The Socio-economic Impact of the 1991 Mt. Pinatubo Eruption on Concepcion, Tarlac

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Joy Anne Dizon Wage
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APPROVAL SHEET

This undergraduate thesis entitled "**The Socio-economic Impact of the 1991 Mt. Pinatubo Eruption on Concepcion, Tarlac**" prepared and submitted by Joy Anne Dizon Wage, has been approved and accepted in partial fulfillment of the requirements for the Degree of Bachelor of Arts in Social Science Major in Area Studies.

Cristina E. Torres, Ph, D.
Thesis Adviser

Accepted in partial fulfillment of the requirements for the Degree of Bachelor of Arts in Social Science, Major in Area Studies.

Prof. Benjamin Mangubat
Chairperson
Department of Social Sciences

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Abstract

This research is aimed at drawing out the impact of the June 1991 Mt. Pinatubo eruption on the lives of the Concepcion residents, most especially on their social, and economic aspects. It has a total of ten chapters, each discussing the details beginning from the research proposal to the implementation of the proposal to the analysis of data gathered until the drafting of the conclusion.

Chapter 1 discusses the research problem, the objectives, the hypothesis, the conceptual and theoretical frameworks, and the research methodology. It also contains the review of related literature. This research made use of the Evolutionary theory as its theoretical framework. In order to acquire more accurate data, the researcher employed several techniques of gathering data. These include key informant interviews, focus group discussion, survey, review of records, and the observation method.

Chapter 2 contains the historical overview of the study. It tackles the brief history of Tarlac Province as well as the town of Concepcion, wherein the study was conducted. The history covers the pre-Spanish era until the period after the Japanese occupation. This chapter also talks about the geology of Mt. Pinatubo as well as the special attachment of the Aetas to it. Furthermore, it gives a picture of the impact of the 1991 Pinatubo eruption on the Philippines in general. This chapter reports about the great damage of the eruption on the different sectors in the Philippines.

Chapter 3 presents the statistics on the profile of the survey respondents. The sex of the respondents is taken into consideration as well as their age, civil status, their current employment status, and their religious affiliations. Results show that there are

more female respondents than male ones. Most of the respondents belong to the age range of 31 to 50 years old. Many of them are working although they do not earn that much. The bulk of them are already married, too. Moreover, most of the respondents are Roman Catholics.

Chapter 4 is allotted in discussing the socio-economic condition of Concepcion before the 1991 Pinatubo eruption. The business and livelihood of the townspeople are tackled. Findings show that agriculture was the main source of livelihood of the people although some handicraft industries existed during the period covered. Moreover, there is a section discussing about the existing cooperatives, and banks in the town during the same period. Employment, education, and health services that were offered by the place of study to its inhabitants are presented, too. However, the peace and order situation in the town is also discussed in this chapter.

Chapter 5, on the other hand, discusses the experiences of Concepcion dwellers during the 1991 Pinatubo disaster. The physical condition during that period is presented in this chapter as the respondents described it to be. The immediate damage of the said disaster on the lives of these respondents is revealed as well. Moreover, the rescue and relief operations conducted by government units, and other organizations are discussed in this chapter.

Chapter 6 reveals the psychosocial effects of the said disaster on its victims. The unforgettable traumatic experiences of the Concepcion dwellers during that disaster are presented in this chapter. However, a book that emphasizes on the importance of rendering psychosocial therapy to disaster survivors is tackled as well.

Chapter 7 is a portion that talks about the socio-economic condition of Concepcion after the disaster struck it in 1991. Business and livelihood of the townspeople are presented. Conditions of cooperatives and banks in the town are discussed, too. The chapter also presents the social and health services that are available in the town. Electric and water supply, and transportation and telecommunications services, which are being offered in Concepcion are tackled as well. Furthermore, the impact of that calamity to social gatherings as well as to family, friends, and neighbor relationships are revealed in this chapter. Beneficial economic consequences of that eruption are shown, too. These include new business ideas, and new job opportunities.

Chapter 8 talks about the other effects of the 1991 Pinatubo eruption on the lives of Concepcion dwellers. The improvement of the townspeople's disaster preparedness is presented in this chapter. Other aftermaths such as the betterment of the people's relationship with the Lord, and with one another are discussed as well.

Chapter 9 is a summary of the study's findings. It reveals the interconnections of the various variables of the research to one another. It gives a more simple presentation of all the data acquired by the researcher.

Finally, chapter 10 presents the conclusion of the study. It supports the study's hypothesis, which is the 1991 Pinatubo eruption has significantly affected the socio-economic well-being of Concepcion residents. The disaster greatly destroyed the economic aspect of the town although it had more positive social effects such as unity among the townspeople, and acquisition of better coping techniques. At the end, recommendations made by the researcher are offered. The implementation of these recommendations is believed to be for the improvement of the town, and its inhabitants.

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Chapter 1

Introduction

Background of the Study

One Sunday morning, during a Holy Mass at the Immaculate Conception Parish Church in Concepcion, Tarlac, this writer saw an Aeta child inside who was begging for alms from the churchgoers. When the Holy Mass was over and this same writer was walking out of the church, she noticed more Aeta children going after the townspeople and asking for alms. There were also a number of Aeta men and women walking around the town's plaza with sacks on their shoulders.

These Aetas' poor condition served as an inspiration for this writer to study about the different effects of the Mount Pinatubo eruption on Concepcion. If that eruption has caused these Aetas to leave their natural habitat, what about the people in this writer's home town? What have been its consequences for Concepcion dwellers? Just like many other towns in the provinces of Zambales, Pampanga, and Tarlac, Concepcion has been through a lot of difficulties since the occurrence of that natural calamity.

The residents of Concepcion suffered from a decade of panic brought about by annual flow of lahar. Farming fields had been swept off. Many houses got buried under thick layers of ashes and lahar. Some residents were forced to live in resettlement areas. Poultry businesses had experienced huge losses. A number of farm-to-market roads were destroyed. Schools were closed for some time due to flooding. But above all these, was the possibility that a fraction of the people lost some of their loved ones.

As a Concepcion dweller, this writer would want to dig deeper into this natural disaster's outcomes. She would like to come out with a research that would hopefully be beneficial to everyone, especially to the future inhabitants of Concepcion. May this researcher's study take the future generation to the time when the eruption of Mount Pinatubo took place, and may it serve as a very valuable reminder of the struggles that the earlier townspeople had been through, making the yesteryears of Conception beautiful, so interesting.

Statement of the Problem

Along with the lava that flowed from the mouth of Mount Pinatubo when it erupted in June 1991 were additional elements that have hampered the development of the Philippines. These damaging factors have greatly affected the lives of the Filipino people. Concepcion happens to be one of the towns in Tarlac, which had been seriously victimized by that natural disaster. Even now, the consequences of that eruption continue to be felt by the people of Concepcion. Concepcion is a vivid picture of the aftermath of that phenomenon. What are the outgrowths of this act of nature on Concepcion? How has this nature-striking-back occurrence changed the lives of the residents of Concepcion?

Review of Related Literature

A book entitled, *Disaster! When Nature Strikes Back* describes some of the most devastating events of the past. It has accounts of earthquakes, tropical storms, tornadoes, thunderbolts, floods, volcanic eruptions and other natural occurrences perilous to mankind. It discusses the manner on which these disasters happen. It also contains explanations on the methods employed by humans in the modern times in order to be informed about these

catastrophes, and so, to lessen the destruction to properties and life that they may bring. It also tries to relate these disasters to the mythologies of history; thus, suggests man's desire to find answers to the many questions about the events in his life, especially those, which he has, no control of. Finally, this book proves that no matter how high the technology has been, and how much comfort new discoveries have brought to mankind, man still cannot escape the frightening realities of nature.

On the other hand, Catherine C. Mahamtan on her undergraduate thesis entitled, *Description of the Socio-economic Condition of the Victims of Mt. Pinatubo at the Angeles Tent City* describes the socio-economic condition of the victims in Sapang Bato of the Mt. Pinatubo eruption in 1991. The victims are now relocated at White Tent City in Angeles City, Pampanga. This study discusses the needs of these evacuees. It also presents the problems which this group encounters since the volcanic eruption occurred. It deals, too, with the socio-economic programs and services that the Philippine government has set for these poor victims. Problems regarding where and how funds would be raised in order to implement the programs are also defined in this study. Lastly, this thesis suggests that the set of programs would have been more effective if their implementation has been concentrated in the hands of the Department of Social Welfare and Development instead of creating a number of disaster committees and organizations which only doubles the burden of source of funds.

A book entitled, *Disaster Policy Implementation*, and authored by Peter J. May and Walter Williams deals with disaster policies. It contains chapters about disaster policy dilemmas, and implementation issues. It focuses on intergovernmental program implementation or shared governance and program management. In this book wherein the United States of America is the focus of the study, it is stated that disaster preparedness and mitigation create two basic

dilemmas for federal disaster policy. These two are the political dilemma, and the implementation dilemma. The latter arises from the shared governance of disaster policy among the various strata of government, while the former comes from the disjunctive nature of federal disaster policy making. This book in its last chapter says that implementation research shows that there is so much difficulty in implementing and managing shared governance programs that allot goods and services. It also states that there are cases when the findings of implementation research shed light to these difficulties but unfortunately, implementation research only warns of hardships and does not tell exactly what to do. Although this is the case, these warnings are useful in determining the limits of governance. This book is useful in presenting these limits; therefore, hugely helps in creation of operative disaster policies.

Another undergraduate thesis entitled, *The Socio-economic Effects of the Mt. Pinatubo Eruption and Lahar in Minalin, Pampanga* by Patricia C. Tomada deals largely with the impact of the Mt. Pinatubo eruption in 1991 and consequently, lahar in Minalin, Pampanga. It discusses the different perceptions on that natural calamity of the residents in that area for the last decade. This study seeks for the manner on which the residents view their local government's efforts in helping them cope with the losses brought about by that natural phenomenon. It proves that the failure of the local government to create and implement sound policies has not improved the standards of living in their locality. This thesis also presents the said volcanic eruption as a means for a fraction of the government officials to commit graft and corruption, which definitely has made it more difficult for the residents to stand up from their fall. Ultimately, this study recommends that the local government should at least hold monthly meetings and consultations with the residents about the real problems and planned solutions. In that way, the voices of the

people who positioned them in their respective places would be heard, and their needs be properly and at the soonest possible time be attended to.

Objectives

General Objective:

To gain a deeper understanding of the effects of the Mount Pinatubo eruption on Concepcion.

Specific Objectives:

1. To describe the socio-economic condition of Concepcion prior to the eruption of Mount Pinatubo;
2. To determine the losses of Concepcion due to that natural disaster; and
3. To describe the socio-economic condition of Concepcion after the eruption of Mt. Pinatubo.

Hypothesis: The eruption of Mount Pinatubo in 1991 has significantly affected the economic, and social well-being of the residents of Concepcion, Tarlac.

Significance of the Study

The author of this study firmly believes that this research will play an important role in the lives of everyone who finds interest in the events around him or her, may these occurrences be in the past, the present, or the future.

This research will hopefully serve as a guide for the Philippine national government in policy making. More so, it can result to a more effective administration by the local government, one, which is aware, and responsive to the needs of its constituents.

Another significance of this study will be as a reference for any individual or group that plans to conduct similar or related researches in the future.

However, it is the present and future generations of the people of Concepcion, Tarlac who are the main target beneficiaries of this research. The researcher wishes to preserve a moment in the history of Concepcion for the future children of the town to cherish someday because the researcher believes that knowledge about the past will always be the best foundation for a bright future.

Theoretical Framework

The Evolutionary Theory is the best model for this particular research. This theory proposes that societies undergo phases of development, which are characterized with increasing complexity, and at the same time taking into consideration what the ecologists stress: interdependence of these societies with their environments.[1] Herbert Spencer maintained, "human societies go through an evolutionary process like the process Darwin described in his theory of natural selection." It was Spencer who formulated the concept "survival of the fittest." Spencer believed that human societies develop in accordance to the principles of natural laws, meaning, "Societies that adapt to their surroundings and can compete will survive; those that do not will meet difficulties and perish."[2] Spencer rejected any form of interference that would help the feeble.[3]

However, contemporary evolutionary theorists argued, "evolution does not necessarily result in changes for the better and that while societies increase in complexity, good as well as

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[1] Isabel Panopio, Felicidad Cordero-MacDonald, and Adelisa Raymundo, General Sociology: Focus on the Philippines, 3rd ed., (Quezon City: Philippines, 1994), 12.
[2] Ibid., p. 9.
[3] Ibid., p. 12.

bad effects may arise." The evolutionary theory can supply the "underpinnings for judging the outcome of varied social forces, understanding current changes, and predicting the future."[4]

Conceptual Framework

This research shall be carried out with the parameters set by the definitions of the following concepts.

The eruption of Mt. Pinatubo in 1991.

This refers to June 1991 when the period of several centuries of Mt. Pinatubo's dormancy ended.

Has significantly affected the economic and social well-being.

By this, the researcher means the changes and necessary adjustments in the way of living as consequences of the Mt. Pinatubo eruption in 1991. This specifically, refers to the impact of that disaster to the livelihood, source of income, education, and health. It also pertains to the profound effects of the eruption on the relationships among family members and relatives, among neighbors and friends, and their interaction with the rest of the community.

Of the residents of Concepcion, Tarlac.

This includes all individuals of whatever age, gender, or religious affiliations that live within the boundaries of the town of Concepcion in the province of Tarlac from years before or on the time that the Mt. Pinatubo erupted, and up to the present.

Methodology

The historical design is the most logical model for this research. Historical design's purpose goes together with this study's goal, that is, to explain the existence of present

[4] Ibid.

conditions. It even has the capability to give a picture of the future through scientific collection and evaluation of data, which describe the events in the past.

This research was conducted in Concepcion, Tarlac. It was set to be done from the last week of October 2001 until February of 2002. The researcher chose Barangay Sta. Rita to be the area in focus for the study. Simple random sampling was utilized in determining which among the households in Barangay Sta. Rita would be the sample of the entire population.

In order to verify information, and to come out with more accurate results, this researcher utilized not only a single but several data gathering methods for this thesis: (1) review of records; (2) key informant interviews; (3) focus group discussion; (4) survey; and (5) observation.

She spent some time in the Concepcion Municipal building, specifically, at the office of the Municipal Planning and Development Office to obtain the socio-economic records of the town.

