

**AWARENESS AND RESPONSE OF WESLEYAN MINISTERS IN PANGASINAN  
TO CLIMATE CHANGE: BASIS FOR A MITIGATION  
AND ADAPTATION FRAMEWORK**

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Doctor of Philosophy Major in  
Development Studies

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## APPROVAL SHEET

In partial fulfillment of the requirements for the degree Doctor of Philosophy, Major in Development Studies, this dissertation entitled **"AWARENESS AND RESPONSE OF WESLEYAN MINISTERS IN PANGASINAN TO CLIMATE CHANGE: BASIS FOR A MITIGATION AND ADAPTATION FRAMEWORK,"** prepared and submitted by **RHEYNIL A. SAGUD**, is hereby recommended for approval and acceptance.

  
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R. A. S.

**DEDICATION**

**To all who are suffering;**

**To all who are fighting to survive;**

**To all of us;**

**Trust in God, all is well.**

**God is with us.**

**-rheynil-**

## ABSTRACT

<b>Title of the Study:</b>	<b>AWARENESS AND RESPONSE OF WESLEYAN MINISTERS IN PANGASINAN TO CLIMATE CHANGE: BASIS FOR A MITIGATION AND ADAPTATION FRAMEWORK</b>
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The problem dealt with the awareness and response of Wesleyan Ministers in Pangasinan to climate change in order to develop a climate change mitigation and adaptation framework.

The respondents of this study were 79 Pastors who are duly recognized by the Wesleyan Church through the District Conference as ministers. The Wesleyan Church flourished in different municipalities in Pangasinan and there are two Superintendents looking after the churches and the ministers in the area. Through the permission of the Superintendents the questionnaires were given to all ministers in the area.

The descriptive survey method was used with the questionnaire as the main instrument in collecting the data. All the data were consolidated and were analyzed by the official statisticians of Pangasinan State University, School of Advanced Studies. Frequency counts and percentages were used to address the stated problems in the study.

Based on the gathered data, the researcher found the following: There is almost an equal representation between male and female ministers but still dominated by male ministers. Most of the ministers are college graduate and a handful of the ministers took further studies after college. Most of the respondents are ordained ministers and the greater number of ministers is just in their first to fifth year of ministry. Furthermore, most of the respondents have at least one vehicle and most of them are enjoying the benefits of using four or more appliances at home. Most and more than half of Wesleyan ministers have never attended a climate change seminar sponsored by the church and that almost all ministers have never attended Government-sponsored climate change seminars.

The respondents identified eleven causes of climate change wherein pollution has the highest percentage and over population has the lowest percentage. There are only two causes of climate change known by at least majority of the respondents and these are pollution and deforestation. There were other causes that were not identified including greenhouse gases and greenhouse effect. As to the impact of climate change, majority of the respondents identified flooding as one of the impact and the least that were identified are sea level rise, reduced water supply and fish kill.

Wesleyan ministers identified three major sources of information regarding climate change namely, television (T.V.) followed by social media and the third is conversation with common people. Pastoral messages and online sources almost ranked as major sources. The use of print media like newspapers, books, magazines and pamphlets is still a good source of information for ministers.

Among the activities contributing to climate change, the most common activities observed by the respondents in their localities are the use of vehicles, burning of garbage and throwing of garbage everywhere. On the other hand the least activity observed is deforestation. Generally, when it comes to the practice of mitigation and adaptation, the response of Wesleyan ministers is high, which means that mitigation and adaptation is practiced 61 to 80 percent of the time. The most common response is conserving gas, conserving water and conserving electricity, respectively. The least practiced among the climate change responses are sharing climate change knowledge to others, choosing organic materials, choosing organic food and avoid burning garbage.

The climate change mitigation and adaptation framework is based from the responses of the Wesleyan ministers. It is very simple and very practical so as to fit the context of the ministers.

From the given conclusions, the following are recommended to address the findings: a) Wesleyan ministers can become climate change mitigation and adaptation agents if they are given proper training. The Wesleyan



Church can provide climate change seminars for the Wesleyan Ministers; b) The Wesleyan churches or ministers can initiate partnership with government and non-government agencies in the climate change agenda; c) Ministers are encouraged to go for further studies and they may also explore other means to widen their professional armory; d) Ministers must continue getting updated information on climate change by reading books, magazines, and online resources to enrich their awareness; e) Wesleyan ministers should continue to conserve renewable and non-renewable energy, choose organics, and share climate change knowledge; f) Wesleyan ministers may adopt the climate change mitigation and adaptation framework to have a Bible-based, sustainable and healthier lifestyle; and g) Future researchers may conduct a parallel study with other agencies of the government covering other variables not included in this study.

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## **Chapter 1**

### **THE PROBLEM**

#### **Background of the Study**

Climate Change is real, it is happening and every citizen of the world experiences it (Chao and Feng, 2018). What is Climate Change? National Aeronautics and Space Administration (NASA) defines Climate Change as the long-term change of temperature and unusual weather patterns in a particular location or the planet as a whole (NASA, 2020). Scientists discovered that human activities contributed a lot to climate change like burning fossil fuels, natural gas, oil, and coal and the result are greenhouse gases. These greenhouse gases trap heat from the sun's rays inside the atmosphere making Earth's average temperature to rise. Because of Climate Change, frequencies of flooding, water shortage and extreme heat are expected to happen in the future (National Geographic Society, 2020). The United Nations, in response to the alarming impact and risks of climate change created the Intergovernmental Panel on Climate Change (IPCC) in 1988 in order to address the issue (IPCC, 2020). In the Philippines, in order to combat climate change, our government created the Climate Change Commission (CCC) through the Climate Change Act of 2009 otherwise known as R.A. 9729 (lawphil, 2020).

In our fight against Climate Change, we need to work together as citizens of this world. Let us not just leave the problem to our leaders but each of us should find our significant part. The researcher is amazed at the courage of

Greta Thunberg in saying that the world is already dying because of pollution and yet ignoring it. This is a very sharp pronouncement from Thunberg to the leaders at the 2019 UN climate action summit in New York (npr.org, 2019). The researcher believes that there is more than being just an activist; we can create awareness in our own workplace and in our community in a more decent way.

This study is not the work of a Climate Change expert but simply a work built on the work of others regarding climate change and climate risks. As a minister of the Wesleyan Church of the Philippines, the researcher will pursue the course of the spiritual body to the issues of climate change that the world is facing today. Pope Francis said that one of the most serious phenomena of our time is climate change. There is a need to put more effort in order to solve the climate issue and more awareness of every citizen is needed (Vatican News, 2019). The Pope and the Roman Catholic Church are seriously involved in this global climate issue. What about our Church? The researcher would like to know the awareness and response of the Wesleyan Church of the Philippines to climate change. To start with, the researcher being a minister situated in Pangasinan is going to conduct a climate change awareness study here.

This study is focused on the awareness of ministers to climate change. The researcher recognizes the authority and influence of every minister in every issue facing the church. If ministers are outstanding in their view of climate change, they can surely make an impact and influence to their congregations and communities.



