 events), Viet Nam (8 events), Afghanistan (8 events), India (7 events), Japan (7 events), Malaysia (6 events) and Nepal (6 events) and based on the above data it is known that there have been 20 natural disaster events recorded in the Asian Disasters Reduction Centre that occurred in Indonesia, for this reason this study wants to examine Indonesia as a research object because it has the greatest rate of natural catastrophes in the Asian continent.

Every year the frequency of natural disasters continues to increase for all types of natural disasters that occur in Indonesia, both single natural disasters and natural disasters that occur simultaneously. The high increase in the frequency of natural disasters that occur in Indonesia will certainly cause a decrease in Indonesia's economic figures. The economic decline is caused by the damage to various infrastructures that will require a large amount of money and a long time to reconstruct, disruption of various business activities that cause a decrease in production and income, the emergence of market instability and investment, the increase in the number of unemployed due to the cessation of business activities and the destruction of the economic sector which causes many people to loss their jobs, even with the inequality of

income distribution can trigger the emergence of negative impacts of natural disasters on households that are more severe (Kreimer, 2001).

The environmental (socio-economic) impacts of natural disasters are generally negative and long-lasting (Lee, 2020) This suggests that environmental change accelerated by natural disasters will increase socio-economic inequality. As a result, the already vulnerable poor often experience greater difficulties in coping with and recovering from such disasters, resulting in a more significant and prolonged increase in poverty. Natural disasters alter the course of poverty rates in neighboring nations, and the chance of a change rises with the disaster's intensity. Similarly, in Indonesia, it is known that poverty is still a persistent problem.



Graph 2.2 Number and percentage of poverty in Indonesia 2023

The figure above shows that the percentage of poverty in Indonesia in 2013-2014 decreased, namely in 2013 by 11.46 per cent and in 2014 by 10.96 per cent. Furthermore, there was an increase in 2015 to 11.13 per cent. Then there was another significant decline in 2016 to 10.7 per cent. However, in 2017 the poverty percentage will increase to 10.64 percent. Using information from the Central Statistics Bureau, the poverty line in March 2023 was recorded at IDR 550,458/capita/month. In March 2023, there were 25.90

million impoverished individuals, which represents a 0.46 million reduction from September 2022 and a 0.26 million decrease from March 2022. However, compared to September 2022, when it was 7.53 percent, the percentage of urban poor persons in March 2023 was 7.29 percent. In the meantime, the proportion of people living in rural poverty fell from 12.36% in September 2022 to 12.22% in March 2023.

The number of poor individuals in metropolitan areas in March 2023 fell by 0.24 million from September 2022 to March 2023 (from 11.98 million to 11.74 million). In contrast, 0.22 million fewer rural persons lived in poverty during the same time period (from 14.38 million in September 2022 to 14.16 million in March 2023). Based on the description of the figure above, this situation implicitly states that poverty is still a major problem that is difficult to overcome in Indonesia.

Based on the intensity of natural disasters that often occur in Indonesia and the condition of the poor population in Indonesia, the relationship between natural disasters and poverty is complex and interrelated. Natural disasters can exacerbate poverty by destroying productive assets, cutting off access to employment, and increasing the cost of living. Conversely, poverty can increase vulnerability to natural disasters due to limited resources for mitigation and adaptation. Therefore, understanding the interaction between natural disasters and poverty is crucial to developing more effective and sustainable disaster management strategies. (Baez & Santos, 2008).

The relationship between natural disasters and poverty demonstrates that natural disasters constitute a force field that can aggravate poverty in emerging countries (Mani et al., 2003). Vietnam and other poor countries are well-known for their vulnerability to natural disasters. Typhoons, floods, and droughts have a substantial impact on Vietnam's per capita income and expenditure (Baez & Santos, 2008) have also estimated the impact of

earthquakes on household income in El Salvador. The results showed that earthquakes can reduce household income by up to a third.

The mechanism of how natural disasters can worsen poverty conditions in the research (Kyne & Kyei, 2024) also explains that natural disasters can worsen the long-term economy. This impact can occur because many poor households are vulnerable to natural disasters due to their limited access to disaster-resistant infrastructure and social services, which exacerbates poverty.

Previous research conducted in Indonesia by (Rush, 2018) which explored the impact of natural disasters on education and poverty in El Salvador focused on the discussion of special events and household level conditions to see the conditions of poverty that occurred. This study uses 2010 data while the research to be conducted by researchers uses the latest data in 2023. Previous research also discussed the relationship with the poverty percentage rate while this study wants to examine the poverty rate in depth in the form of adding the variable number of poor people to be able to explore poverty conditions in a more complex manner.

Based on the explanation of the phenomenon above, the author is interested in conducting research in Indonesia. To the best of the author's knowledge, there are still few studies that discuss the complex relationship between natural disasters and poverty rates, especially in Indonesia using the latest data. In addition, this topic is interesting to study because of the prevalence of natural disasters that currently occur in Indonesia and the poverty conditions in this country.

Based on the things that have been explained previously, the title of this research is **"The Effect of Natural Disasters on Poverty in Indonesia"**.

1.2 Formulation of the problem

1. What is the effect of natural disasters on poverty in Indonesia?
2. Is there any evidence for heterogeneity in the effect of disasters on poverty across different types of damages in Indonesia ?

1.3 Research Objective

Based on the formulation of the problem that has been stated, the objectives of this study are:

1. To find out, test, and analyze the effect of natural disasters and poverty in Indonesia
2. To find out, test, and evidence the heterogeneity in the effect of natural disasters and poverty in Indonesia.

1.4 Benefit of Research

The following are the projected benefits of this research for the parties considered interested:

1. Benefits to science and technology: The findings of this study are likely to bring new perspectives and expand knowledge.
2. The benefits for scholars are intended to provide understanding into socioeconomic
3. Benefits for academics: It is intended that this research will serve as a reference for future researchers.
4. The research findings are expected to provide recommendations for poverty-reduction measures based on the impact of natural disasters in Indonesia.

1.5 Writing Systematic

The systematics of writing is developed to assist the development of this thesis. It is required to determine decent writing. The writing systematics are as follow:

Chapter 1 : Introduction

This chapter contains the background, introduction about poverty and natural disasters issues in general, fixed research objectives, research benefits, and systematic thesis writing.

Chapter II Literature Review

This chapter provides theories of poverty, theories of natural disasters, characteristics of natural disasters, and specifications of natural disasters, comparing the variables and searching for the relationship between them.

Chapter III Research Method

This chapter discusses populations and samples, data collection strategies, data and data sources, operational definitions of variables, and data analysis procedures.

Chapter IV Data Analysis and Discussion

This chapter contains the explanation of research objects, including data, analysis, and discussion of the data as well as research findings.

Chapter V Conclusion

This chapter contains conclusions and recommendations needed.