On separate occasions, this writer set appointments for interviews with various individuals that she thought would be very informative regarding the 1991 Pinatubo eruption. The personalities that were interviewed include Hon. Mayor Benjie Lacson, former mayor Danilo David, Brgy. Capt. Carlito Tayag, Mr. Aristotle Castro, Mr. Carlos Mercado, a farm manager who chose to remain anonymous, Mr. Marciano Dizon, and Ms. Mylene de Jesus.

On the evening of January 16, 2002, an hour-long focus group discussion was held in this writer's residence. The participants are all Unit Heads of the Couples for Christ Tarlac South A-1 Chapter. They included Mr. and Mrs. Aristotle Castro, Mr. and Mrs. Joni Sese, Mr. and Mrs. Dan Sese, Mr. and Mrs. Gerry Geron, Mr. and Mrs. Danny Ysais, Mr. and Mrs. Jun Payawal, and Mr. and Mrs. Wilfredo Wage. Two of these 14 participants are public school principals, while one is a college professor in Tarlac State University, and another is a private school

teacher. Two are government employees. One is a plain housewife while the rest are engaged in various businesses such as in construction, processed food, and printing press enterprises.

Furthermore, on January 23, 2002, this researcher conducted a survey in Barangay Sta. Rita. Brgy. Sta. Rita has 424 total number of households. In order to attain only a .1 sampling error, a total of 80 respondents was needed for the study.

Because this researcher has long been a Concepcion resident, the observation method was the most natural for her to perform. However, it was only at the start of the final quarter of the year 2001 did she carefully observe the people, the surroundings, and the happenings in her native place for the purposes of acquiring more data for this research.

All the data that were gathered in this research underwent tests in order to establish their validity and reliability. External as well as internal criticisms were performed to achieve such.

Chapter 2

Historical Overview

A Brief History of Tarlac Province

The province of Tarlac is located on the northwestern quadrant of the great basin of Central Luzon whose south is the swamp of Candaba. Cabusilan Mountains, which include Mt. Pinatubo, and the Zambales-Tarlac Mountain Range, surround the west and northwest of this basin while the Sierra Madre is on the east and northeast. This basin is broken only by a few mountains of volcanic origin such as Mt. Arayat on the southeast of Tarlac, and Mounts Balungao and Amorong in Pangasinan, and Mt. Bangcay in Nueva Ecija. Tarlac Province covers an area of 304,232 hectares.[5]

The name *Tarlac* is believed to have come from *malatarlac*, which is an Aeta term for wild cogon grass that used to grow abundantly in the area.[6] The Aetas were the original inhabitants of Tarlac.[7]

Spanish Regime

It was written that the earliest date of the coming of the Spanish colonizers in Tarlac Province was in the year 1571. This was the time when a ship carrying Martin de Goiti reached a part of Pangasinan and the southernmost part of the place now known as Tarlac. After three years, Juan de Salcedo came to an area that connected the villages of Candaba and Pangasinan. The Spaniards utilized a trail that bridged Lingayen to Manila, too. This trail was parallel to the river system that linked the two rivers of Agno and Pampanga. Miguel de Loarca was said to

[5] Margarita Cojuangco, Tarlac: Prehistory to World War II, (Philippines: Sangguniang Panlalawigan ng Tarlac and Tarlac Provincial School Board, 1997), p. 3.
[6] Ibid. p. 1.
[7] Ibid. p. 9.

have used a smooth road, fourteen to fifteen leagues, reaching the Capampangan River, in traveling back to Manila in 1582. In 1648, the Augustinians would go through a way from Pampanga River in Arayat in order to check their missions in the Ilocos region. They would travel through Magalang to Malungueỳ, then to Binalatogan and to Lingayen. Despite this, it was reported that between the years 1575 and 1578, the Augustinians had already gone to the southern part of Tarlac, and the Tarlac town on the side of Pangasinan. It was said that this marked the beginning of the "intense missionary activities" of the Augustinians.[8]

The province of Tarlac is relatively a young province for it was one of the latest provinces to be created during the Spanish colonial rule in the Philippines.[9] According to the *Ereccion de Pueblo,* the following were the first towns of Tarlac Province: (1) Paniqui, founded in 1686; (2) Tarlac, established in 1686; (3) Bamban, created in 1710; and (4) Capas, founded in 1710. Paniqui was a former part of Pangasinan while Tarlac, Bamban, and Capas belonged to Pampanga. When a politico-military setup was organized in 1858, three other towns were created: (1) Concepcion; (2) Victoria; (3) Gerona. These towns were placed under military *commandancia* for they were unpacified areas. This military commandancia stopped the penetration of the Zambals to the lowlands; therefore, protecting the missionaries as well as the newly Christianized natives.[10]

Philippine history tells that Tarlac was one of the first eight provinces to fight against the Spanish colonizers.[11] Tarlac's history records the revolt of 1762, which was led by Juan dela Cruz Palaris. This uprising had its impact on Tarlac, especially on the northern portion of the

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[8] Ibid. p. 28.
[9] Socio-economic Profile of Tarlac Province, 1986, p. 8.
[10] Cojuangco, p. 32.
[11] Ibid., p. 85.

region. Paniqui joined the other towns in "raising the standard of revolt" as a response to the appeal of Palaris to go against the Spanish colonial government.[12]

Another important matter that needs to be mentioned is the uprising in Tarlac led by none other than the "most distinguished hero of Tarlac during the revolution," General Francisco Makabulos. He decided to declare the independence of Tarlaquenos from the Spanish oppressors on January 24, 1897, the feast day of La Paz. Amidst the festivities, Makabulos and his men assaulted the *guardia civiles.* Many of these surprised *guardia civiles* died or seriously injured from the violent hostility.[13]

Furthermore, population records of Tarlac Province show that the province's population was fixed for a number of years. However, this changed due to the influx of immigrants coming from the north. The population steadily grew. For the record, the Ilocanos participated in these immigrations. These immigrants settled in the towns of Camiling, Gerona, and Paniqui. Records of these towns show that about the year 1850, the population was 14,266 only, but just after two decades, it increased to 33,941.[14]

American Regime

Before the swearing in of a civil government, Tarlac Province was kept under the control of American military men, In July 1900, the Philippine Commission appointed Captain William O. Clark as the acting Provincial Governor of Tarlac. Other civilians were appointed to support his leadership.[15] However, on February 18, 1901, the Taft Commission inaugurated a civil

[12] Socio-economic, p. 8.
[13] Cojuangco, p. 90.
[14] Socio-economic, p. 8.
[15] Cojuangco, p. 146.

government in the province with Don Alfonso Ramos as the first Provincial Governor. Since then until the year 1935, Tarlac had been under various governrships.[16]

Commonwealth Government

The Tarlac Province had candidates to the National Assembly. Jose Cojuangco, and Benigno S. Aquino acquired positions. The former was the representative of the First District while the latter represented the Second District. Both of them were lawyers.[17]

At the beginning of the Commonwealth period, the province of Tarlac experienced a number of changes in its political personnel. For one, Jose Urquico was made the Provincial Governor. The Provincial Board Members included Lino Ignacio, and Carlos Kipping. However, there was no position of a Vice-Governor during this period.[18] It was written that several new offices were established under the provincial government. These were the following:

- "Office of the Provincial Board
- Office of the Treasurer
- Office of the Auditor
- Office of the Division Superintendent
- Office of the District Health Officer
- Office of the Provincial Fiscal
- Office of the Clerk Court Office of the Sheriff
- Office of the Register of Deeds
- Office of the District Engineer
- Office of the Provincial Commander
- Office of the Provincial Land Inspector
- Office of the Provincial Agronomist
- Bureau of Labor
- Office of the Provincial Veterinarian
- Office of the Philippine National Bank"[19]

[16] Ibid., p. 147.
[17] Ibid., p. 188.
[18] Ibid., 189.
[19] Ibid., p. 190.

Japanese Regime

The Japanese forces entered the province of Tarlac on the night of December 30, 1941. Tarlac residents woke up the next day seeing Japanese flags "hanging from the windows of buildings and street posts." The townspeople of Tarlac, Tarlac moved farther and farther away to the far-off barrios as more trucks carrying Japanese soldiers arrived.[20]

The province became cut off from Manila and Northern Luzon due to the destruction of the Calumpit, Bamban, and Carmen bridges by the withdrawing American troops. The Japanese transformed the Gabaldon Central School in Tarlac into a garrison. The Holy Ghost Academy was made into quarters for the soldiers, and later into a hospital.[21]

Some of the residents in the province could still recall, "women were never safe in the hands of the enemies."[22]

In an interview, Purisima Paras said:

> *The young women were forced to cut their hair short and wear men's clothing. They had to do this because many were raped by the Japanese. Likewise, youngsters were picked up by the Japanese and forced to train as soldiers to be used as guards by the Japanese. As the days wore on, we became disturbed. There were some who made preparations to evacuate farther into the forests and hilly areas in spite of the relatively peaceful days.*[23]

The townspeople of Concepcion had similar stories to tell. The elderly in the barrios of Talimundoc, and Sta. Lucia remembered the tortures done by the Japanese, and the persecutions to the suspected guerrillas.[24]

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[20] Ibid., p. 205.
[21] Ibid.
[22] Ibid.
[23] Ibid., p. 206.
[24] Ibid.

The notorious Death March of more than 70,000 Filipino, and American prisoners that were captured by the Japanese started at daylight on April 10, 1942 in Bataan. These very weary, hungry, and thirsty prisoners were forced to march 55 miles to San Fernando, Pampanga, from there they were taken by rail to Capas, Tarlac, where they marched the last eight miles to Camp O'Donnell. They were mistreated and starved, receiving beatings on their way. The Japanese bayoneted those poor prisoners who fell along the long march. The 54,000 exhausted prisoners that survived were confined in Camp O'Donnell. Roughly, 10,000 Filipinos and 1,200 Americans died on the road while the rest escaped into the forest.[25]

However, on January 20, 1945, Tarlac was liberated from the hands of the Japanese. Perhaps, it was through the divine intercession that Tarlac was liberated for that same day was the feast of San Sebastian, the place's Patron Saint.[26]

The People of Tarlac Province

Residents in the eastern part of Tarlac Province, specifically, in the town of La Paz, and a part of the town of Concepcion, speak Tagalog. This maybe attributed to the geographical proximity of these areas to Nueva Ecija, which mainly used Tagalog in speaking. On the other hand, the populace in the north and in the western part of the province speaks Ilocano and Pangasinense. This is due to the influence of the nearby province of Pangasinan. In actuality, the northern towns of Paniqui, Gerona, Pura, Moncada, Anao, Ramos, and San Manuel used to belong to Pangasinan before the establishment of the province of Tarlac. The towns of Capas,

[25] Ibid., p. 207.
[26] Ibid., 225.

Concepcion, and Bamban have a populace, which speaks Pampango since these were former parts of Pampanga.[27]

A Brief History of Concepcion

Concepcion is one of the eighteen towns of the province of Tarlac. It has an area of 245.7 square kilometers or 24,570 hectares. Concepcion is 7.5 kilometers away from the Capas junction on the MacArthur Highway. It is located on the southeastern tip of the province whose south is Pampanga. Concepcion is bordered by Nueva Ecija in the east, La Paz in the northeast, Tarlac in the northwest, Capas in the west, and Bamban in the southwest.[28] The National Statistics Office records Concepcion's total population at 115,171 as of May 2000.[29] Concepcion has two great rivers: (1) Lucong River; and (2) Parua River. These two rivers irrigate all the rice and sugarcane fields of the place. However, there are times when these rivers overflow, and destroy not only crops, but as well as lives.[30]

Spanish Regime

In 1860, Concepcion and Magalang belonged to the same town, which was named San Bartolome. San Bartolome was a military commandancia of Pampanga during the Spanish rule.[31] Then, a great flood destroyed the whole settlement of San Bartolome in 1863. As a result, the people of San Bartolome were forced to evacuate the place. Some of them wanted to go north while others liked to travel south. What happened was that these people split into two groups. Don Pablo Luciano led the first group, went southward and put up their settlement on the slope side of Mt. Arayat, and named the place after him. As time passed by, the place was renamed

[27] Socio-economic, p. 9.
[28] Socio-economic Profile of Concepcion, 1993, p. 1.
[29] Socio-economic Profile of Concepcion, 2001
[30] Socio-economic Profile of Concepcion, 1993, p. 1.

Magalang. The Yumuls, Castros, Dizons, Pinedas, Felicianos, Aquinos, Cortezes, and many others, on the other hand, led the second group. This group went northward and chose Matondo (now called Sto. Nino) as their new place for settlement. Most of the members of this group were not satisfied with Matondo, which had abundant snakes and a few source of water. In effect, dissatisfied settlers moved southward to an area where Concepcion now stands. These settlers started cutting down trees, and building huts and roads. These people named the place *Concepcion* after a few years of difficulties. They named the place as such in honor of their patron saint, Immaculate Conception, whom they believed to be miraculous and powerful over the snakes that abound the town.[32]

In 1898, Moises Castro was elected as the first Municipal President under the short-lived Philippine Republic of General Emilio Aguinaldo. This caused the emergence of a unified town.

American Regime

In 1902, Captain Smith established the first American government in town. Below is the list of the prominent officials of the municipality during the American rule with the corresponding years of office.[33]

- Don Marciano Barrera 1900-1903
- Don Patricio Soliman 1903-1905
- Don Pedro Sanchez 1905-1907
- Don Santiago Mallari 1907-1909
- Don Rufino Lulu 1909-1912
- Don Modesto Yumul 1912-1915
- Don Jose Cortes 1915-1918
- Don Santiago Mallari 1918-1921
- Don Carlos Soliman 1921-1924
- Don Gregorio Palma 1926-1931
- Don Jose Dizon 1931-1934

[31] Ibid.
[32] Ibid.

Commonwealth Government

Under the Commonwealth government, Don Gregorio Palma was the Municipal President from 1934 until 1937. His successor was Don Sergio Aquino whose term of office was until 1941. When the Commonwealth government was re-established, Alfredo Castro was made the mayor of Concepcion until 1946.[34]

Japanese Regime

The Japanese occupation of the town started in 1942. Nicolas Feliciano became the mayor from 1942 until 1944 while Romeo Yumul took his term from 1944 to 1945.[35] This period was characterized by many brutalities and murders. When the Japanese forces left Concepcion in 1944, the Hukbalahap took over the town until January 1945.