The CCC is tasked to coordinate with other institutions, public and private organizations, NGOs and Civil Society organizations to work hand in hand as collaborating bodies to address climate change (Lawphil, 2020). Churches must also be included in the program of the Government; the Government must take the churches as its partner in addressing the issues of climate change.

The researcher's main concern is based upon the plan of God for man to take care of God's creation (Genesis 1:28). Taking care of God's creation is not just the duty of the Government but also the duty of the church and even every human being.

### **Statement of the Problem**

This study aimed to deal with the following specific problems:

1. What is the profile of Wesleyan ministers in relation to the following?
  - a. Age;
  - b. Civil Status;
  - c. Gender;
  - d. Educational Attainment;
  - e. Ministerial Status;
  - f. Years in the Ministry;
  - g. Number of Vehicles/motorcycles;
  - h. Number of Appliances used at home;
  - i. Number of Seminars attended sponsored by the church; and

- j. Number of Seminars attended sponsored by the government?
2. What is the awareness of Wesleyan ministers along the following?
  - a. Causes of Global climate change; and
  - b. Impact of climate change?
3. What are the Wesleyan ministers' sources of information on climate change?
4. What activities do Wesleyan ministers observed in the locality that contribute to climate change?
5. What is the level of response of Wesleyan ministers on climate change?
6. What climate change mitigation and adaptation framework can be developed for the Wesleyan Ministers?

### **Significance of the Study**

This study will give a real picture and information and create a new program to the following:

**Wesleyan Ministers.** The Wesleyan Ministers will be able to see their actual awareness and response to climate change. Although ministers are known as spiritual guardians yet it is also biblical that ministers are part of God's original agenda to take care of God's creation. As a result of this study, a framework for climate change mitigation and adaptation will be developed in the context of Wesleyan Ministers.

**Government.** The result of this study will also show the extent and

effectiveness of the government's (CCC) campaign to address climate change issues.

**Wesleyan Church Members.** Through the influence of the ministers, they will be encouraged to follow a climate change mitigation and adaptation program that will lead them to a Bible-based, sustainable and healthier lifestyle.

### **Scope and Delimitation of the Study**

The study focused on determining the level of awareness and response of Wesleyan Ministers in Pangasinan to climate change in order to develop a climate change mitigation and adaptation framework. The awareness of ministers is about their general knowledge of global climate change and their awareness of the risks that affect the Filipino people. The responses are mitigation and adaptation in nature and these are the common ways that can help in delaying the fast progress of climate change and common ways to avoid the risks that climate change bring.

This study included all the Wesleyan Ministers in Pangasinan. These ministers are those who are recognized by the Wesleyan Church of the Philippines through the District Conference as Pastors, whether student minister, licensed minister or deacon/deaconess, or ordained minister or ordained deacon/deaconess.

### **Definition of Terms**

The following definition of terms is provided according to how terms are used in this study:

**Wesleyan Minister.** A Wesleyan is a follower of Arminian Methodism taught by John Wesley; a minister is a person whose job involves leading church services, performing religious ceremonies (such as marriages), and providing spiritual or religious guidance to other people; a member of the clergy in some Protestant churches (Merriam-Webster Dictionary, 2020).

In this study a Wesleyan minister is a member of the Wesleyan Church of the Philippines who is called of God to preach the Word of God and who is stationed by the District Conference in a particular local church or Bible School. A Wesleyan Minister is a man or a woman, deacon or minister and licensed or ordained (The Discipline of the Wesleyan Church of the Philippines, 2009).

**Climate Change.** It is defined as a periodic modification of Earth's climate brought about as a result of changes in the atmosphere as well as interactions between the atmosphere and various other geologic, chemical, biological, and geographic factors within the Earth system (Britannica, 2020).

In this study climate change is simplified as the long-term change of temperature and unusual weather patterns in a particular location or the planet as a whole (NASA, 2020).

**Climate Change Awareness.** Knowledge, understanding, observation and experience of the causes and impacts of climate change.

**Impact of Climate Change.** The negative and harmful effects of climate change to the world.

**Response.** It is an answer or reaction. In this study, it refers to the mitigations and adaptations that Wesleyan ministers employ to combat climate change.

**Mitigation.** To make (something) less severe, harmful, or painful (m=Merriam-Webster Dictionary, 2020). In this study it refers to reducing climate change – involves reducing the flow of greenhouse gases into the atmosphere (NASA) like avoiding burning your garbage and not using your motorcycle or car when going to your neighborhood.

**Adaptation.** A change in plant or animal that makes it able to live in a particular place or situation; the process of changing to fit some purpose or situation (Merriam-Webster Dictionary, 2020). In this study this means adapting to life in a changing climate; involves adjusting to actual or expected future climate (NASA) like designing your house and garden into a facility that can withstand flooding and extreme heat.

**Pangasinan.** The province of Pangasinan particularly the places in Pangasinan where Wesleyan Churches are located.

**Climate Change Mitigation Adaptation Framework.** Climate Change Mitigation and Adaptation model that was developed based on the data gathered through the questionnaire and interview of the respondents.

## Chapter 2

### REVIEW OF RELATED LITERATURE AND STUDIES

There are several literatures and studies about the church and climate change that are significant for this study. Most of the literature and studies are conducted among students and in some communities here and abroad.

### RELATED LITERATURE

The following selected literatures provide information on how religion and governments react to climate change.

#### **Religion on Climate Change**

According to the book *How the World's Religions are Responding to Climate Change: Social Scientific Investigations* edited by Veldman, Szasz, and Haluza-DeLay (2014), religion is now becoming an important factor in the climate change crisis. Furthermore this book pointed out that religion has a great influence among the believers and religious leaders are respected and many people accept their authority. On the other hand, it also recognizes some of the barriers for religious groups to participate in the climate change crisis such as theological views and the like. Masci (2014) stated in his article that some denominations including Roman Catholics, Southern Baptists, Mormons (Latter-day Saints), Muslims, Missouri Synod Lutherans, and the Orthodox Church in America, do not ordain women or allow them to lead congregations.

In November 2016, the World Council of Churches (WCC) made a statement on climate justice in response to the Paris Agreement in December

2015 (WCC, 2016). The WCC believes that churches play an important role in the realization of the Paris agreement which is to keep the global temperature increase to 2 degrees Celsius, thereby pursuing means to limit the increase to 1.5 degrees. WCC is promoting climate justice because it is the will of God. The Bible states that "The earth is the Lord's and everything in it, the world and all who live in it; for He founded it on the seas and established it on the water (Psalm 24:1-2)." The WCC stood in full support of the Paris Agreement by calling all nations to fulfill their part in the realization of the agreement by all means and through collaboration and cooperation.

### **International Movements on Climate Change**

The Paris Agreement is a landmark environmental accord that was adopted by nearly every nation in 2015 to address climate change and its negative impact. The deal aims to substantially reduce global greenhouse gas emissions in an effort to limit the global temperature increase in this century to 2 degrees Celsius above preindustrial levels, while pursuing means to limit the increase to 1.5 degrees. The agreement includes commitments from all major emitting countries to cut their climate-altering pollution and to strengthen those commitments over time. The pact provides a pathway for developed nations to assist developing nations in their climate mitigation and adaptation efforts, and it creates a framework for the transparent monitoring, reporting, and ratcheting up of countries' individual and collective climate goals.

The Climate Reality Project founded by Al Gore, identified ten major changes in our climate system and these are the following (Climate Reality

Project, 2015): Air temperature over land are increasing; Air temperature over oceans are increasing; Arctic sea ice is decreasing; Glaciers are melting; Sea levels are rising; Humidity is increasing; Ocean heat content is increasing; Sea surface temperature is increasing; Snow is decreasing; and Earth's lower atmosphere temperature is increasing.

The Global Climate Risk Index (CRI) developed by German Watch identified Philippines as one of the countries affected by climate related risks. In 2019 the Philippines was ranked number 20 among those nations that are greatly affected by climate related risks. The common climate risks that are seen in the Philippines are the following: Increased temperatures, Increased number of hot days, Decreased number of cold nights, Increased number of typhoons and flooding, Increased sea surface temperatures, Sea level rise, Reduced rainfall in Mindanao, Increased rainfall in Luzon and Visayas, Increased frequency of El Niño, and Dry season is drier because of reduced rainfall (German Watch, 2019).

### **Philippine's Response to Climate Change**

In March 2017, the Philippines decided to join the Paris Agreement. The next step for the country, according to its Climate Change Commission, will be to finalize and mainstream the obligations of the country to the agreement and make necessary plans and programs. These obligations include a conditional move to reduce emissions by 70 percent below the projection by 2030. This is in recognition of the various dangers posed to the Philippines, and many other vulnerable countries, from the effects of climate change.



Many nations that have emitted the least pollution are going to carry the brunt of the impact. That is why the Philippines and other nations had formed the Climate Vulnerable Forum for cooperation on facing climate change and transitioning to 100 percent renewable energy.

In a statement, the Philippines Climate Change Commission (CCC) said that formally joining the Agreement shows an important move to hold the increase in the global temperature to 1.5°C as agreed in the Paris Agreement, in which the Philippines is strongly advocating. As the lead climate negotiator for the Philippines CCC expressed that the Paris Agreement is our common highway towards climate justice and human rights and above all, integrity of ecosystems.

According to Republic Act No. 9729, "AN ACT MAINSTREAMING CLIMATE CHANGE INTO GOVERNMENT POLICY FORMULATIONS, ESTABLISHING THE FRAMEWORK STRATEGY AND PROGRAM ON CLIMATE CHANGE, CREATING FOR THIS PURPOSE THE CLIMATE CHANGE COMMISSION, AND FOR OTHER PURPOSES," also known as the "*Climate Change Act of 2009*," this is the policy of the State to afford full protection and the advancement of the right of the people to a healthful ecology in accord with the rhythm and harmony of nature. It adopted the Philippine Agenda 21 framework which espouses sustainable development, to fulfill human needs while maintaining the quality of the natural environment for current and future generations. The purpose is to protect the climate system for the benefit of humankind, on the basis of climate justice or common but differentiated responsibilities and the Precautionary Principle to guide decision-making in climate risk management.

As part of a worldwide organization, it helps to find ways to balance ecosystems in order to adapt to climate change and to sustain economic development amidst disasters. Furthermore, it recognizes the vulnerability of the Philippine archipelago and its local communities, particularly the poor, women, and children, to potential dangerous consequences of climate change such as rising seas, changing landscapes, increasing frequency and/or severity of droughts, fires, floods and storms, climate-related illnesses and diseases, damage to ecosystems, biodiversity loss that affect the country's environment, culture, and economy, hence the State shall cooperate with the global community in the resolution of climate change issues, including disaster risk reduction. It shall be the policy of the State to enjoin the participation of national and local governments, businesses, nongovernment organizations, local communities and the public to prevent and reduce the adverse impacts of climate change and, at the same time, maximize the benefits of climate change. It shall also be the policy of the State to incorporate a gender-sensitive, pro-children and pro-poor perspective in all climate change and renewable energy efforts, plans and programs. In view thereof, the State shall strengthen, integrate, consolidate and institutionalize government initiatives to achieve coordination in the implementation of plans and programs to address climate change in the context of sustainable development. Further recognizing that climate change and disaster risk reduction are closely interrelated and effective disaster risk reduction will enhance climate change adaptive capacity, the State shall integrate disaster risk reduction into climate change programs and initiatives. Cognizant of the

need to ensure that national and sub-national government policies, plans, programs and projects are founded upon sound environmental considerations and the principle of sustainable development, it is hereby declared the policy of the State to systematically integrate the concept of climate change in various phases of policy formulation, development plans, poverty reduction strategies and other development tools and techniques by all agencies and instrumentalities of the government (Lawphil, 2020).

### **Causes and Impact of Climate Change**

Britannica (2020) identified both human activities and natural processes contributing to global climate change and these are the following:

1. Fossil-fuel combustion, deforestation, rice cultivation, livestock ranching, industrial production, and other human activities have increased since the event of agriculture and particularly since the beginning of the economic Revolution.
2. Greenhouse gases (GHGs) within the atmosphere, like CO<sub>2</sub>, methane, and water vapor, absorb infrared emitted from surface and reradiate it back, thus contributing to the atmospheric phenomenon.
3. Ice sheets, sea ice, terrestrial vegetation, ocean temperatures, weathering rates, ocean circulation, and GHG concentrations are influenced either directly or indirectly by the atmosphere; however, they also all feed back to the atmosphere and influence it in important ways.
4. Periodic changes in Earth's orbit and axial tilt with reference to the Sun (which occur over tens of thousands to many thousands of years) affect how radiation is distributed on surface.
5. Tectonic movements, which change the form, size, position, and elevation of the continental masses and therefore the bathymetry of the

oceans, have had strong effects on the circulation of both the atmosphere and therefore the oceans. 6. The brightness of the Sun continues to extend because the star ages and it passes on an increasing amount of this energy to Earth's atmosphere over time.

In the article *What is Climate Change?*, the causes and effects of climate change are discussed (Conserve Energy Future, 2020). These are as follows:

A. Causes of global climate change - 1. The atmospheric phenomenon  
2. Greenhouse Gases 3. Volcanic Eruptions 4. Ocean Currents 5. Solar Radiations 6. Earth Orbital Changes.

B. Effects of global climate change - 1. Change in Rainfall Patterns 2. Depletion of Arctic Ice 3. Wildfires 4. Heat Waves 5. Loss of Wildlife Species 6. Rise in water level 7. Shifting Habitat 8. High Temperatures.

## RELATED STUDIES

There have been studies conducted abroad and within the Philippine context that are very helpful and somehow related to the present study being conducted.

### Religion and Climate Change

In a study conducted by DeLashmutt (2011) entitled *Church and Climate Change: An Examination of the Attitudes and Practices of Cornish Anglican Churches Regarding the Environment* among six parishes around the Diocese of Truro wherein the researcher assessed the attitudes towards and actions regarding environment and climate change. The study found out that there

was very little awareness among local churchgoers despite the resources that the church have.

The study of Pew Research Center on *Religion and Views on Climate and Energy Issues* (2015) found that those who are members of a religious group or church do not care so much about climate change. On the other hand those who are not affiliated with any religion are more likely to care about climate change. Furthermore, the study found out that Hispanic Catholics are more aware that the earth is getting warmer due to human activities than white protestant evangelicals who are least unaware.