Era of the Republic of the Philippines

In 1946, General Servillano Aquino and Raymundo Panlilio hoisted the Philippine flag at the Benigno Aquino Memorial Park. Mayor Nicolas Feliciano was put in his position in 1946, and remained there until 1956.[36] The list below shows his successors, and their respective terms of office.

- Mayor Benigno Aquino Jr. 1956-1959
- Vice Mayor Romeo Yumul took over
- Mayor Romeo Yumul 1960-1963
- Mayor Nicolas Feliciano 1964-1967
- Mayor Rafael Suarez 1968-1971
- Mayor Nicolas Feliciano, Jr. 1972-1986
- OIC Alfredo P. Avena 1986-1987
- OIC Danilo D. David 1987
- OIC Benito Cuenco 1987
- Mayor Danilo D. David 1987-1992
- Mayor Alfredo P. Avena 1992-2001[37]

[33] Ibid., p. 2.
[34] Ibid.
[35] Ibid.
[36] Ibid.
[37] Ibid., p. 3.

- Mayor Benjamin Lacson 2001 to date

Mt. Pinatubo and Its History of Eruption

Mt Pinatubo is classified as a stratovolcano[38], which is found in the Philippine's largest island—Luzon.[39] But for the Aetas, this mountain means more than that because they strongly believe that Mt. Pinatubo is where Apo Namalyari lives. Apo Namalyari is regarded by the Aetas as the Great Protector and Provider. The Aetas have resided in the environs of Mt. Pinatubo for a minimum of four centuries, and on the mountain itself for at least three hundred years. This indigenous people were pushed into the highlands during the Spanish colonial rule in the Philippines as the Aetas tried to escape from the control of these colonizers.[40] Prior to the 1991 Pinatubo eruption, the Aetas' economic and cultural life was anchored on Pinatubo. The Aetas' lived by the "volcano's rhythm, timing the planting and harvesting of their crops by the volume of steam rising continuously from a natural vent on the upper slope. A relatively dense steam meant a good harvest; a thin one augured a sparse yield." The Aetas hunted in Pinatubo's slopes. They did fishing in the rivers that drained it.[41]

However, there is no known oral tradition of the Aetas about any Pinatubo eruption that preceded the June 1991 eruption. The word *pinatubo* means *to make grow* both in Tagalog and in Sambal; therefore, the name Mt. Pinatubo might pertain to a period when the mountain grew. Still, it is more probable that *pinatubo* means a fertile place that enables crops to grow. Some Aeta residents have said that their elders remember minor explosions in the past. It would have

[38] According to the Grolier Academic Encyclopedia, Vol. 19, p. 627, a stratovolcano forms from "a cycle of quiet eruptions of fluid lava followed by explosive eruptions of viscous lava. The fluid lava creates an erosion-resistant shell over the explosive debris, forming strong, steep-sided volcanic cones."
[39] "Fire and Mud Content"
http://volcano.und.nodak.edu/vwdocs/volc_images/southeast_asia/philippines/pinatubo.html

been possible that small phreatic or hydrothermal explosions happened in the past decades and hundred years.[42]

Furthermore, the Philippine Commission on Volcanology (COMVOL) identified Mt. Pinatubo as "having solfataric activity" in the 1981 Catalogue of Philippine Volcanoes and Solfataric Areas while the Philippine Institute of Volcanology and Seismology (PHIVOLCS), COMVOL's replacement, re-categorized Mt. Pinatubo as "potentially active" in 1988. There is only one recorded incidence of unrest before the 1991 occurrence. It happened almost a year earlier, specifically on August 3, 1990. This unrest occurred just after a couple of weeks that a major earthquake struck about a hundred kilometer to the northeast of Mt. Pinatubo. The residents, then, noticed "a large ground fracture and steam emission" on that third of August. It is said that those observations were caused by "a landslide on the upper northwest side of the volcano, along Maraunot fault in an area of preexisting solfataric activity."[43]

The history of eruption of Mt. Pinatubo is divided into two parts: (1) the ancestral Pinatubo eruptions; and (2) the modern Pinatubo eruptions. The ancestral Pinatubo was a stratovolcano composed of andesite[44] and dacite.[45]

Not a single evidence of large explosions from the ancestral Pinatubo is available. The ancestral Pinatubo was centered where the modern Pinatubo now stands. At one time, it may have grown as high as 7,550 feet above sea level. It is said that a number of surrounding

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[40] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/newhall/>
[41] "Fire and Mud Content" http://pubs.usgs.gov/pinatubo/cbautist/
[42] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/newhall/>
[43] Ibid.
[44] The Grolier Academic Encyclopedia, Vol. 1, p. 404 describes andesite as "a fine-grained, gray-to-black, volcanic igneous rock...commonly occurs as lava flows and dikes in zones of continental plate convergence."
[45] According to the Grolier Academic Encyclopedia, Vol. 6, p. 4, dacite is "a fine-grained, light-colored volcanic rock coomonly composed of the minerals plagioclase (a type of feldspar) and quartz, with sanidine (also a feldspar) and various iron-magnesium minerals, such as biotite and hornblende, in lesser abundance."

volcanoes were, in reality, vents of the ancestral Pinatubo. These volcanoes include Mt. Negron dome, the Mataba dome and Bituin plug, and the Tapungho plug.[46]

On the other hand, the modern Pinatubo is a dome complex and stratovolcano. It is also composed of dacite and andesite. Pyroclastic flow and lahar deposits from large explosive eruptions rim modern Pinatubo. These explosive eruptions have been grouped into six to twelve eruptive periods.[47]

The June 15, 1991 explosion is one of the smallest. It is also said that the 460-year dormancy period that preceded this eruption was in fact relatively short in comparison to other dormancy periods in the volcano's history. It is recorded that Mt. Pinatubo rose about 5,725 feet above sea level prior to its June 1991 eruption. This implies that that eruption blew almost 500 feet of the volcano away. Mt. Pinatubo seems to have a consistent eruptive style: after a relatively short explosive eruption, it will go through slow growth through extrusions, then it will become dormant for a longer period, and much of the deposited materials during the last eruption will be eroded; after which, another explosive eruption will happen and devastate what remains of the growth from the last time it erupted.[48] Primarily, this is the reason why the volcano never grows very large.[49]

The biggest eruption in modern Pinatubo's history happened more than 35,000 years ago when 325 feet of pyroclastic flow material was dispersed on all sides of Mt. Pinatubo. This same eruption marked the creation of the modern Pinatubo. The enormity of eruptions is declining with time since then.[50]

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[46] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/newhall/>
[47] Ibid.
[48] "Fire and Mud Content"
http://volcano.und.nodak.edu/vwdocs/volc_images/southeast_asia/philippines/pinatubo.html
[49] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/newhall/>
[50] "Fire and Mud Content"
http://volcano.und.nodak.edu/vwdocs/volc_images/southeast_asia/philippines/pinatubo.html

The Pinatubo eruptions happen episodically. Mt. Pinatubo blows large volumes of relatively cool ash and dacite magma. This means that it is only in danger of eruption when sufficient volatile- and crystal-rich magma evolves.[51] Mt. Pinatubo has been relatively silent since its eruption in 1991-1992. Despite this, it remains to be an active one.[52]

The Impact of the June 1991 Mt. Pinatubo Eruption on the Philippines

The major eruptions of Mt. Pinatubo from June 12 to 15 and their consequences in the year 1991 had tremendously affected the lives of those living in the Philippines. These eruptions had caused the residents to leave their homes and sources of livelihood. These activities of Mt. Pinatubo had changed the landscape of the region of Central Luzon. They had disrupted the development of the country, and most specially that of Central Luzon. The eruptions had also affected the programs set by the local, regional, and the national governments. Even the agenda of non-government organizations was disrupted by these occurrences.[53]

It was reported that houses and means of earning a living in 364 barangays were either partially or totally wrecked by lahar, and ash fall from June 1991 to November 1992. There were 4,979 houses that were totally destroyed while 70, 257 were in partial wreck. Of the 329 thousand families affected, 7,840 of these were of the Aetas.[54] In the beginning, the Aetas were considered to be the hardest hit. They were uprooted not only from their means of livelihood but from their cultural roots as well.[55]

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[51] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/newhall/>
[52] "Fire and Mud Content" http://volcano.und.nodak.edu/vwdocs/volc_images/southeast_asia/philippines/pinatubo.html
[53] "Fire and Mud Content" http://pubs.usgs.gov/pinatubo/cbautist/
[54] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/mercado/>
[55] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/cbautist/>

Table 1. Total number of houses damaged (Partial damage refers to any degree of physical destruction attributed to the disaster. Total destruction is the condition when the house is no longer livable)

Extent of Damage	**1991**
Totally Destroyed	4,979
Partially Damaged	70,257
Total	**75,236**

A lot of damages were caused to the different sectors in the Philippines. These included damages to public infrastructure, destruction of the country's natural resources, ruins brought to the agricultural sector, losses in trade and industry, negative effects to the social services sector, and the devastation of military facilities.

Public Infrastructure. As of August 23,1991, an estimated total damage of 3.8 billion pesos was reported by the Department of Public Works and Highways Regional Office III. The irrigation and flood control systems, roads and bridges, and school buildings were the ones greatly devastated.[56]

Table 2. Total cost of damage to infrastructure as of Aug. 23,1991 (The foreign exchange rate during this time was $1=27.07 pesos)

Infrastructure subsector/Facility	**Damage Cost (in thousand pesos)**
Transportation	1,149,908
Communication	13,215
Power and electrification	54,918
Water resources	1,568,642
Social infrastructure	1,045,708
Total	**3,832,391**

Natural Resources. Eighteen thousand hectares of forests were buried in ash fall. It was reported that the largest concentration of ash fall was in the Botolan and San Marcelino

[56] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/mercado/>

mountains in Zambales, Florida Blanca in Pampanga, and in Bamban and Capas in the Tarlac Province.[57]

Agriculture. The ash fall had affected 96,200 hectares of agricultural land. It resulted to the damage of crops, livestock, and fisheries amounting to about 1.4 billion pesos.[58]

Table 3. Actual damage to agricultural area by commodity as of July 1991

Commodity	Area or number damaged	Value (Philippine pesos)
Rice (hectares)	81,895	350,855,594
Vegetables (hectares)	2,486	163,548,456
Rootcrops (hectares)	2,070	182,791,365
Assorted fruit trees (number)	2,646	290,061,075
Fisheries (hectares)	7,129	284,098,228
Livestock and poultry (heads)	778,714	203,191,200
Total		**1,474,545,918**

Trade and Industry. Heavy losses were experienced by the manufacturing sector, and as a consequence by the exporting sector as well. An amount of 851 million pesos was lost by 559 firms. A total of about 454 million pesos was the recorded inevitable production losses while 424 million pesos worth of capital investment was smashed in 306 assessed firms. It was also reported that the furniture industry was the hardest hit, as its damage cost was set at 156.5 million pesos in 108 companies. Moreover, 18 companies of the processed food sector lost 97 million pesos while 92 firms from the gifts, toys, and housewares sector incurred 60 million pesos worth of losses. The industries in Pampanga and Tarlac had the greatest number of foregone sales, which amounted to 1.7 million and 0.6 million pesos per month, respectively.[59]

Social Services Sector. There was an increase in morbidity and mortality rates in the evacuation centers. Acute respiratory infections, diarrhea, and measles were the leading diseases. The death rate was 7 per 10 thousand per week during 1991. The relief operations cost so much more than the previous ones conducted normally during typhoons and other calamities because it

[57] Ibid.

was necessary to be done in a longer period. The damage to educational facilities was approximately worth 747 million pesos as of August 1991. 700 school buildings were destroyed, which meant the displacement of 236,700 students and 7,009 teachers. Furthermore, school buildings that were not devastated were also used as evacuation centers, worsening the problem of the disturbance of schooling. The estimated amount of damage at first to instructional materials, furniture, equipment, and other school supplies was set at 93 million pesos.[60]

Table 4. Estimated cost of damage to school buildings by province or city as of Aug. 12, 1991 (Ash fall is the major cause of damage)

Province/City	**Cost (in thousand pesos)**
Zambales	410,000
Bataan	34,000
Olongapo City	140,000
Pampanga	130,000
Tarlac	13,000
Angeles City	12,000
Bulacan	5,050
Nueva Ecija	3,200
Total	**747,250**

Military Facilities. There was a substantial damage to military facilities as well, although estimates were not easy to make. However, a total of 3.8 billion pesos worth of damage in 1991 was reported.[61]

Due to the eruption and mudflows by the Mt. Pinatubo, the Philippines had incurred a total of 10.5 billion pesos worth of losses in 1991. This figure only represents the losses that could be measured numerically.[62] It does not and cannot gauge the deeper, larger, long-term, therefore more hurting damages to the aspects of human existence.

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[58] Ibid.
[59] Ibid.
[60] Ibid.
[61] Ibid.
[62] Ibid.

Table 5. Existing sectoral damage and production losses, 1991

Sector	**1991 (in million pesos)**
Public infrastructure	3,830
Agriculture	1,474
Military facilities	3,842
Trade and industry	851
Natural resources	125
Foregone income (trade and industry)	454
Total	**10,576**

Chapter 3

Demographics of Survey Respondents

Because Brgy. Sta. Rita was the hardest hit during the 1991 Pinatubo eruption, this researcher chose to conduct a survey there about the impact of the disaster on the lives of its inhabitants. The researcher strongly believes that the results of this survey would be the best representation of the experiences of the residents of Concepcion during and after the occurrence of the said natural calamity.

This researcher found it of great importance to take into consideration the profile of this study's survey respondents. The general information regarding the survey respondents had helped a lot in figuring out the conclusion to this research.

Survey results show that the female respondents outnumbered the male ones because there are only 37 male respondents (46.25%) while 43 are female respondents (53.75%).

Table 6. Number of respondents per sex

Respondent's sex	**# of respondents**	**Percentage**
Male	37	46.25%
Female	43	53.75%
Total	**80**	**100%**

It is noticeable that most of the respondents are in the age range, which is supposedly capable of work. Two (2.5%) of these respondents are 20 years old; 11 (13.75%) are in the range of 21-30 years old; 23 (28.75%) are in the 31-40 years old range; 25 (31.25%) are 41-50 years old; 6 (7.5%) are 51-60 years old; 8 (10%) are 61-70 years old; and 5 (6.25%) are 71 years old and above.