### **Climate Change Policies and Development Goals**

In a study conducted by Hasan, et. al. (2019), entitled *The Synergy Between Climate Change Policies and National Development Goals: Implications for Sustainability*, the researchers found out that Bangladesh's climate change policy initiative are mostly ineffective in reducing GHG (greenhouse gases) because the amount of GHG emissions has increased over the past two and a half decades and the share of total energy renewable consumed has also decreased. It was found out that policy instruments such as scaling up solar program or low-carbon clean technology investment were not able to decarbonize the country's energy sector. However, the policy instruments aimed to improve energy efficiency have shown some progress because the energy intensity has followed a decreasing trend over the past years. Moreover, initiatives regarding energy demand management were ineffective in reducing per capita energy consumption. The researchers said that this trend may continue unless appropriate policies are introduced.

## **Awareness and Attitudes Towards Climate Change**

A study on *Awareness and Attitude Towards Climate Change of Selected Senior High Students in Cavite, Philippines*, was conducted by Lopez and Malay (2018) revealed moderate to high level of awareness on issues concerning climate change. The study showed that senior high school students moderately to strongly agree on their role in addressing problems about climate change. The students became aware of climate change through several sources like television, internet, and from school. Majority of them look for further information about climate change by searching through the internet, watching television and from reading books. The result of high awareness level and strong positive attitude of senior high school students towards issues and concerns about climate change is a good indication that they are more likely to express willingness to act on this global problem. Further, the researchers recommended that raising awareness and promoting positive attitude about climate change should be one of the basic courses during early childhood education and curriculum designers should integrate it in the K to 12 curriculum.

A study entitled *Climate Change Awareness among the High School Students: Case Study from a Climate Vulnerable Country* by Rahman, Tasmin, Kawser Uddin, Touhidul Islam, and Sujauddin (2014) was conducted in Bangladesh and the result showed that based on the Climate Awareness Index (CAI) constructed by the researchers, the quality of schools, and grade, major and merit position of students have affected the CAI values. Further, the study concluded that religion, gender, parental education, occupation and

income, etc., could affect the students' climate change informedness.

Bondoc (2015) conducted a study *Climate Change Awareness among Students in the Secondary Level at UP High School, Cebu*. The findings of the study showed that there is a high level of awareness on climate change among the students. There were misconceptions but the researcher recommended that the Science teachers should incorporate climate change awareness in their curriculum so that misconceptions will be discussed and clarified.

According to a study conducted by Barreda (2018) entitled *Assessing the Level of Awareness on Climate Change and Sustainable Development Among Students of Partido State University, Camarines Sur, Philippines*, generally, students of Partido State University have much awareness on climate change issue regardless of their year level. As to the factors influencing the students' level of awareness, generally the students agreed that education, public sources, personal experience, and government programs could influence their awareness on climate change. Moreover, the respondents indicated four major sources of information that could enhance their level of awareness namely, education, mass media and family, trainings and seminar workshops, and the Internet and social media.

Moreover, a study on *Climate Change Awareness and Environmental Attitude of College Students in One Campus of a State University in the Philippines* conducted by Magulod Jr (2018) revealed that the respondents have high level of climate change awareness and environmental attitude. This was confirmed by the findings that students' awareness on climate change

differ significantly along gender, age, birth order, and parents' educational attainment. Moreover, the respondents' attitudes towards the environment differ along with their age and college departments. It was also found out that there is a significant relationship between climate change awareness and environmental attitude of the respondents implying that the higher awareness the students on climate change, the higher environmental attitude they exhibit. The researcher recommended that providing knowledge to students about climate change can result to the higher probability of demonstrating positive attitude towards environmental care.

In a study conducted by Lubos and Lubos (2019) entitled *Knowledge, Attitudes, Practices, and Action on Climate Change and Environmental Awareness of the Twenty-two Villages along the River Banks in Cagayan de Oro City, Philippines: PART II*, the researchers found out that the settlers' knowledge, attitudes, practices, and action on climate change was on a moderate level, with attitudes as the main domain, followed by knowledge, practices, and action. Due to this, their awareness did not do much in involving themselves in river conservation, protection, and sustainability. The researchers concluded that intervention is needed to improve the settlers' awareness to feel, think, and act responsibly to protect both public health and the environment.

### **Health and Climate Change**

Moreover, a study entitled "*Measuring National Environmental Health Association (NEHA) Member Attitudes, Awareness, and Behaviors on Climate Change: Results From Three Consecutive Annual Surveys*" written by



McAdams, et.al. (2019) showed that NEHA members' attitudes on climate change were focused on health impacts and they wanted to call for urgent action regarding the matter. They also agreed on the U.S. need to use wind, solar, natural gas energy sources.

A research was conducted by Sulistyawati, et.al. (2017) entitled "*Assessment of Knowledge regarding Climate Change and Health among Adolescents in Yogyakarta, Indonesia*" and the study result showed that the respondents had a low and inconsistent understanding on climate change and its health impact. Furthermore, the respondents said that they prefer to get climate information through talking with family.

### **Local People's Perception of Climate Change**

The empirical study conducted by Pondorfer (2018) entitled *The Perception of Climate Change: Comparative Evidence from the Small-Island Societies of Bougainville and Palawan, Environmental Development*, is very significant. It is intended to investigate and compare the factors that influence local people's perception of climate change and understanding its causes in the coastal small island societies of Bougainville (Papua New Guinea) and Palawan (Philippines). Factors such as education, access to information via mobile phones and radios, and market integration increase people's awareness of climate change independent of their cultural background. These factors do not seem to affect people's understanding of the causes of climate change, while subjective vulnerability partly does. However, beliefs, values, and other short-term pressing problems (poverty and food security) limit understanding.

According to Owusu, et.al. (2019), in their article "*Gendered Perception and Vulnerability to Climate Change in Urban Slum Communities in Accra, Ghana*," gender and poverty were the determining factors. The results showed that though climate change is hazardous to the poor especially in the slums, their perceptions and knowledge differ by gender, age, educational status and place-based variables, wherein women showed lower awareness and more vulnerable than men despite similar levels of exposure. This was due to the women limited access to productive resources, poor housing conditions, low participation in adaptation decision-making, and the heavy responsibilities that they have. The researchers concluded that policy makers should make gender-sensitive and content-specific adaptive measures to cater to the needs of the people in the communities of the Global South.

### **Resilience to Climate Change**

In a study entitled *Building Institutional Resilience in the Context of Climate Change in Aurora, Philippines* conducted by Grefalda, et.al. (2019), Local Government Units (LGUs) were engaged in the process of preparing Climate and Disaster Risk Assessment (CDRA) and Local Climate Change Action Plan (LCCAP) to enhance its capacity. It was found out that Aurora's Local Government Units capacity was high in terms of anticipating risk, responding and recovering which was attributed to its ability to anticipate the potential impact of climate risks in each locality. The high capacity rate was due to the LGUs having an office in charge of disaster risk reduction and management helping them to respond quickly to emergencies and disasters. The study showed that in order for LGUs to effectively respond to climate

change, resources such as information, personnel and financial should be given attention. The correlation analysis showed that there is a strong relationship between expertise and position in all conditions while gender was moderately correlated in most conditions except on access rights and entitlements. There are three key areas that need to be developed, namely, staffing and human resources among offices, greater accessibility to external financial support, and knowledge management systems.

### **Adaptation and Mitigation Response to Climate Change**

In another study conducted by Zerrudo, Salain, and Salain (2017) entitled *Adaptation and Mitigation of Climate Change: Awareness of Basilan State College Freshman Students*, they found out that the overall awareness on adaptation and mitigation of climate change for both male and female freshman students was “occasionally” aware. This result implied that freshman students were irregular in adapting and mitigating practices in order to minimize the effects of climate change so the researchers recommended that concepts of climate change should be incorporated in science subjects in the school where the study was conducted.

Chao and Feng in their article *Scientific Basis of Climate Change and its Response* (2018) pointed out that there is no longer doubt that climate change is a real thing because there are so many reliable observations and researches that were already conducted. The observed changes in the climate system include the rise in land surface temperature, rise in sea surface temperature, rise in marine air temperature, sea level rise, and the melting of ice (snow, glacier) due to high temperature. Chao and Feng (2018) concluded

that governments, enterprises and the public must work together in order to address climate change.

### **Synthesis of Research Studies**

The similarities and differences of the present study and the previous studies were examined.

Previous studies and the present study have one thing in common. That is, they all tackle about climate change awareness in relation to attitudes and actions toward it.

The studies of DeLashmutt (2011); Piew research Center (2015); Lopez and Malay (2018); Rahman, et. Al. (2014); Hasan, et. al. (2019); Bondoc (2015); Barreda (2018); Magulod Jr. (2018); McAdams, et. al. (2019); Sulistyawati, et. al. (2017); Pondorfer (2018); Owusu, et. al. (2019), Grefalda, et. al. (2019); and Zerrudo, et. al. (2017) is in some way the same to the present study in the sense that the studies used climate change in determining the awareness and attitudes or response of their respondents.

The differences lie on the following:

1. The focus of the present study is Wesleyan ministers in Pangasinan.
2. The awareness and response of ministers on climate change will be used as basis for mitigation and adaptation framework in their particular context.

## Conceptual Framework

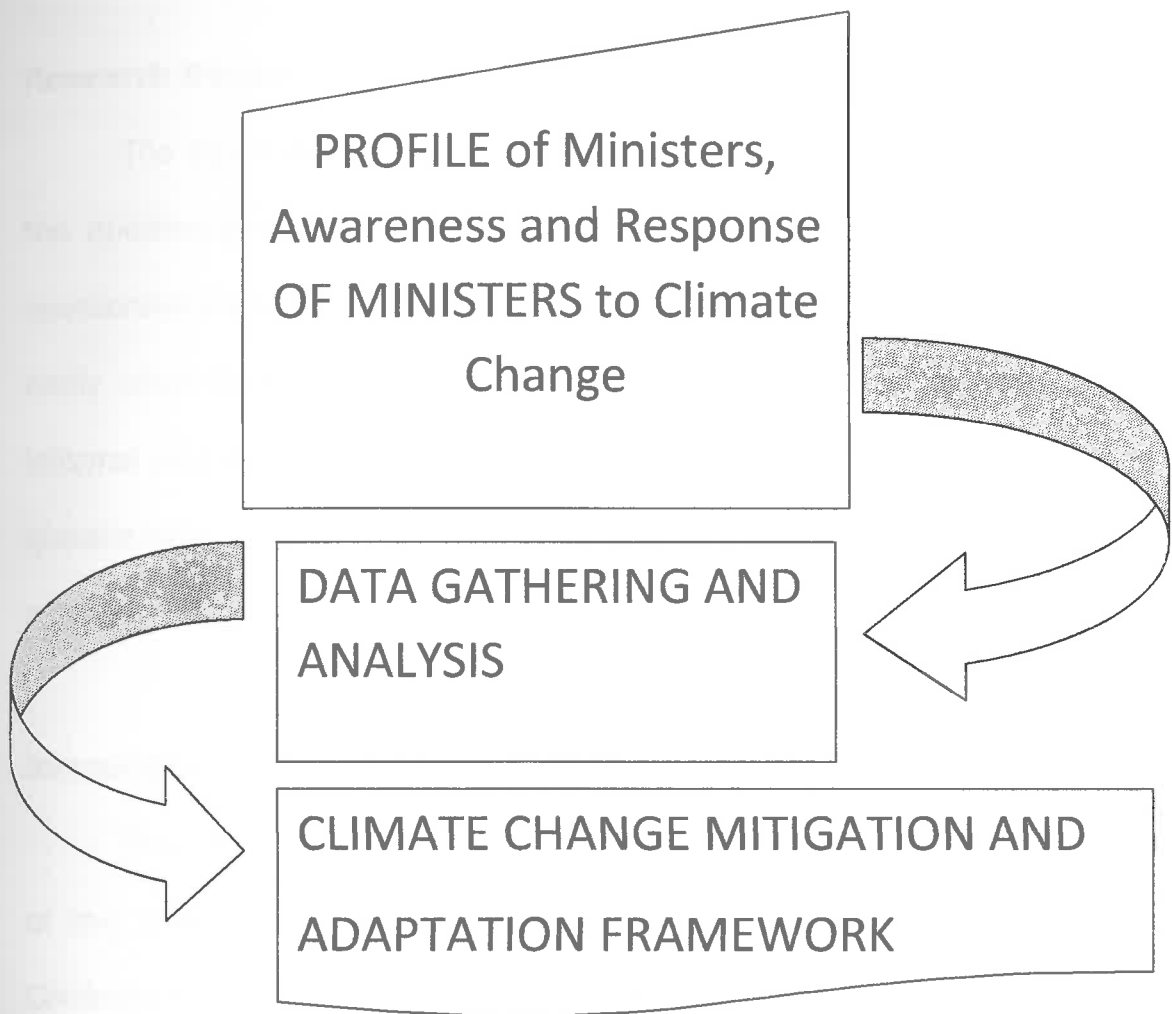


Figure 1. The profile of the ministers, awareness of ministers and response of ministers to climate change are the independent variables in this study. The dependent variable is the desired outcome, which is a climate change mitigation and adaptation framework.

## Chapter 3

### RESEARCH METHODOLOGY

#### Research Design

The researcher used the descriptive survey method of research with the questionnaire as the main instrument in the collection of data. The questionnaire was made as simple and as clear as possible so that it will be easily understood by the respondents. The data were supplemented by informal interviews and observations to verify some of the responses in the questionnaire and to gain additional information needed to give more substance to the study.

#### Respondents

The respondents of this study were 79 Pastors of the Wesleyan Church of the Philippines in Pangasinan who are duly recognized by the District Conference as ministers. The researcher distributed the questionnaires to all the ministers and had a chance to see some of them and their local churches.