Table 7. Age distribution of respondents

Age range	**# of respondents**	**Percentage**
20 years	2	2.5%

21-30 years	11	13.75%
31-40 years	23	28.75%
41-50 years	25	31.25%
51-60 years	6	7.5%
61-70 years	8	10%
71 years and above	5	6.25%
Total	**80**	**100%**

Taking into consideration the civil status, 67 (83.75%) of the respondents are already married; 8 (10%) are still single; and 5 (6.25%) are widowed. Obviously, many of them have their own families to support.

Table 8. Civil status of respondents

Civil status	**# of respondents**	**Percentage**
Married	67	83.75%
Single	8	10%
Widowed	5	6.25%
Total	**80**	**100%**

In actuality, twelve (15%) of the respondents are childless; 36 (45%) have 1-3 children; 28 (35%) have 4-6 children; and 4 (5%) have 7-9 children. This data imply that many of them have a relatively few number of family members.

Table 9. Number of children of respondents

# of children	**# of respondents**	**Percentage**
0	12	15%
1-3	36	45%
4-6	28	35%
7-9	4	5%
Total	**80**	**100%**

Considering the employment status, 14 (17.5%) of these respondents are non-working while 66 (82.5%) of them are working. It may be deduced that the employment statistics logically tallies with that of the age distribution of the respondents because, indeed, there are more respondents who perform work.

Table 10. Current employment status of respondents

Employment status	# of respondents	Percentage
Non-working	14	17.5%
Working	66	82.5%
Total	**80**	**100%**

To be specific, one (1.52%) of these working respondents is a government employee; 12 (18.18%) are private employees; and 53 (80.3%) are self-employed. It seems that people in Brgy. Sta. Rita want to venture into a business of their own rather than being under the directives of an employer.

Table 11. Type of employment of working respondents

Type of employment	# of respondents	Percentage
Government employee	1	1.52%
Private employee	12	18.18%
Self-employed	53	80.3%
Total	**66**	**100%**

Furthermore, of the 66 who are working, 28 (42.4%) have 50 thousand pesos and below as annual income; 13 (19.7%) earn 50,001-100,000 pesos per year; 21 (31.8%) have 100,001-150,000 pesos annual income; and 4 (6.1%) earn 200,001 pesos and above annually. These figures manifest the being financially poor of the majority of the survey respondents.

Table 12. Annual income of working respondents

Annual income	# of respondents	Percentage
50,000 pesos and below	28	42.4%
50,001-100,000 pesos	13	19.7%
100,001-150,000 pesos	21	31.8%
150,001-200,000 pesos	0	0%
200,001 pesos and above	4	6.1%
Total	**66**	**100%**

In addition, the respondents have different religious affiliations although the bulk of them belong to one and the same religion. Seventy-seven (96.25%) of these respondents are Roman

Catholic; 1 (1.25%) is a member of the Iglesia ni Cristo; 1 (1.25%) is a Mormon; and 1 (1.25%) is an *Espiritista.*

Table 13. Religion of respondents

Religion	**# of respondents**	**Percentage**
Roman Catholic	77	96.25%
Iglesia ni Cristo	1	1.25%
Mormon	1	1.25%
Espiritista	1	1.25%
Total	**80**	**100%**

Chapter 4

Concepcion before the June 1991 Mt. Pinatubo Eruption

General Situation

In 1988, Concepcion was a fifth class municipality with an income of 3.4 million pesos. This is what Mr. Danilo David, Concepcion's municipal mayor from February 2, 1988 until June 30, 1992 claimed during an interview. He also said that in 1990, Concepcion became a 3rd class municipality, earning an income of 14.2 million pesos. This upward movement of the town's status meant a 100% increase in the salaries of the municipal government's employees. The very conversant Mr. David said that the townspeople were generous and responsible taxpayers. He accounted this fact to the nice and proper treatment of all municipal employees to the taxpayers, and to the manner they showed the people as to where their taxes go.

Another key informant is the former barangay captain of Sta. Rita (second most populous barangay in Concepcion), and now Concepcion's Hon. Mayor Benjamin Lacson. His testimonies regarding life in Concepcion before the 1991 eruption were similar to those of Mr. David. He also shared that prior to the June 1991 Mt. Pinatubo eruption, people from other towns in Tarlac Province went to Concepcion to shop, and to watch in the movie theaters located in the town.

Business and Livelihood

There are available records regarding the socio-economic condition of the town of Concepcion. According to the Socio-economic Profile of Tarlac Province 1986, Concepcion, whose total population in 1985 was 90,165 had a total income of 3,196,883.22 pesos in 1984. The profile also presents lists of different businesses in operation, and various sources of

livelihood in the municipality of Concepcion. These include 4 registered lumber dealers; 86 freshwater fishpond operators who occupied an area of 19.915 hectares, and produced 26.85 metric tons per year; 3 rice-fish culture farm operators who covered an area of 6.2 hectares, and 6,120 hectares of irrigated palay fields; 1 private owner of ice plant and cold storage, which had a capacity of 300 ice blocks per day; 3 engage in the handicraft industry which produced macramé lampshades, plant hangers, wall decors, bags, buri book shelves, dividers, and plant stands; 1 who was into metal craft industry which produced plows, harrows, and iron grills; 3 engaged in the garment industry whose products were pants, jackets, polo, T-shirts, short pants, long pants, and children's jogging pants; 6 who were into the furniture industry which made sala sets, dining sets, garden sets, rocking chairs, precious chairs, midrib bookstand, dividers, book shelves, and stereo cabinets; 1 who was into the ceramics industry which made hollow blocks; 2 engaged in the food processing industry whose products included pandesal, ensaymada, pan de lemon, coco candies, pastillas, and butter balls; and 1 engaged in lubricating oil enterprise. There is also a list of 5 complementation industries that manufactured doors, windows, jealousies, mini-rice thresher, tricycle sidecar, steel gates, and iron grills. Records prove that there was also one operator of fishing industry that processed bagoong and patis.

Table 14. Registered business establishments in Concepcion, 1986

Type of business	# of establishments
Lumber dealer	4
Freshwater fishpond operator	86
Rice-fish culture farm operator	3
Ice plant and cold storage	1
Handicraft	3
Metal craft	1
Garment industry	3
Furniture industry	6
Ceramics industry	1
Food processing industry	2
Lubricating oil enterprise	1
Complementation industry	5

Fishing industry	1
Total	**117**

However, Concepcion's main source of livelihood was agriculture. On one hand, a total of 6,500 hectares of land area was irrigated for palay production, and the total production in the year 1984 is recorded at 353,360 cavans. On the other hand, 3,240 hectares were rain fed and the total production in the same year is recorded at 133,510 cavans. Mr. David also maintained that the main generator of income in Concepcion was the agricultural sector. He specified that 65% of 14,072 hectares of agricultural land were cultivated with rice while the remaining 35% were for root crops, and sugarcane cultivation.

An interview with Mr. Carlos Mercado, who has been into the business of selling fresh meat of pigs, cows, and carabaos since 1954, revealed that business was very good during the period before the said eruption. Two to three pigs were butchered and sold every ordinary day while more than three during special occasions. The people of Concepcion used to buy the food they wanted to eat since money was not very difficult to look for as long as people worked. There were fewer complaints about hardships in life because life, generally speaking, was good. Many were courageously investing or venturing into different enterprises.

The FGD conducted for this thesis came out with a similar picture regarding what was it like to live in Concepcion prior to the eruption of Pinatubo. All of the FGD participants agreed that before the Pinatubo eruption in 1991, life was not difficult. There was a very normal life as one of the public school principals said. Money was easy as long as they'd work. They found no problem on how they would be able to purchase their everyday basic commodities. Most of the time they were even able to save something from their income. Their businesses were doing very well. The one engaged in the construction activities even claimed that prior to that calamity,

there was a boom in the construction venture. The couple, which has been into a printing press business, said that the business was in very good shape during the period before the volcanic explosion. Most of the people in Concepcion seemed to be enjoying the beauty of life.

Cooperatives

In the 1986 records, it is presented that Concepcion had a number of *samahang nayon.* There were actually 45 of them in the records. The members of these *samahang nayon* totaled to 4,471. The recorded total general fund is 5,432.80 pesos; total barrio savings fund is 770,109.90 pesos; and the total barrio guarantee fund is 220,614.08 pesos. The *samahang nayon's* investments include 430,081.63 pesos in the Cooperative Rural Bank of Tarlac, and 50,400 pesos in the area marketing cooperative.

This researcher was also able to conduct an interview with Mr. Aristotle Castro who has been working as a Field Operation Specialist in the Land Bank of the Philippines for the last 14 years. He described the socio-economic condition in Concepcion before Mt. Pinatubo erupted in 1991 as something definitely better than the period after the said disaster hit the town. Mr. Castro maintained that the Land Bank serves as the financial arm of the Philippine government. Land Bank is the official depository of the Philippine government. Mr. Castro has the responsibility of approving loans applied for by farmer cooperatives. His task is to train the farmers in order to organize an efficient cooperative. He does supervision and monitoring of the cooperatives' productivity. He shared that many farmer cooperatives were applying for loans before the 1991 eruption of Pinatubo. Many of these applicants were approved as well. He also claimed that the approved loans were responsibly paid by the borrower-cooperative.

Banks

According to available records, there were only 3 financial institutions in Concepcion in the year 1985: (1) Rural Bank of Concepcion, (2) Land Bank of the Philippines, and (3) Manila Banking Corporation.

Mr. David confirmed that indeed, only 3 banks were in operation in the town in the year when he became mayor. After some time, 4 additional banks started to operate in Concepcion: (1) United Coconut Planters Bank, (2) Philippine National Bank, (3) PCI Bank, and (4) Banco San Juan. These additional banks signified progress amidst the lives of Concepcion residents.

Employment

Moreover, the results of the survey done for this study shows that 17 (21.25%) of the respondents had jobs or source of income prior to the eruption of Mt. Pinatubo in 1991 while 63 (78.75%) had none. The jobs that these respondents had before the said eruption include being a grocery owner; 5 were sari-sari store owners; one was a printing press owner; another a palay buyer; one was a bakeshop owner; 3 were welders; 10 were entrepreneurs; 4 were drivers; 3 were laundrywomen; one was a sales manager; 3 were dressmakers; 5 were laborers; another was a taxi driver; one was a tricycle driver; another soul a sales representative; one was a janitor; 8 were farmers; one was a teacher; 2 were metal craft business owners; another was a factory worker; another a financier; 2 were salesladies; one was a carinderia owner; another was a mechanic; one was a scout ranger; another was a construction worker; one was a painter; and another was a subcontractor. Three (17.65%) of those who have no jobs during that period were still students while the rest were really non-working.

Table 15. Employment status of respondents prior 1991 Pinatubo eruption

Employment status	# of respondents	Percentage
Non-working	17	21.25%
Working	63	78.75%
Total	**80**	**100%**

Education

The records also show the available educational facilities, and employees in Concepcion in the year 1985. Then, both public, and private schools operated in the town. The public elementary schools were divided into 4 districts: (1) Concepcion East, (2) Concepcion North, (3) Concepcion South, and (4) Concepcion West. There were 11 schools with 3,980 enrollees, and 104 teachers in the eastern district, setting the teacher-student ratio at 1:38. In the northern district, 12 schools were opened with 4,823 enrollees, and 145 teachers, providing a teacher-student ratio of 1:33. The southern district had a total of 10 schools that accommodated 2,996 students, and employed 108 teachers, creating a 1:27 teacher-student ratio. The western district had the highest number of schools--15 schools, which provided education to 4,015 enrollees, and created employment for 115 teachers, setting the teacher-student ratio at 1:34.

Table 16. Public elementary school enrollment (SY 1985-1986)

Concepcion District	# of enrollees	# of teachers	# of schools	Teacher-student ratio
East	3,980	104	11	1:38
North	4,823	145	12	1:33
South	2,996	108	10	1:27
West	4,015	115	15	1:34
Total	**15,814**	**472**	**48**	

There was 1 private elementary school, the Concepcion Catholic School. It had 939 enrollees in the SY 1985-1986. It also provided secondary education, having 596 enrollees in the same school year.

Public secondary schools were also present in Concepcion. In fact, there were 3 of them: (1) Aquino Memorial High School, (2) Balutu Barangay High School, and (3) Caluluan Barangay High School. There were 3,236 enrollees, and 78 teachers in Aquino Memorial High School, setting a teacher-student ratio of 1:41. In Balutu Barangay High School, 241 were enrolled while 8 were teaching, resulting to a teacher-student ratio of 1:30. The Caluluan Barangay High School had 375 enrollees, and 12 teachers, creating a teacher-student ratio of 1:31.

Table 17. Public secondary school enrollment (SY 1985-1986)

Concepcion High School	**# of enrollees**	**# of teachers**	**Teacher-student ratio**
Aquino Memorial High School	3,236	78	1:41
Balutu Barangay High School	241	8	1:30
Caluluan Barangay High School	375	12	1:31
Total	**3,852**	**98**	

As for those FGD participants close to the educational institutions, they all maintained that before the unfortunate eruption, there were many enrolled children. There used to be at least 3 sections per grade level, and 22 teachers employed as said by one participant who is a former public school teacher. The number of graduates in that same public school was not less than a hundred before the eruption. On the other hand, the private school teacher participant claimed that prior to the eruption there were more than 1,300 enrollees in the school where she has been teaching. Schooling both in private and public schools went smoothly as scheduled. Moreover, their co-teachers were less dissatisfied with their salaries than they have been since the disaster.

Professional growth for teachers was very possible before the Pinatubo eruption because teachers could easily send themselves to attain a master's degree.

Health Services

The health of the Concepcion residents was also being taken cared of. There were public, and private hospitals and clinics in the municipality. The Concepcion Emergency Hospital had 25 beds while 2 privately owned clinics, Palma Clinic, and Sta. Rita Clinic had 10, and 15 beds, respectively. There were also 5 pharmacies, and 5 pharmacists in Concepcion. In the available records, 1 physician, 1 dentist, 2 nurses, 11 midwives, 1 medical technologist, and 3 other health personnel were practicing their respective fields of expertise.

Peace and Order

Peace and order in the town was maintained, primarily by the police force Concepcion had. There were 28 policemen, setting the police-population ratio at 1:3,220, and the police-municipal land area (sq. km) ratio at 1:8.78. The fire protection services were rendered by 7 firemen, creating a 1:12,881 firemen-population ratio, and a 1:31.1 fireman-municipal land area (sq. km) ratio.