#### Research Locale

The researcher selected the Ministers of Wesleyan Church in Pangasinan who are assigned in different churches in the province as shown in Figure 2. There are two (2) district superintendents supervising the churches and the ministers in the area. The Wesleyan ministers and their churches are located in the following municipalities/cities and these are:

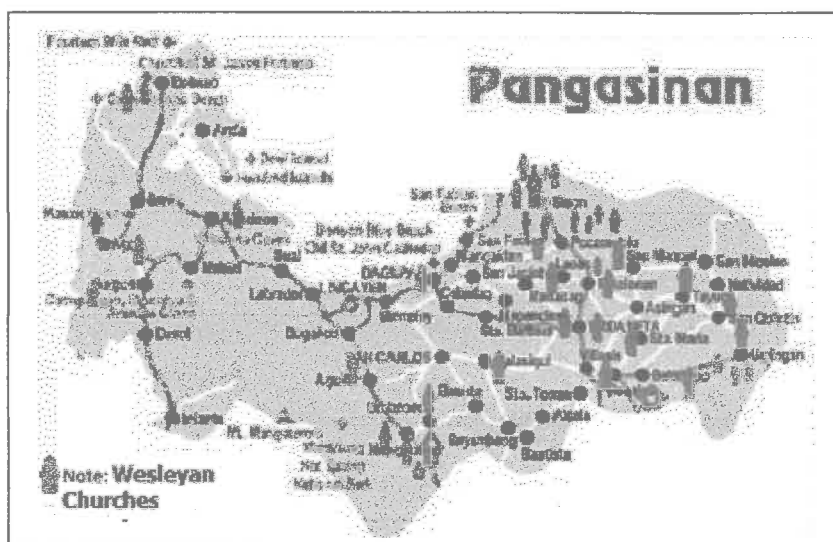
Bolinao, Burgos, Agno, Alaminos, Aguilar, Mangatarem, Urbiztondo,

Malasique, Sta. Barbara, Dagupan, Laoac, Urdaneta, Sta. Maria, Tayug, San Quintin, Rosales, Umingan, Binalonan, San Manuel, Pozzorobio and Sison.

Figure 2.  
Distribution of  
Wesleyan  
Churches in  
Pangasinan

Source:

<http://pang-tube.blogspot.com/2008/02/pangasinan-map.html>



## Research Instrument and Its Validation

The Survey questionnaire that was used in this study was formulated based on the common scientific findings on climate change. The researcher based the questionnaire on awareness to climate change from the Climate Reality Project and from the Philippine climate risk index. The questions on response to climate change are the common mitigation and adaptation responses to climate change.

In order to establish the validity of the questionnaire, the research instrument was pre-tested and evaluated by Wesleyan ministers from other Wesleyan Church districts. The result of the pre-test and evaluation helped the researcher to redesign, reword, restructure and remove unnecessary items in the survey questionnaire.

### **Data Collection Procedures**

There were several steps in the gathering of data in order for the study to be completed. The researcher wrote a letter to the two District Superintendents (DS) in Pangasinan asking for permission to do his study in their respective districts. Moreover, the District Superintendents were informed of the purpose of the researcher and were encouraged to ask their ministers to participate in the study.

Upon the approval of the District Superintendents, the questionnaires were given to the ministers. The District Superintendents even extended their help in the distribution and retrieval of questionnaires.

### **Statistical Treatment of the Data**

All the data were consolidated and were analyzed by the official statisticians of Pangasinan State University, School of Advanced Studies. SPSS was the main tool in the treatment of data. Frequency counts and percentages were used to address the stated problems in the study.



## Chapter 4

### PRESENTATION, ANALYSIS OF DATA AND INTERPRETATION OF FINDINGS

This chapter presents the necessary gathered data, analyzed and interpreted in answer to the specific questions of this study. The data were organized, tabulated, statistically treated and analyzed.

#### The Profile of the Wesleyan Ministers in Pangasinan

This investigation discusses the profile of the respondents in relation to the following attributes: gender, age, civil status, educational attainment, ministerial status, number of years in the ministry, climate change seminars (church-sponsored and government' sponsored) attended and number of vehicles and appliances owned by the Wesleyan ministers.

Table 1 shows the distribution and percentage of the respondents according to gender, age, civil status, educational attainment, ministerial status and number of years in the ministry.

It can be noted from Table 1 that there are more male ministers (54.43%) than female ministers (45.57%) and most of them are ages 40-59 (43.04%). The number of female ministers shows that the Wesleyan Church of the Philippines in Pangasinan welcomes female ministers and this is true to all Wesleyan Churches all over the world. According to the article *The Divide Over Ordaining Women*, unlike other major religious groups namely Roman Catholics,

Southern Baptists, Mormons (Latter-day Saints), Muslims, Missouri Synod Lutherans, and the Orthodox Church in America, which do not ordain women or allow them to lead congregations (Masci, 2014), women ministers in all Wesleyan churches are allowed to lead and can be ordained. Most of the ministers are college graduate (79.75%) and very few of the ministers took further studies after college. There is only one minister with doctorate degree and only three ministers with master's degree. It is notable that most of the respondents are ordained ministers (44.30%). In the Wesleyan Church of the Philippines, ordained minister is the highest ministerial status and ordination is the highest honor that is given to the ministers (The Discipline of the Wesleyan Church, 2019). Finally, it can be noted that the greater number of ministers (35.44%) are just in their first to fifth year of ministry and this is followed by those who are more than 20 years (30.38%) in the ministry.

Table 1  
Profile of the Wesleyan Ministers

Variable		Frequency	Percent
Sex	Male	43	54.43
	Female	36	45.57
Age	17 - 19	2	2.53
	20 - 39	28	35.44
	40 - 59	34	43.04
	60 and above	15	18.99
Civil Status	Single	14	17.72
	Married	62	78.48
	Widow	3	3.80
Educational Attainment	High School Graduate	12	15.19
	College Graduate	63	79.75
	With Master's Degree	3	3.80
	With Doctorate Degree	1	1.27
Ministerial Status	Student Minister	4	5.06
	Licensed Minister	24	30.38
	Licensed Deacon/Deaconess	5	6.33
	Ordained Deacon/Deaconess	11	13.92
	Ordained Minister	35	44.30
Number of Years in the Ministry	1 - 5 years	28	35.44
	6 - 10 years	11	13.92
	11 - 15 years	8	10.13
	16 - 20 years	8	10.13
	more than 20 years	24	30.38

Table 2 shows the frequency and percentage of the number of vehicles and appliances owned by Wesleyan ministers.

Variable		Frequency	Percent
Number of vehicles Owned	0	26	32.91
	1	35	44.30
	2	13	16.46
	3	5	6.33
Number of appliances Owned	0	5	6.33
	1	3	3.80
	2	17	21.52
	3	14	17.72
	4 or more	40	50.63

The table shows that many (44.30%) of the Wesleyan ministers have at least one vehicle in their disposal. A vehicle is not really a status symbol but perhaps a necessity especially for ministers since they need to travel and visit their parishioners from time to time. For some people (Pojani et al, 2018) a car is a status symbol but it should not be for ministers. However the table also shows that some of the Wesleyan ministers (32.91) do not own any vehicle. Furthermore, the table shows that 50.63% of the respondents are enjoying the benefits of using four or more appliances at home. Appliances like television, washing machine, refrigerator, electric fan, gas stove and the like are already necessities nowadays.