Other Services

Taking note of the town's water supply, the Concepcion Water District, which had a recorded capacity of 150 GPM, supplied the residents of Concepcion with potable water. Out of the 15,074 total number of households in the town, 10,074 households had water supply.

Concepcion also had providers of postal services, and a number of post offices. There were 9 letter carriers, which had 12 personnel in the records. They rendered service to all barangays in the municipality from Monday to Friday.

Chapter 5

Concepcion during the June 1991 Mt. Pinatubo Eruption

Physical Condition

The key informants as well as the FGD participants remembered the days in June 1991 when the major explosions of the Mt. Pinatubo occurred. They observed very similar happenings. All of them observed the famous mushroom cloud formation above the sky. Then, ashes started to fall causing some of them to experience the attacks of their allergies. After some time, considerable volume of pebbles and sand began to drop from the sky onto the roofs of the houses of Concepcion residents. Soon, darkness covered the whole of the town.

One of the FGD participants remembers:

> *Nangmangha ako sa mushroom shape na nakita ko sa langit noon. Noong una, aliw na aliw kong pinagmamasdan iyon kasama ng iba kong mga kapitbahay. Pero nung magsimula nang mag-ash fall, siyempre pumasok na kami sa loob ng bahay. Bahing na kasi ako nang bahing mahirap na baka ano pang mangyari sa amin e. Tapos nun umulan na rin ng bato at buhangin. Akala ko nga bibigay na ang bubung ng bahay pero buti di naman. Dumilim na ang buong paligid. Tuloy parang gabi lagi.*

Immediate Community Reaction

An interview with former barangay councilor and now Brgy. Capt. Carlito Tayag revealed to this researcher the general reaction of people in Concepcion, specifically in Brgy. Sta. Rita where he was serving his term during the time that Mt. Pinatubo was in eruption. Brgy. Capt. Tayag claimed that Sta. Rita's barangay officials did warn their constituents against the coming of the tremendous consequences of the Pinatubo eruption plus those of the heavy rain.

He and his colleagues advised the people in their barangay to immediately vacate their houses because of the possible lahar flow. He even asked someone to ring the bell in the barangay chapel to alert the people in Sta. Rita. However, not everyone in Sta. Rita took the warnings seriously. Some insisted to stay put in their houses. This stubborn people chose to guard their houses and other belongings. On the other hand, those who believed in the word of warning left their houses carrying some of their clothes and other basic needs, and fled either to their relatives' houses, which were not in danger of mudflows or to the evacuation centers that were standing by to temporarily serve as the evacuees' second home. He added that even their barangay captain, together with his family lived for months with his constituents in one of the evacuation centers.

The interview with Mayor Lacson has seconded the claims of Mr. Tayag regarding the response of the people in Sta. Rita during the eruption of the Pinatubo. According to then Brgy. Capt. Lacson, Sta. Rita was the hardest hit. The barangay officials were divided into committees. He with some of his constituents helped in monitoring the Parua River, and in the sandbagging operations. Mayor Lacson claimed that indeed, barangay officials gave warnings, and that not all of the people in Sta. Rita easily believed. There were some people who insisted to remain in their homes while the early believers of the caution were brought to the evacuation centers like the Central Elementary School, and the NIA buildings. Even if he had another house, he held that he chose to stay in the evacuation center for four months because he believed that it was a time when his constituents needed him the most. He shared that living in the evacuation center was never comfortable. He recalled that about 25 families shared in one small room, leaving them with no privacy at all.

Moreover, some of the FGD participants as well as a number of the survey respondents told this researcher that they thought it was already the end of the earth. They feared that God wanted to take their lives any moment then; therefore, they did pray very hard for help and mercy. Initially, a number of them were not even aware that a volcanic eruption was the one responsible for covering the heavens with darkness. A few of them admitted that they were guilty of being stubborn for having chosen to disregard the warnings from their barangay officials. One of these respondents explained, "*Paano naman ako agad susunod sa sinabi nila e ang dami kong maiiwanang mga kasangkapan sa bahay noon. Tsaka kala ko sandali lang yun. Kala ko talaga nagbibiro lang ang langit.*"

Immediate Damage

The FGD participants claimed that a lot of Concepcion residents lost their houses during the 1991 Pinatubo disaster. The people's means of livelihood, mostly rice fields, were swept off by lahar. They said that the most affected populations in Concepcion were uprooted from their homes and their cultivated lands.

Brgy. Capt. Tayag said that almost all the houses in Sta. Rita had been totally destroyed by ash fall, and mudflows. The lahar buried their shelters underground. Future harvest of the farmers' crops was made impossible for there was nothing left to reap. Many of his neighbors were not even able to salvage any piece of their clothing. In addition, Mr. David said that although there were evacuation centers for lahar victims, life for them got so difficult to the extent that some were gambling over cans of sardines.

The respondents of the survey that this researcher conducted corroborated the things mentioned above by the FGD participants, and the key informants. Living in the hardest hit barangay, they lost so much when that disaster occurred.

Results show that the 1991 Pinatubo eruption had either partially or totally destroyed the houses of the 76 (95%) of the survey respondents. Moreover, 30 (37.5%) of the respondents were not even able to salvage foodstuffs. Domesticated animals owned by 55 (68.75%) respondents perished. The work place of 48 (60%) respondents was damaged, too. The home appliances, and furniture of 10 (12.5%) respondents were ruined, and mostly either taken by mudflows or got buried underneath. The cultivated lands of 9 (11.25%) respondents were covered with very thick ashes, and lahar.

Table 18. June 1991 Pinatubo eruption damage to properties of survey respondents

Damaged properties	**# of respondents affected**	**Percentage**
House	76	95%
Food	30	37.5%
Domesticated animals	55	68.75%
Work place	48	60%
Home appliances and/or furniture	10	12.5%
Cultivated land	9	11.25%

Suspension of classes in the schools in the town was another negative consequence brought about by the eruption of the Mt. Pinatubo in 1991. Classes both in public and private schools were largely disrupted. Because most of the public school buildings were utilized as evacuation centers, it became impossible to immediately resume classes even if the worst days of the disaster had already passed by. There were also school buildings that were either partially or totally wrecked by the Pinatubo eruption. These old school buildings were not able to endure the heavy flow of lahar, and the thick ash fall as well as sand. Some remain to be buried underground until today. The affected populace, which was dispersed to different evacuation

centers, carried along with them the students, and school personnel causing them to be far away from their respective schools. The relocation of students, and teachers was another reason why formal education in Concepcion happened to become paralyzed for quite some time.

Rescue and Relief Operations

The interview with then Mayor of Concepcion, Danilo David has put great action in the picture of the rescue and relief operations conducted in the town during the 1991 Pinatubo eruption. He recalled no warning given to him by anyone regarding the eruption of Mt. Pinatubo in the year 1991. He only remembered seeing the cars of Americans in Clark Air Base on the move, as he passed by on the way back to Concepcion from a hospital in Manila. He maintained that Concepcion was the first hit of the 1991 Mt. Pinatubo eruption, putting emphasis on Sta. Rita as the hardest hit. He did not forget to mention the other two barangays in Concepcion that were damaged the most. These barangays include San Martin, and San Nicolas Poblacion. Mr. David commented that the Pinatubo eruption has caused everyone in the town to unite. There was an excellent cooperation among the citizenry. He mentioned that political rivalry that was in existence in the municipality was set-aside for a while in order to more effectively respond to the needs of the affected barangays. Basically, there were two groups that were organized: (1) rescue operations team, and (2) relief operations team. He himself led the rescue operations in the town, leaving the relief operations to the opposition-member municipal counselors. As chief of the rescue team, he was housed for 63 days in the municipal building because he was always on call. He remembered not taking off his shoes even if he was asleep in order for him to just put on his life vest when a situation would call for him. Only for 1 to 2 hours did he sleep during that time. Mr. David also mentioned about his asking the help of the members of the Rotary Club

Concepcion Chapter whose president then was Mr. J. Sotto, and the town's parish priest, Msgr. Alberto Bruno. All the religious groups, and civic organizations in Concepcion convened, and were united as one with the main objective of responding to the needs of their *kababayans*. A food center was established in the rice mill compound of Mr. J. Sotto. This food center was in operation for 57 days. But where did the funds of this food center come from? The food center was funded by the League of Municipalities, which gave a hundred thousand pesos, Susan Go who gave 30 thousand pesos, Governor Farinas, and many other generous individuals. All the expenses were accordingly accounted. From 5 in the morning until 6 in the evening, volunteers at the food center were preparing meals for those at the evacuation centers, and those people working at the sandbagging sites.

The first sandbagging job was done in Brgy. San Vicente. Nine hundred seventy Aetas were doing the sandbagging work in the Gomez side in Brgy. San Francisco, which length was 3.6 kilometers, along with some Concepcion residents while 365 soldiers were responsible for sandbagging the Dungan side, which length was 1.6 kilometers. The sandbagging operation in the Gomez side was defense against the great volume of lahar that was heading for Brgys. Sta. Rita, and San Martin while that of the Dungan side was protection from mudflows that was to hit the town proper. The different groups were very eager in performing their assigned tasks, and regularly reported to the Mr. David about their activities. Because Mr. David was oftentimes in the rescue operations, he appointed SB Regie Alday as the OIC. The OIC was left in the municipal building in order to entertain other people who were coming to Concepcion to extend help to the victims of the eruption. The rescue team saved the people in the affected barangays. Many of those who were waiting to be rescued were seen on top of the roofs of their houses. A few were even on top of the trees, holding on tightly. Fifteen to twenty barangays were taken to

the evacuation centers. Some people were too stubborn to stay in their houses. Most often than not, only men remained in the affected barangays to guard and save some of their belongings. The Red Cross Tarlac and National Chapters aided in retrieving the belongings of the affected populace. Many public school buildings for many months became the place of refuge for the unfortunate victims of lahar. Although a committee was organized to take good care of the health of the evacuees, a number of diseases struck those at the evacuation centers. These include fever, respiratory infections, and diarrhea.

Mr. David did not fail to mention about the arrival of national government officials in Concepcion during that time. It was Senator Maceda who came first to check on Concepcion. He brought with him an army truck, which was loaded with sacks of rice, and boxes of canned goods. The generous senator even brought with him a *tiklis of pandesal*, which was shared by members of the rescue team housed at the municipal building for breakfast. The second one to visit the town was Commissioner Remedios Salazar Fernando who also brought sacks of rice, and went straight to the food center. Mr. David also recalled that two days after the June 12 eruption, then President Corazon Aquino came to do an ocular inspection of the town, especially Brgy. Sta. Rita.

Wanting to elaborate about the efforts of the municipal officials during the disaster, Mr. David recalled that warning signs included 1 siren sound for Alert level 1; 2 long siren sounds for Alert level 2; and non-stop ringing of the church bells plus the siren for Alert level 3. He also remembered that 16 Marines aided in the rescue missions of the municipal government. These Marines brought with them 2 army trucks and a rubber boat. They were also housed at the municipal building together with the others conducting rescue operation, making them like one big family not only during rescue but also during mealtime. The people that these Marines

rescued loved them so much that they gave them pigs, and chickens to feed themselves. Mr. David was filled with happiness as he recalled and shared about the beautiful relationships that had been developed between him and the 16 Marines, and between the Marines and the very thankful people of Concepcion. When the rescue missions were over, and when it was time for these Marines to bid goodbye, Mr. David called to mind that there was crying among themselves, the townspeople, including himself. He accounted this crying to the true service and sincerity to help demonstrated by the Marines.

The interview with Mr. David also revealed that the Metro Manila Transit, a government-owned company extended help to Concepcion as well. It sent 5 buses to help in the rescue operations. Movie actors like Rez Cortez, and Rudy Fernandez did lend a hand, too.

Mayor Lacson confirmed that both the national, and the local governments tried to ease the suffering of the evacuees by providing food, clothing, blankets, medicines, and resettlement areas. In fact, just like Mr. David, he witnessed the visit of then President of the Philippines Corazon Aquino to Concepcion. Senator Alvarez made an appearance, too. Mayor Lacson mentioned that several NGOs conducted relief operations as well.

Moreover, it is proven by survey results that indeed, relief operations were done during the said disaster. The barangay, municipal government, provincial government, and the national government extended aid to the victims of that calamity. These government bodies provided food, clothing, medicines, home appliances, money, and resettlement areas. There were also two lucky respondents who each received 10 thousand-check from the barangay or the municipal government.

Table 19. Relief operation by the barangay

Relief	# of benefited respondents	Percentage
Money (cash)	11	13.75%
Food	64	80%
Clothes	43	53.75%
Medicines	40	50%
Home appliances	24	30%
Resettlement area	57	71.25%

Table 20. Relief operation by the municipal government

Relief	# of benefited respondents	Percentage
Money (cash)	5	6.25%
Food	59	73.75%
Clothes	33	41.25%
Medicines	37	46.25%
Home appliances	20	25%
Resettlement area	24	30%

Table 21. Relief operation by the provincial government

Relief	# of benefited respondents	Percentage
Money (cash)	9	11.25%
Food	35	43.75%
Clothes	21	26.25%
Medicines	22	27.5%
Home appliances	14	17.5%
Resettlement area	18	22.5%

Table 22. Relief operation by the national government

Relief	# of benefited respondents	Percentage
Money (cash)	5	6.25%
Food	33	41.25%
Clothes	22	27.5%
Medicines	21	26.25%
Home appliances	13	16.25%
Resettlement area	16	20%

Chapter 6

Psychosocial Impact of the 1991 Mt. Pinatubo Eruption

The 1991 Pinatubo eruption did not only cause damage to material belongings but also did harm or did incur losses on human lives. Although 74 (92.5%) of the survey respondents did not lose any of their loved ones during the disaster, still 6 (7.5%) of them did lose family members or friends. Three (50%) of these lost their spouses; 1 (16.7%) lost a parent; and 2 (33.3%) lost other relatives.

Table 23. Human deaths caused by June 1991 Pinatubo eruption

Death	**# of respondents affected**	**Percentage**
Spouse	3	50%
Parent	1	16.7%
Other relatives	2	33.3%
Total	**6**	**100%**

This heartbreaking reality plus the high level of lahar flow, darkening of the sky due to the elements emitted by the Pinatubo when it erupted, the destruction of houses, and sources of livelihood, as well as the frequent sounding of the siren and the church bells caused tremendous psychological effects to the populace, especially to the children, and the elderly.

This researcher's interview with Mr. Marciano Dizon, an 81-year-old fellow, and a resident of Concepcion accidentally revealed the disruptive psychological effects of the Pinatubo explosion to him and his own family as he narrated his experience during that disaster.

Mr. Dizon recollects:

Nasa bahay lang ako noon kasama ang aking asawa. Ang taas ng tubig-baha na may kasama pang putik. Ang lakas ng agos at nakakatakot talaga kahit na alam kong matibay naman ang bahay namin. Natataranta lahat ng mga kapitbahay namin pati kami. Ang iba ay nagbakwit na. Hindi namin malaman kung ano ang uunahin naming iakyat sa itaas ng bahay. Pero mas nag-

aalala ako para sa aking pamilya. Hindi lahat ng mga apo ko ay nasa bahay na noon. Ang iba kasi ay nasa trabaho pa o kaya ay nasa eskwelahan. Kaming mag-asawa ay nininerbyos na. Ang gulu-gulo sa labas ng bahay noon. Hindi malaman ng mga tao kung saan sila pupunta kahit na may umiikot ng trak para sunduin sila. Sa tuwing tutunog ang sirena pati ang kampana ng simbahan, hindi na ako mapakale. Hindi rin ako makatulog ng mahimbing. Parang laging nasa panganib ang buhay ng pamilya ko.

The teachers who participated in the FGD also shared about how they and their students were always frightened whenever the siren and church bells rang for warnings. One of them shared that she found it hard to calm her students because she herself was scared.

An interview with Ms. Mylene de Jesus unveiled her own experience during the Pinatubo eruption.

Ms. de Jesus, who was just 7 years old when the eruption occurred, remembers:

Batang-bata pa ako noon pero tandang-tanda ko pa rin ung mga pangyayari. Ayaw akong palabasin noon ng nanay ko para makipaglaro. Nagtaka ako kasi dati-rati naman ay pinapayagan nya ako makipaglaro. Hindi ko agad naintindihan noon hanggang sa dumating ang tito ko at sinabi sa nanay ko na malapit ng umapaw ang sapa. Dali-daling inakyat ng mga kuya ko ang mga gamit namin sa itaas ng bahay. Sinabihan ako ng nanay na huwag lalabas ng kwarto ko. Sa bintana ng aking kwarto na lang ako patingi-tingin. And dilim-dilim ng langit. Ang ingay-ingay ng mga kapitbahay namin. Takbuhan dito, takbuhan doon. Wala akong makitang kalaro ko na naglalaro. Ilang sandali lang e nakita ko ng umaapaw ang tubig sa mga kanal. Naaalala ko pa na umuulan din ng buhangin noon. Ang lakas ng tunog sa bubong ng bahay namin. Nakakatakot talaga. Hindi ako agad makatulog noon. Tumatabi ako sa nanay ko sa pagtulog kasi talagang natatakot akong mag-isa. Iniisip ko kasi na baka makalimutan nila ako isama kapag aalis sila. Nakakalungkot talaga kasi ang tagal kong hindi nakapaglaro. Isa pa, ang iba kong mga kalaro ay umalis na sa kanilang mga bahay. Tuloy nagkalayo-layo na kami.

Furthermore, two of the FGD participants shared that because of the Pinatubo eruption, they became nervous. They had trauma or phobia. One of them oftentimes had nightmares of lahar chasing him and his family. This participant said, "*Lagi akong nagigising sa gabi kasi ang sama ng panaginip ko. Hinahabol ako ng mataas na lahar. Pati tuloy asawa ko hindi makatulog.*" The other FGD participant, who was pregnant during that time uttered, "*Naging nerbyosa ako noon. Sabi nga nila delikado raw para sa bata sa tiyan ko na palagi akong nininerbyos kaya lang di ko mapigilang hindi nerbyosin e.*"

Someone to support the above occurrences is Cynthia Banzon Bautista. She claimed that because "nothing in their individual and collective past prepared them for disaster…many of the victims suffered from psychological problems even long after their initial evacuation." The evacuation process traumatized both adults, and children.[63]

A study of the victims and service providers clearly describes:

> *But whether it came day or night, the sound and sight of lahar was enough to frighten the people into immediate escape. The lahar was terrifyingly high and steaming hot, they reported. It swept along with it tree trunks and rocks so huge and heavy that it took five men to move them later on. Many believed it to be the end of the world and all thought they would die then. All thought of immediate escape. There were those who only had time to scoop in their infant children and run off, all the while shouting to their older children to run ahead. (Few) had enough time and presence of mind to scoop up…belongings.*
>
> *There was pandemonium as they ran, they recalled. People were screaming and crying as they ran, calling on their God for help and deliverance. Everyone was terrified and shouting for help. In their haste, they tripped or ran into each other, fell, picked themselves up and begun to run blindly again…there was a mad rush to get on the trucks. The women and children came off badly in this scramble, as they were pushed aside or thrown unceremoniously on.*

[63] "Fire and Mud Content" <http://pubs.usgs.gov/pinatubo/cbautist/>

Those who were caught in their houses only had enough time to rush up their roofs. There, families huddled together in fear and for comfort—awaiting their certain death. All spent the night terrified, crying, and praying to God for help and mercy....[64]

Moreover, Jimenez reported that the victims, who fled to the evacuation centers showed symptoms of stress. These evacuees "trembled from cold and fear continuously." A number of them went into "hysterical laughter." These victims had difficulty in getting to sleep. They did not have much appetite for food. However, the respondents of Jimenez claimed that the eruption had different effects on males and females. These respondents held that males were "more quiet and withdrawn" than the females. The males spent time in "all-male drinking sessions."[65]

In addition, the service providers in a resettlement area for farmers in Zambales observed sudden turns to "crying, irritability, and constant headaches" among the resettlers that could only be traced to the ordeal of the Pinatubo eruption.[66]

In line with the above findings, a book by Ma. Lourdes Carandang entitled, *Pakikipagkapwa-damdamin: Accompanying Survivors of Disasters* presents the psychological setback of various disasters to their victims who luckily survived. In this book, the experiences of the Holistic and Empathetic Approach to Rehabilitation and Training (HEART) team, which is comprised of psychologists involved in the work of psychosocial rehabilitation for disaster survivors in the secluded town of Carrangalan, Nueva Ecija during the outcome of the July 16, 1990 earthquake were recorded.[67]

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[64] Ibid.
[65] Ibid.
[66] Ibid.
[67] Ma. Lourdes Carandang, Pakikipagkapwa-damdamin: Accompanying Survivors of Disasters, (Makati City: Bookmark, 1996), p.1.

The book says that there are three aspects of disaster rehabilitation. These aspects include the *physical* aspect, which faces the needed solutions to material damages by a disaster like goods, and shelter. Another aspect is the *livelihood* that engages in re-establishing the people's everyday living by granting livelihood projects, and loans to farmers, entrepreneurs, and cooperatives in the affected localities. The final aspect pertains to *psychosocial rehabilitation*. This aspect provides care to the "emotional, psychological and social well-being of those who have been severely traumatized by an unforeseen disaster." The book states that it was in the year 1990 when the Department of Health along with the UP-PGH Department of Psychiatry started the rendering of such aspect of disaster rehabilitation.[68] The psychosocial rehabilitation was the concern of the HEART group.

The HEART team documented the descriptions of the disaster survivors' emotional and physical states. These include: (1) bitterness, pain, depression and suicidal thoughts; (2) intrusion or having intrusive thoughts; (3) blame, anger, quarrels;[69] (4) fears, anxiety and hyperarousal; (5) a sense of loss and grieving; (6) mental anguish;[70] (7) feelings of helplessness and hopelessness; (8) unexpected positive changes, realizations and learning.[71]

The HEART team also recorded physical symptoms as well as somatic reactions of the persons they provided with therapy. It is written in the book that disaster survivors have irregular sleeping patterns or sleeplessness. They also develop irregular eating habits or loss of appetite. Disaster survivors experience difficulty in breathing. These people also claimed that they suffer from loss of strength or body weakness.[72]

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[68] Ibid., p. 3.
[69] Ibid., p. 61.
[70] Ibid., p. 63.
[71] Ibid., p. 64.
[72] Ibid., p. 65.

However, the disaster survivors' ways of coping were also placed in the same book. Their means of dealing with the outgrowths of the disasters include: (1) prayer, surrender and faith;[73] (2) no laying of blame; (3) continuing to hope; (4) hard work and perseverance;[74] (5) recognizing the courage their children give; (6) talking about it; (7) suppressing feelings and fears; (8) suppressing memories;[75] (9) withdrawing; (10) "living in the now"; (11) asking for help; (12) salvaging from one's old house; (13) cooperation; (14) taking concrete steps to overcome anxiety;[76] and (15) drinking.[77]

[73] Ibid.
[74] Ibid., p. 66.
[75] Ibid., p. 67.
[76] Ibid., p. 68.
[77] Ibid., p. 69.

Chapter 7

Concepcion after the June 1991 Mt. Pinatubo Eruption

General Situation

Records show that in 1993 the total population of Concepcion was 115,138. The total population decreased to 101,243 in 1995 while it later became 115,171 in the year 2000.

Mr. Danilo David in his interview mentioned that because of the Pinatubo eruption, some barangays in Concepcion were wiped out from the map. Brgy. Telabanca remains silted, so erased from the map. One consolation for the townspeople was the establishment of a productivity center that supposedly has a working scheme of 70-30, giving priority to Pinatubo victims residing in Concepcion. This productivity center was erected along the road of Santiago. Mr. David recalled that when he left his position in 1992, a surplus of 8.6 million pesos was kept in the municipality's purse. He claimed that surplus seldom happens, and that it would enable the immediate implementation of municipal projects if only properly handled. Less than a million pesos were also acquired by his administration from the revitalized system of tax collection. The surplus plus the revenue from taxes made it possible for Concepcion to become a 1st class municipality on the first year of the first term of Mr. David's successor. That means the town attained this status some time in 1993. This was a little bit surprising since the Pinatubo eruption had caused so many losses to the town. However, the town has been fixed in this status for 8 years already.

Despite such, a quite surprising yet a very soothing particularity is the presence of streetlights in the used-to-be dark roads of Concepcion. It was only in the second half of the year 2001 when these streetlights got installed. These have prevented vehicular accidents that

frequently occurred in the past. Concreting of roads in town has also been done, making transport of goods and services easier and more convenient.

This writer noticed as well the many new business establishments in town such as computer shops, bars and restaurants, recreational facilities, barbershops, beauty parlors, and apartment buildings. If these are true measures of progress, for sure, Concepcion cannot be denied to be experiencing one.

There are also a few big houses that are in the construction process. These big houses are mostly located at the town proper. As expected, very wealthy individuals own them. A few of these owners either had worked overseas or have relatives that work abroad. Even in Sta. Rita, which was the hardest hit by the Pinatubo disaster, a number of new huge and beautiful houses are newly erected or are still being constructed.

In Sta. Rita where the survey for this thesis was conducted, roughly every 8th house has a sari-sari store. The houses of most of the survey respondents are newly constructed although small, and not fully furnished yet. The relocated inhabitants of Sta. Rita have started to come back to their old neighborhood since there are no more lahar threats.

This researcher also knows of a number of Concepcion residents who have left to work in the Middle East, Canada, and the United States, and a few others are patiently processing their papers for the meantime. Most likely, these people have lost hope that they could have a pleasant life by sticking to their native place. Perhaps, they have thought that they could find for themselves and their loved ones a greener pasture outside the Philippines.

Business and Livelihood

It is written that although the growth of commercial activities in the town has been hampered by the Pinatubo eruption in 1991, there were 1,197 business establishments in Concepcion in 1993. The number increased to 1,879 in the year 2001. This implies that an additional of 682 commercial establishments was erected in town. Most of these enterprises are sari-sari stores with 925 establishments, and 1,460 stalls in the year 1993, and 2001 respectively. The meat vendors ranked second in size, with a total of 45 stores in 1993, and 55 in 2001. Others include banks, hardware and construction, supermarkets, restaurants or carinderia, and resorts. The public market has been considered the major place for trade. According to records available, the increase in commercial activities is attributed to two factors: (1) improvement of peace and order situation; and (2) intensified business tax campaign by the municipal government.

However, Mr. Mercado's interview somehow represents the sentiments of the business sector. Mr. Mercado claimed that after the June 1991 eruption of the Pinatubo, many individuals and families left Concepcion to seek greener pastures. A number of those who left tried their luck overseas since it seemed to them that it would no longer be possible to send their children to good schools if they would remain in the country, and be satisfied that they eat three meals a day.

The business of selling fresh meat in the public market had been greatly affected by the eruption. It had become less profitable, and at times no profit at all. Only half to a whole pig gets to be sold since the disaster. It has been only during fiestas and the holidays do meat vendors get to sell more than the figure above. Mr. Mercado believes that this unfortunate event had occurred since the people in Concepcion decreased their spending. People have tended to do substitution in their consumption. Instead of buying pork, beef, or chicken meat, they would just

buy *Knorr* or *Maggi cubes* that would put flavor to the dish that they plan to cook. Definitely, that costs less.

The scenario has been worsened by the outbreak of Foot and Mouth Disease (FMD). This disease has infected the pigs, causing shortage in the supply. Shortage in the supply means increased in the prices of these animals. Before the outbreak of FMD, 80% of the meat vendors acquired the meat that they sell from a piggery located in Concepcion while the remaining 20% came from the backyards of small-scale pig growers.

Another actuality that adds weight to the burden of these meat vendors is the increase both in the rent of space in the public market, and of the slaughter fee. When Mr. Mercado complained about the 500% increase in the slaughter fee, the local officials just told him that if he does not approve of this, he could just stop doing business in the public market. Because of all these events, Mr. Mercado sees no progress in the lives of Concepcion dwellers in the coming few years.

Taking into consideration the results of the survey, one hundred percent of the respondents maintained that the 1991 Pinatubo eruption had considerably affected their lives. The FGD participants supported this claim. They noticed that a lot of things in Concepcion have been altered since the eruption of the Pinatubo in 1991. Struggle for survival became the main concern of the people. All the participants agreed that there was a need to work harder to be able to earn not even more but just to earn enough. It was necessary for them to decrease their spending. All the business operations that they were involved in experienced downtrend.