Table 3 shows the distribution and percentage of respondents according to the number of climate change seminars they have attended.

Variable		Frequency	Percent
Church-sponsored Seminars	0	40	50.63
	1 - 10	21	26.58
	11 - 20	6	7.59
	more than 20	12	15.19
Government and NGOs-sponsored Seminars	0	52	65.82
	1 - 10	20	25.32
	11 - 20	3	3.80
	more than 20	4	5.06

Based on the table above, Wesleyan ministers are not really saturated with climate change seminars. Most (50.63%) and more than half of Wesleyan ministers have never attended a climate change seminar sponsored by the church. It is more serious with Government-sponsored climate change seminars, 65.82% have never attended. Pew Research Center (2015) found out in their study that church people or religious people do not care so much about climate change. That might also be true to the Wesleyan ministers in Pangasinan. Government-sponsored seminars must come to the rescue, if the churches do not care so much about climate change. Republic Act No. 9729 states that, "It shall be the policy of the State to enjoin the participation of national and local governments, businesses, nongovernment organizations, local communities and the public to prevent and reduce the adverse impacts of climate change..." Why

not call the attention of the ministers in the local communities? Ministers are significant public figures and they can influence their congregations. Veldman, et. Al. (2014) said that religious leaders are respected and many people accept their authority.

### **Awareness of Wesleyan Ministers to Climate Change**

This investigation discusses the awareness of the respondents to the causes and impact of climate change.

Causes	Frequency	Percentage
1. Pollution (from factories, burning of fossils)	54	68.35
2. Cutting of trees/logging/deforestation/kaingin	45	56.96
3. Burning of garbage	28	35.44
4. Improper waste disposal	22	27.85
5. Use of fertilizers/pesticides	11	13.92
6. Natural Calamities/volcanic eruption	6	7.59
7. Mining/quarrying	5	6.33
8. Abuse of natural resources	5	6.33
9. Natural decomposition	4	5.06
10.Intensive Fishing/Illegal fishing	4	5.06
11.Over population	3	3.80

Table 4 shows the distribution and percentage of the causes of climate change according to the Wesleyan ministers in Pangasinan.

Wesleyan ministers in Pangasinan have identified eleven causes of climate change. Among the causes of climate change identified by the respondents, pollution has the highest percentage (68.35%) and over population has the lowest percentage (3.80). It can be noted that most of the causes of climate change identified by the respondents fall under human activities. NASA identified most of the causes of climate change as results of human activities and these activities release greenhouse gases into the atmosphere which eventually affect the earth's climate system (NASA, 2020). Most of the greenhouse gases are produced through deforestation, land use changes, burning fossil fuels, agriculture, soil cultivation practices, especially rice cultivation, manure management associated with domestic livestock, use of commercial and organic fertilizers, nitric acid production, biomass burning, the decomposition of wastes in landfills, and industries. NASA also identified the natural causes of climate change such as volcanic eruption, respiration, decomposition of waste materials and water vapor. Very few of the respondents (7.59%) identified natural causes such as volcanic eruption and other natural calamities. This picture shows that in the context of the respondents, human activities contributing to climate change are very clear. Among the respondents are a few keen observers (3.80%) noting over population as one of the causes of climate change. National geographic society highlights overpopulation as one of the causes of climate change (National Geographic Society, 2020). However the table also shows that among the identified causes, only two causes are known by at least

50% of the respondents and these are pollution (68.35%) and deforestation (56.96%) while the other nine causes fall below 50%. This shows that climate change awareness campaign is necessary in order to elevate the awareness of ministers to at least 90% or even 100% to all causes of climate change in their particular context. As a result of this study, the causes of climate change that are not mentioned are nitric acid production, water vapour, respiration and other natural causes like changes in earth's orbit, ocean circulation and temperature, tectonic movements and increasing brightness of the sun (Britannica, 2020). Greenhouse gases and greenhouse effect is not also identified and the researcher wants this aspect to be explained clearly to the respondents.

Table 5 shows the impact or effects of climate change according to the Wesleyan ministers in Pangasinan. The results show that among the impact identified by the respondents, flooding has the greatest percentage (64.56%) and the least that were identified are sea level rise, reduced water supply and fish kill with similar percentages (2.53%). Flooding is really a common scenario during typhoons and thunderstorms in Pangasinan and it is also broadcasted in televisions, radios and social media. Sea level rise and fish kill are identified because a number of the Wesleyan ministers are assigned in Dagupan, Bolinao, Agno, and Burgos which are very close to the sea. However, it is of great importance to highlight a little misconception shown in the table and that is including pollution (3.80%) as one of the impact of climate change. This is a slight misconception that needs to be addressed. Pollution is rightly considered

as one of the causes and not an impact of climate change.

Table 5  
Impact of Climate Change According to the Wesleyan Ministers

Impact of Climate Change	Frequency	Percentage
Flooding	51	64.56
Health problems	30	37.97
Increased temperature/global warming	21	26.58
Typhoons/Abnormal weather conditions	13	16.46
Landslide/erosion	12	15.19
Drought	11	13.92
Heavy Rain	6	7.59
Natural disasters	6	7.59
Destruction of the ozone layer	5	6.33
Affects farming	5	6.33
Loss of livelihood	5	6.33
Reduced food supply	4	5.06
Effect on global economy	4	5.06
Pollution*	3	3.80
Poverty	3	3.80
Rising sea level	2	2.53
Reduced water supply	2	2.53
Fishkill	2	2.53

Note: pollution is one of the causes of climate change but consider by some ministers as impact.

Climate Reality Project (2019) identified three ways that climate change affects people's lives. These are effects on health, home and food. Basically, Wesleyan ministers identified these basic effects but in some areas were on a little percentage. These are the same impact that Global Climate Risk Index identified as risks affecting the Philippines especially typhoon, flooding, and increased rainfall in Luzon (Germanwatch, 2019). Only flooding is known as an impact by at least 64% of the respondents and the rest fall under the 50% mark. There are other climate change impact that were not identified by the



respondents such as loss of wildlife habitation and loss of wildlife species, depletion of arctic ice and the dangerous devastation due to wildfire (Conserve Energy Future, 2020). Climate change awareness campaign is necessary in order to elevate the awareness of Wesleyan ministers to at least 90% or even 100% to all impacts of climate change in their particular context.

### **Sources of Information on Climate Change**

This investigation discusses the sources of information of the respondents about climate change.

Sources	Frequency	Percentage
Television (T.V.)	69	87.34
Radio	38	48.10
Social Media	63	79.75
Online Resources	37	46.84
Newspapers	30	37.97
Seminars	33	41.77
Magazines	22	27.85
Pastoral Messages	37	46.84
Conversation with common people	47	59.49
Conversation with experts	14	17.72
Books	24	30.38
Pamphlets	10	12.66

Table 6 shows the sources of information on climate change by the respondents. According to the table, television (T.V.) is the primary source of information (87.34%) for most of the respondents, followed by social media (79.75%) and conversation with common people (59.49%) respectively. A similar result is found in the study of Lopez and Malay (2018) indicating television and social media as major sources of climate change information. Interaction and sharing of knowledge with other people is a good avenue of climate knowledge sharing but to be with experts is also necessary. Some of the respondents (17.72) are privileged to talk with people who have greater knowledge of climate change issues. Generally the picture of the table shows a balanced source of information on climate change. The use of print media like newspapers (37.97%), books (30.38%), magazines (27.85%) and pamphlets (12.66%) is still a good source of information for ministers. And it is worth mentioning that one of the sources of information on climate change is pastoral messages (46.84%).