However, this finding was contested by the claims of a manager of a farm, which has been in operation for the last 30 years in Concepcion. This manager asked me to conceal his identity as well as the farm's identity. In all honesty, this researcher had acquired only a few bits

of learning from this fellow. When asked about the effects of the 1991 Pinatubo eruption on the farm, he just replied that it was only the increase in the level of floods, which caused erosion of land that the business suffered from. He claimed that there were no significant effects to the condition of the pigs or to the business transactions that the farm has been dealing itself with. The manager maintained that business was and still is as usual. Business was never interrupted by that disaster, and that presently, the business runs smoothly.

On the other hand, according to two very reliable sources, the farm manager might just be protecting the image of the farm. The truth of the matter, according to this researcher's sources, is that the Department of Agriculture (DA) has padlocked the farm for three weeks already at the time the interview with the manager was conducted. The reason behind the action by the DA was the infection of the pigs in the farm with FMD. Pictures of many pigs being burned, and buried underground were shown to this researcher by one of her two dependable sources.

Looking at the brighter side, small and medium scale industries are recorded as in operation in Concepcion. These are further classified into rice mills, mini-conos, furniture shops, metalcrafts shops, woodcarving, home decors manufacturing, garments manufacturing, broom making, *balut*-and salted egg-making, meat processing, and many others. In 1993, 50% of these industries were rice mills, and mini-conos, which support the main economic venture of Concepcion, and that has been *palay production.* This trend continues at the present.

The town does not experience any problem regarding raw materials, and labor because these means of production are locally available. The products of these industries are usually destined to nearby towns in the province of Tarlac, and to some towns in Pampanga, namely, Mabalacat, San Fernando, and Angeles City.

Cooperatives

Mr. Castro held that the Pinatubo eruption had greatly affected the farmers in Concepcion. The ash fall, and the mudflows had taken away the farmers' main source of livelihood. A consolation for them was the fact that they were insured in the Philippine Crop Insurance. The affected farmers received a small amount of money that enabled them somehow to get back on their feet.

He added that the soil, which was used to be cultivated with rice was converted to sugarcane fields because it had become not suitable for rice to grow. Elements composing lahar that covered the fields made the soil infertile.

The worse event was the actuality that a number of the cooperatives went bankrupt. After the disaster, fewer applications for loans by farmer cooperatives got approval from Land Bank since these farmers had incurred a lot of debts from other individuals or institutions. The Land Bank worried about the farmers not being able to afford to service another debt obligation. Mr. Castro also said that he always tell the farmers that he encounters in his everyday work that they would have to cooperate with the government because the government could not help them to improve their lives if they themselves resist assistance. He remembered to tell this researcher that farmers in Concepcion have always been afraid to at once apply new technology in their farming. The farmers have always preferred the old way of doing things. Their motto when it comes to the lands they cultivate, according to Mr. Castro, has always been *to see is to believe*. However, Mr. Castro believes that farmers have started to recover from their fall caused by the Pinatubo eruption in 1991.

Banks

The presence of banks, and lending institutions in the town make it easier for Concepcion residents to set up or maintain their own businesses. Farmers, merchants, and industrialists could utilize the affordable credit capabilities of these financial institutions. As shown in the records, there were 6 banks in operation in the town in the year 1993 but this was reduced to 5 in 2001.

Profitable Economic Consequences

The FGD results state that creativity among the people developed as they have tried to make profit out of the ashes, lahar, sand, pebbles, and logs that destroyed their properties in the beginning. These materials have been created into novelty items, hollow blocks, and furniture. The lahar was processed and converted to fertilizer. The sand was even sold.

To verify this matter, the survey respondents were asked if they did try to put into advantageous use the huge volume of ashes, sand, and lahar that were emitted by Mt. Pinatubo when it erupted in 1991. Eight (10%) respondents made use of these materials to their benefit while 72 (90%) did not.

Table 24. Utilization of materials emitted by Pinatubo

Beneficial utilization	**# of respondents**	**Percentage**
Yes	8	10%
No	72	90%
Total	**80**	**100%**

The 10% that utilized these materials from Pinatubo transformed these resources into sandbags, hollow blocks, and ventured into sand selling.

Table 25. Method of utilization of the materials emitted by Pinatubo

Method of utilization	**# of respondents**	**Percentage**
Sandbagging	2	25%
Hollow blocks making	4	50%
Sand selling	2	25%
Total	**8**	**100%**

When asked if they had thought of any new job or business because of the Pinatubo eruption, 58 (72.5%) respondents said no while 22 (27.5%) of them replied yes.

Table 26. New job or business idea from the Pinatubo eruption

New job or business idea	# of respondents	Percentage
No	58	72.5%
Yes	22	27.5%
Total	**80**	**100%**

Eight (36.36%) of the 22 who had thought of new job or business did not pursue their idea while 14 (63.64%) of them turned their new concepts into reality. The new job or business ideas include hollow blocks making; egg selling; establishment of sari-sari store; erection of *babuyan;* creation of a sash factory; making and selling chicharon; selling of clothes; and being a real state agent. Nine (64.29%) of those who put into action their ideas were successful in their ventures while 5 (35.71%) were not.

Table 27. Implementation of new job or business idea

Implementation	# of respondents	Percentage
No	8	36.36%
Yes	14	63.64%
Total	**22**	**100%**

Table 28. Success of the implementation of new job or business idea

Successful	# of respondents	Percentage
Yes	9	64.29%
No	5	35.71%
Total	**14**	**100%**

Social Services

Social services are being rendered to Concepcion residents. The services include day care service, supplemental feeding, adoption, peer group service for out-of-school-youth, self-employment assistance, parent effectiveness service, pre-marriage counseling service, physical fitness lessons, and many others.

Education

Educational opportunities are also offered to Concepcion residents. As a basic human right, the government must provide ample attention to making available the best possible education to its constituents. Both public, and private schools administer formal education in Concepcion. The public elementary schools remain to be divided into 4 districts. The total number of schools in these 4 districts increased to 53 in 1993 from being only 48 in the year 1985. However, no additional school was erected in 2001. There were only 2 private elementary schools in the year 1993: (1) Concepcion Catholic School, which had a total of 565 enrollees; and (2) Concepcion Ecumenical School, which garnered a total of 198 enrollees. In the year 2001, there were 3 additional private elementary schools. Secondary education is also being provided by both private, and public high schools. In the 1993 records, 3 public high schools render secondary education to 5,639 enrollees while 7,543 enrollees in the SY 2001-2002. Only the Concepcion Catholic School (CCS) is shown in the 1993 records as the private school, which provided secondary education to 503 enrollees. However, in the 2001 records, 2 additional private schools are said to be offering secondary education; along with CCS, these private schools cater to 526 enrollees. No college was in operation in the town in 1993; however in the 2001 Socio-economic Profile of Concepcion, 1 college named Holy Cross College is recorded to be providing tertiary education to 335 enrollees.

Table 29. Public elementary school enrollment

Concepcion	# of enrollees		# of schools	
District	SY 1993-1994	SY 2001-2002	SY 1993-1994	SY 2001-2002
East	3,861	4,967	12	12
North	5,548	6,229	14	14
South	3,091	3,015	10	10
West	4,544	3,851	17	17
Total	**17,044**	**18,062**	**53**	**53**

Table 30. Public secondary school enrollment

Concepcion High School	**# of enrollees**	
	SY 1993-1994	**SY 2001-2002**
B.S. Aquino National High School	4,513	5,147
Balutu Barangay High School	340	1,373
Caluluan Barangay High School	786	1,023
Total	**5,639**	**7,543**

Undeniably another negative consequence of the Pinatubo eruption is the fact that it disrupted classes in school. The displaced students tended to either stop attending their former schools and continued schooling in a much closer school or totally disregarded education due to changes in the socio-economic conditions. This was the main reason why the number of enrollees both in private and public schools declined. In the public school previously mentioned by the FGD participants, the enrollees decreased to just a single section per grade level, and the number of teachers employed was cut as well. The enrollees in the private school pointed out also in the same section of chapter 3 just totaled to less than 900. In addition, rooms for professional growth for teachers have become vague because the money, which was supposedly for this must be kept and utilized for more necessary spending. The Pinatubo eruption seemed to have caused nothing but trouble to the people of Concepcion.

Health Services

Furthermore, the health of the Concepcion residents is being taken cared of, too. In the 2001 records, it is shown that there are 8 clinics, and 5 hospitals in Concepcion. There are 24 medical doctors; 8 dentists; 12 midwives; 15 practicing *hilots*; and 44 barangay health centers.

Electric and Water Supply

Electric power, and potable water are also being supplied to the Concepcion residents. The Tarlac Electric Cooperative II (TARELCO) provides the power needs of all the 45 barangays within the municipality. However, the 1993 records present that only 67% of the total number of households in the town were availing of the power supply. Those who did not were using candles, and kerosene lamps for their lighting. It is also said in the records that the power supply was not very efficient as manifested by the daily brown outs that were actually being experienced nationwide during that period. This has improved in the present because brown outs are not that frequent anymore. The town had in 1993 a total of 13,645 hand pumps, and 519 jetmatic pumps distributed in various barangays. Concepcion also has a water district that caters to 7 barangays as of the year 1993.

Telecommunications and Transportation

Telecommunication services in the municipality include 1 post office, 1 telegraph office, and radio communications system in the 1993 records, and as well as in the 2001 records. The Philippine Long Distance Company (PLDT) remains to be the sole provider of telephone services of at least 10 barangays in town. In 1993, there were 444 recorded subscribers to PLDT. The town has also 4 cell sites. Four networks of local short-range radios are operating in Concepcion. All magazines, and newspapers reach the town everyday. Every TV, and radio station broadcast reach the town everyday. Furthermore, one cable station is presently providing services to Concepcion residents, while 1 internet service provider exists as well. The 2001 profile shows that transportation facilities in Concepcion include 908 private vehicles, 2,464 tricycles, 278 jeepneys, 2 buses, and 4 mini-buses.

Social Gatherings

In the distributed survey questionnaire, the researcher also asked if there were any effect in the manner they celebrated fiesta, and Christmas that came after the 1991 Pinatubo eruption occurred. Ten (12.5%) of the respondents answered that the disaster had no effects or caused no changes in their celebration of fiesta while 70 (87.5%) of them replied otherwise, meaning that there was almost no celebration at all or if there was, it was less happy and lively since there were fewer guests, and it became inexpensive unlike the way it had been before. Twenty-two (27.5%) of the respondents celebrated Christmas the same way they had been prior to the eruption while 58 (72.5%) respondents replied that there was indeed, significant effects because there was almost no celebration at all after the disaster struck their barangay. The changes were attributed to the decrease in the number of inhabitants in their barangay, and the insufficiency of money that they have to celebrate. The respondents don't prepare as much food as they had prior to the calamity. As much as they would want to buy new clothes to wear for these special occasions, they could not afford to.

Table 31. Effect of Pinatubo eruption on fiesta celebration

Effect	**# of respondents**	**Percentage**
No effect	10	12.5%
Significant effect	70	87.5%
Total	**80**	**100%**

Table 32. Effect of Pinatubo eruption on Christmas celebration

Effect	**# of respondents**	**Percentage**
No effect	22	27.5
Significant effect	58	72.5
Total	**80**	**100%**

The FGD participants said the same things regarding celebrations of occasions after the 1991 Pinatubo eruption. The celebrations became plain. As much as they would want to celebrate these occasions as extravagant as they used to, they do not any longer possess the

resources that they had before the disaster hit them. However, they maintained that it really does not matter whether they spent a lot of money for food, clothes, gifts, accessories, and decoration or not for they had realized that what truly matters is that they still have their loved ones celebrating with them.

Family, Friends, and Neighbor Relationships

FGD participants all agreed that the eruption has strengthened their family bonds. Many just wanted to be always with their loved ones instead of having drinking sessions with friends.

The survey respondents were also asked how did the eruption of Pinatubo affect their relationships with their family, neighbors, and friends. Forty-five (56.25%) of the respondents claimed that the eruption had no effects in their relationships with their family. Survey results show that the eruption caused negative effects on the relationships of the 17 (21.25%) respondents with their family while 18 of them developed better relationships with their family due to the disaster. Results also present that relationships with neighbors of 51 (63.75%) respondents were not affected at all; negative effects were caused to 20 (25%) respondents; and positive effects were the results to 9 (11.25%). Relationships with friends of the 52 (65%) respondents were not affected by the eruption of Pinatubo. 20 (25%) respondents suffered negative effects in their relationships with friends while 8 (10%) of them enjoyed the positive outcomes of the eruption in their bonds with friends. Negative effects on family relationships here pertain to disunity, and lack of care and consideration for one another especially in the most troubled moments. They also refer to physical separation, and lack of communication. Positive outcomes mean closer ties with family members, and increase in both the quantity and quality of time spent together. Negative effects on the relationships with neighbors, and friends mean

finding out that the used-to-be friendly neighbor is not, and the I'll-always-be-here-for-you friend vanishes in times when you needed him or her the most. Physical separation caused by resettlement or relocation is another. Positive effects, on the other hand, mean development of stronger bonds that unite the people more especially in the worst of times. No effect does mean that relationships generally remained intact as before.

Table 33. Effect of Pinatubo eruption on family relationships

Effect	**# of respondents**	**Percentage**
No effect	45	56.25%
Negative effect	17	21.25%
Positive effect	18	22.5%
Total	**80**	**100%**

Table 34. Effect of Pinatubo on relationships with neighbors

Effect	**# of respondents**	**Percentage**
No effect	51	63.75%
Negative effect	20	25%
Positive effect	9	11.25%
Total	**80**	**100%**

Table 35. Effect of Pinatubo on relationships with friends

Effect	**# of respondents**	**Percentage**
No effect	52	65%
Negative effect	20	25%
Positive effect	8	10%
Total	**80**	**100%**

Chapter 8

Aftermath

Disaster Preparedness

The survey respondents were asked whether their family, barangay, municipal government, and the provincial government are ready or not if in case another calamity like that of the Pinatubo eruption would strike again. Seventy-one (88.75%) respondents said that their families are prepared. Sixty-nine (86.25%) respondents perceive that their barangay is ready, too. Seventy (87.5%) of them believe that the municipal government is geared up as well against possible calamities. Sixty-nine (86.25%) respondents have trust and confidence that the provincial government is also ready for future disasters. The reasons behind their perception of disaster preparedness basically depend on their experiences and getting used to such uneasy situations, and presence of another place to go for refuge. The respondents who claimed that they are prepared for future calamities believe that they would know better what to do the next time a similar event strikes them. They also based disaster preparedness to the efforts they see that the municipal government, and provincial government exert in responding to their needs or complaints. Generally, they are satisfied with the manner of governance the current administration implements. The respondents also believe that presently, there is better and stronger protection against floods or mudflows. There is a more durable dike, and their houses are already elevated. A number also said that now they have savings to support them during "emergencies." Those respondents, who perceive that their families, barangay, municipal government, and provincial government are not ready for future calamities, have anchored their reasons for such on their lack of another place to go, and their dissatisfaction in the performance

of their officials. These people claimed that they see no programs implemented by the local government units in order to improve disaster preparedness. They also added that they have no savings that could be utilized when another disaster strikes them.

Table 36. Disaster preparedness of respondents' families

Ready for future calamities	# of respondents	Percentage
Yes	71	88.75%
No	9	11.25%
Total	**80**	**100%**

Table 37. Disaster preparedness of barangay

Ready for future calamities	# of respondents	Percentage
Yes	69	86.25%
No	11	13.75%
Total	**80**	**100%**

Table 38. Disaster preparedness of municipal government

Ready for future calamities	# of respondents	Percentage
Yes	70	87.5%
No	10	12.5%
Total	**80**	**100%**

Table 39. Disaster preparedness of provincial government

Ready for future calamities	# of respondents	Percentage
Yes	69	86.25%
No	11	13.75%
Total	**80**	**100%**

Furthermore, FGD participants claimed that Concepcion residents are indeed, more geared up for any calamity that may strike the town in the future than they were prior to the 1991 Pinatubo eruption. The teachers that participated in the FGD said that disaster preparedness has been integrated into the school curriculum. The schools have started to conduct drills so as to prepare the school personnel as well as the students for future calamities.

Hon. Mayor Lacson also mentioned in his interview that presently, the town is more prepared for future disasters than it was before because he believes that the townspeople are more alert, and experienced. Equipments for rescue are available and the municipality even plans

to purchase an additional rubber boat to be utilized for future rescue operations plus the fact that the first ever executive order that was issued by him upon assuming the mayor's position in 2001 was the reorganization of the Municipal Disaster Coordinating Council to secure rescue and relief operations whenever the situation calls for it.

Other Positive Aftermaths

In spite of the negative events that transpired as consequences of the Pinatubo eruption, the key informants, the FGD participants, and the survey respondents were able to pinpoint other several affirmative, and profitable outcomes of that calamity to them and to other Concepcion residents. First, they noticed how much people have changed their relationships with the Lord for the better since that disaster. Mr. David witnessed that after the Pinatubo eruption, the people of Concepcion became more prayerful causing the church to be always filled with people whenever a holy mass was celebrated. He claimed that even the parish priest observed this. Second, they believe that the eruption has made the Philippines celebrated worldwide. Many foreigners visited the country just to witness the volcano as it erupted. The FGD participants recalled that even them got fascinated with the mushroom cloud, which formed above the volcano. Third, the eruption has served as an awakening for everyone. This means that it has made the people realized that there are certain occurrences that man has no control of. Fourth, the eruption has taught the people values and skills to help, adapt, adjust, and to be resourceful during times when there is little or nothing left. Lastly, the key informants, FGD participants, and the survey respondents maintained that the people once again have become conscious that they could surpass any disaster as long as there is unity among the people, starting from within the family to the whole community.

However, one startling event that this researcher learned from one of the female survey respondents was the U.S. embassy's giving her special treatment when she told her that she and her family was victimized by the Pinatubo eruption. This respondent brought with her pictures of her house--wrecked and buried underground by lahar. She claimed that it seemed that the Pinatubo eruption was a blessing in disguise for her.

Chapter 9

Summary

The town of Concepcion was created due to the occurrence of a great flood. Concepcion's history presents a series of other disasters that struck the area, the June 1991 Mt. Pinatubo eruption being a major one.

The information offered by the previous chapters attest to the tremendous impact of that volcanic eruption to the lives of Concepcion dwellers, especially on their social, and economic well-being. The damage caused by that calamity to the properties, and source of livelihood of the Concepcion inhabitants were enormous. The disaster uprooted the residents from their old neighborhoods, and taken away from them their beginnings. Adjustments or adaptation became very necessary to survive the consequences of the eruption. *Pakikisama* among new neighbors was one needed step to take. Many agricultural lands became barren for quite some time because of mudflows. There was a need to seek new jobs or business ideas to get these victims through a day. School buildings were used as evacuation centers for a long period, making it impossible for children to continue availing of new learning through formal education. The national, and local governments might have provided relief goods, and resettlement areas for the victims but the aid were not able to sustain them for a long period.

Moreover, some resource persons of this thesis claimed that the eruption was a traumatic incident for them. This unfortunate reality caused them to panic, to be fearful, and very nervous.

Taking into consideration the effects to the celebrations of fiestas, and Christmases that came after the June 1991 Pinatubo eruption, most of the survey respondents significantly altered

their manner of celebrations. The used-to-be extravagant celebrations stopped, and were made simpler. The liveliness of the people during the celebrations was lessened.

Considering the effects of that eruption on the relationships among family members, friends, and neighbors, survey results show that a little more than half of the respondents' relationships were not considerably affected by the eruption. Other respondents developed better relationships with their families, friends, and neighbors while a number of them, unfortunately, built up bad relations among family members, friends, and neighbors.

However, results of the key informant interviews (KI), and that of the FGD present an opposition to the survey results on the effect of that disaster on the relationships of the victims with their families, neighbors, and friends. Both the KI and the FGD data state that indeed, there were significant effects. Families became closer while neighbors, and friends turned more helpful, and considerate to one another.

At first glance, it seems that the Pinatubo eruption had caused nothing but suffering to Concepcion residents but when given a deeper analysis, one would discover that it also had a constructive aftermath.

As far as this thesis' survey respondents are concerned, a number had thought of new great ideas for employment, and business. Majority of these ideas were pursued, and became successful. Furthermore, a number of these respondents had utilized the materials that came from the Pinatubo. The materials were made into hollow blocks, sandbags, and novelty items, which were sold.

As claimed by the KIs, FGD participants, and some survey respondents, the Pinatubo eruption had opened new job, and business opportunities for its victims. It also enabled unity among the people in Concepcion during the most difficult times. The eruption enabled them to

develop stronger ties among the victims themselves, and their help-providers. The eruption taught its victims survival strategies. Most importantly, it gave the affected populace a learning experience that could later on benefit them, and the future generations.

Another positive picture of the calamity was that it caused improvement in the disaster preparedness of the populace. The greater part of the respondents believes that their families, barangay, municipality, and provincial government are prepared for similar future calamities. They think that their experiences during the Pinatubo eruption had trained them, and equipped them with "weapons" against disasters that may still come in the future.

Chapter 10

Conclusion and Recommendations

Conclusion

Indeed, the June 1991 Mt. Pinatubo eruption has significantly affected the economic, and social well-being of Concepcion residents. The effects of that natural disaster in the economic aspect of Concepcion dwellers might have been really massively destructive. However, the social consequences could be concluded to have been more positive than negative. Concepcion and its people have developed stronger social bonds that would enable them to stand up from every fall that may still come their way in the future. With the assurance that the residents of Concepcion would remain united as one with the main objective of survival amidst the several situations that may require them to struggle against one another, no calamity could nail them forever to sufferings and recessions. It must not be forgotten that the human resources are the most important assets any place could have; therefore, as long as Concepcion residents continue to aim and work for progress and development of their beloved town, the damage to properties of any disaster would not weigh so much.

Furthermore, the people must always keep in mind that it was because of a natural calamity, specifically, a flood that caused the creation of the town of Concepcion. This fact may as well serve as an inspiration and hope for them to move on whenever a disaster strikes and tries to paralyze them.

Recommendations

Based from all the information gathered in this research, this writer would like to impart a few proposals to both the incumbent, and future national and local government officials, and as well as to individuals or non-governmental organizations that wish to conduct programs or activities in the town of Concepcion.

First, let there be a constant dialogue between the government officials, and their constituents. If this would be made possible, on one hand, for sure, the people's real needs and problems could be raised, and consequently, be responded accordingly by the governing body. On the other hand, the government would be able to save on unnecessary money, efforts, and time that would be utilized in the creation, and implementation of futile programs, and policies. Instead, the funds would be appropriately allocated for real necessities. As far as this writer is concerned, the town's current needs include more school facilities, and additional social workers who could help in educating the populace, which cannot afford to send themselves to school with basic knowledge, and skills that could somehow aid them in uplifting their standards of living. This writer is referring to trainings in establishing profitable home industries such as handicrafts, and food processing, and as well as short courses in mechanics or computer for those who are enthusiastic to learn.

Second, individuals or non-government organizations, which would want to incorporate programs and activities for progress and development in Concepcion are advised by this researcher to conduct profound studies on the nature of life in the town before venturing into various dealings with the populace. It would be best if they would immersed themselves to the everyday living of the Concepcion residents before taking any procedure instead of immediately believing in everything that the local officials say. Their wanting to extend assistance to the

people of Concepcion would surely be more meaningful if they would first know the genuine wishes of their target beneficiaries. They might as well go straight to them rather than pass by the unnecessary channels.

Third, the government is advised to plan, and implement as well programs aimed at improving disaster preparedness of the people in the municipality. This writer would like to suggest continuous conduction of emergency drills in all the schools, and other establishments in the town. It would also help a lot if the government shall purchase additional equipment that would be necessary for rescue operations.

Fourth, the psychosocial impact of a disaster on the survivors as well as on their families, and relatives must be adequately given attention. The government, and other institutions must realize the equal importance of providing psychosocial rehabilitation along with the oftentimes more attended physical, and livelihood rehabilitations to disaster survivors. This researcher suggests that the Philippine government organize a team, which would handle the more difficult task of giving psychosocial therapy to disaster survivors.

Finally, this researcher would like to convey a recommendation that is directed to dealing with the agricultural sector in Concepcion. As mentioned in the earlier chapters of this thesis, the major income-generator of Concepcion is agriculture; therefore, it must be given adequate attention. Efforts at improving production, and productivity as well must be highly prioritized by the government officials, and other concerned institutions. Establishment of productive cooperatives must be constantly encouraged. It would be best if the farmers in town would be provided with education about new methods or higher technology in farming in order to understand, and eventually, accept and apply them in the cultivation of lands, and other related business enterprises. It would also be beneficial if the farming population could venture into

other profitable engagements while waiting for harvest time. They may be taught some skills to organize home industries such as needle works, and food processing.

Through the suggested practices mentioned above, this researcher fervently believes that many lives in the town could be improved considerably.

Pangalan:
Edad:
Kasarian:__a. babae
__b. lalaki
Civil Status: # of Children:
Annual Income:

Relihiyon:
Trabaho:__a. self-employed
__b. private employee
__c. government employee
__d. government official

1. May trabaho o hanapbuhay po ba kayo bago pumutok ang Mt. Pinatubo noong 1991?
   __a. wala __b. mayroon
   Ano?
   _____

   Nagbago po ba ito dahil sa pagputok ng Mt. Pinatubo ng panahong iyon?
   __a. hindi __b. oo
   Kung oo, ano po ang naging kapalit nito?
   _____

2. Malaki po ba ang naging epekto sa inyong buhay ng pagputok ng Mt. Pinatubo noong 1991?
   __a. oo __c. walang epekto
   __b. hindi __d. wala akong pakialam

3. Anu-ano po sa inyong mga ari-arian ang nasalanta noong pagputok na iyon?
   __a. bahay __c. hayop
   __b. pagkain __d. pinagtratrabahuhan
   Ano pa?_____

4. May pumanaw po ba kayong mahal sa buhay dahil sa pagputok na iyon?
   __a. wala __b. mayroon
   Kung mayroon, sino po?
   __a. asawa __c. magulang __e. kaibigan
   __b. anak __d. ibang kamag-anakan(pinsan, tiya, tiyo, apo, etc.)

5. Anong tulong ang ibinigay sa inyo ng mga sumusunod noong pumutok ang Mt. Pinatubo noong 1991?
   a. barangay:
      __pera __resettlement area
      __pagkain __gamot
      __damit __kasangkapan sa bahay

   Ano pa?_____

b. munisipyo:

__pera
__pagkain
__damit
__resettlement area
__gamot
__kasangkapan sa bahay

Ano pa?_____

c. probinsyal na gobyerno:

__pera
__pagkain
__damit
__resettlement area
__gamot
__kasangkapan sa bahay

Ano pa?_____

d. nasyonal na gobyerno:

__pera
__pagkain
__damit
__resettlement area
__gamot
__kasangkapan sa bahay

Ano pa?_____

6. Anong pagbabago ang naidulot ng pagputok na iyon sa paraan nyo ng pagdiriwang ng mga sumusunod:
   a. piyesta?

   _____
   _____

   b. pasko?

   _____
   _____

7. Anong naging epekto ng pagputok na iyon sa inyong relasyon sa mga sumusunod:
   a. kapamilya?

   _____
   _____

   b. kapitbahay?

   _____
   _____

   c. kaibigan?

   _____
   _____

8. Pinakinabangan nyo po ba ang mga ibinugang abo, buhangin, mga bato, at lahar ng Mt. Pinatubo?

   __a. Hindi __b. oo

   Kung oo, ano po ang ginawa nyo sa mga ito?

9. Nakaisip po ba kayo ng bagong pwedeng maging hanapbuhay o negosyo dahil sa pagputok ng Mt. Pinatubo noong 1991?
__a. hindi __b. oo
Kung oo, ginawa po ba nyo ito?
__a. hindi __b. oo
Kung oo, ano po ito?

Naging matagumpay po ba ito?
__a. oo __b. hindi

10. Handa po ba ang mga sumusunod kung sakaling may dumating ulit na kalamidad ng tulad sa pagputok ng Mt. Pinatubo?
a. pamilya: __a. oo __b. hindi
Bakit po?

b. barangay: __a. oo __b. hindi
Bakit po?

c. munisipyo: __a. oo __b. hindi
Bakit po?

d. probinsya: __a. oo __b. hindi
Bakit po?

Maraming Salamat Po.

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