### **Activities Observed in the Locality that Contribute to Climate Change**

This investigation discusses the activities observed by the respondents in the locality that contribute to climate change.

Based on Table 7, use of vehicles (39.24), burning of garbage (39.2) and throwing of garbage everywhere (32.91) have been very highly observed by at least 30% of the Wesleyan ministers in their local communities. On the other hand, deforestation is least observed by the respondents (34.18).

**Table 7**  
**Activities Observed in the Locality that Contribute to Climate Change**

Activity	1		2		3		4		5	
	f	%	f	%	f	%	f	%	f	%
1. Burning of garbage.	4	5.06	7	8.86	21	26.6	16	20.3	31	39.2
2. Use of vehicles.	6	7.59	4	5.06	12	15.19	26	32.91	31	39.24
3. Land clearing/kaingin.	19	24.05	14	17.72	24	30.38	14	17.72	8	10.13
4. Massive use of fertilizers and pesticides	17	21.52	10	12.66	19	24.05	24	30.38	9	11.39
5. Large-scale poultry (chicken, ducks, etc.) production.	23	29.11	15	18.99	21	26.58	15	18.99	5	6.33
6. Large-scale animal (goat, cow) production.	22	27.85	16	20.25	26	32.91	11	13.92	4	5.06
7. Deforestation	27	34.18	5	6.33	26	32.91	11	13.92	10	12.66
8. Throwing of garbage everywhere.	18	22.78	4	5.06	17	21.52	14	17.72	26	32.91
9. High energy consumption.	12	15.19	8	10.13	19	24.05	23	29.11	17	21.52
10. Excessive use of water.	18	22.78	10	12.66	28	35.44	9	11.39	14	17.72

Rate

Descriptive Equivalence

- |   |                      |   |   |
|---|----------------------|---|---|
| 5 | Very Highly Observed | - | 81 – 100% of the population/household is doing the activity |
| 4 | Highly Observed      | - | 61 – 80% of the population/household is doing the activity  |
| 3 | Moderately Observed  | - | 41 – 60% of the population/household is doing the activity  |
| 2 | Fairly Observed      | - | 21 – 40% of the population/household is doing the activity  |
| 1 | Least Observed       | - | 1 – 20% of the population/household is doing the activity   |

In general, the table shows that all those activities contributing to climate change listed on Table 7 are being observed by the respondents in Pangasinan. That means, the province of Pangasinan must also act in order to limit these activities contributing to climate change and find ways to make and implement a

climate change mitigation and adaptation strategies. No wonder why in December 5, 2018, Pangasinan held its first climate change summit in Lingayen (FB, Province of Pangasinan, 2018). Governor Amado Espino III addressed the participants to act and respond to the threats brought by climate change. On the said climate summit, Vice Governor Jose Ferdinand Z. Calimlim, Jr. said that the provincial government will surely make an effort in easing the effects of climate change in localities of the province through legislative agenda. In March 13, 2019 another significant event was held in Pangasinan to address climate change concerns. The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) held a climate outlook forum to deal with climate change concerns in the province of Pangasinan (Inigo, 2019). The forum aims to call for a better understanding and action in dealing with climate change issues and thereby calling for practical mitigation strategies.

### **Level of Response of the Wesleyan Ministers to Climate Change**

As shown in Table 8, Wesleyan ministers in Pangasinan have a high response to climate change except for a moderate response on items 8-10, which are choosing organic food, choosing organic materials, and sharing of climate change knowledge. The results show that the respondents highly practiced conserving gas (45.57) followed by conserving water (43.04%) and conserving electricity (43.04%). The respondents indicated that sharing climate change knowledge to others is least practiced (13.92%) followed by choosing organic materials (10.13%), choosing organic food (10.13%) and avoid burning

garbage (10.13%). The overall average weighted mean (OAWM) on the level of response of Wesleyan ministers in Pangasinan to climate change is 3.76 which is equivalent to "highly practiced" (HP). In the study of Lubos and Lubos (2019), they found out that knowledge, attitudes, practices and action on of their respondents was on a moderate level and they interpreted that these factors did not do much in involving them in climate change activities. Hence, intervention was needed to improve awareness and action.

Table 8  
Level of Response of the Wesleyan Ministers to Climate Change

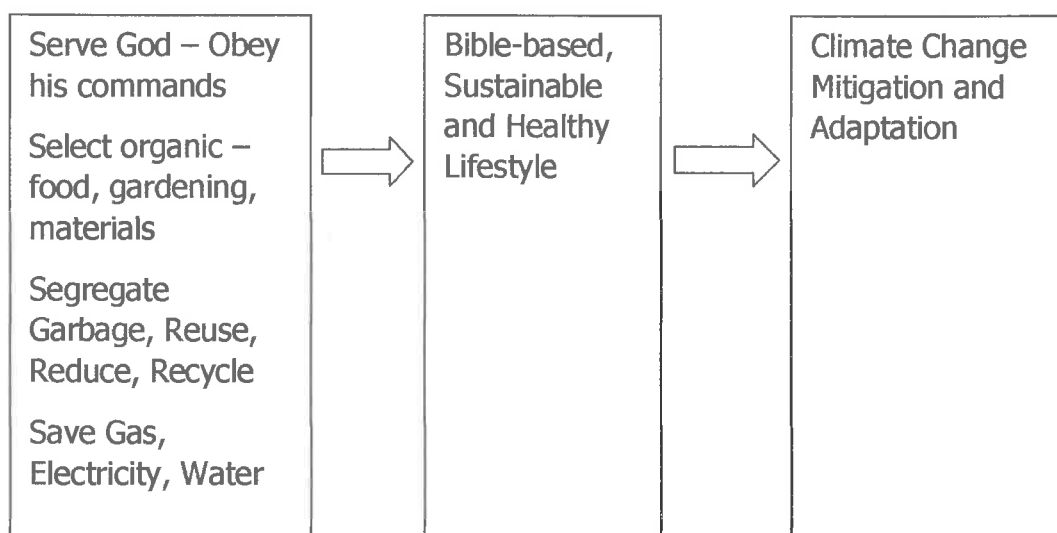
Response	1		2		3		4		5		AWM	Descriptive Rate
	f	%	f	%	f	%	f	%	f	%		
1. Avoid burning garbage	8	10.13	3	3.80	23	29.11	20	25.32	25	31.65	3.65	HP
2. Segregate garbage	3	3.80	8	10.13	18	22.78	19	24.05	31	39.24	3.85	HP
3. Reduce, reuse and recycle materials	4	5.06	6	7.59	22	27.85	21	26.58	26	32.91	3.75	HP
4. Conserve electricity	4	5.06	5	6.33	16	20.25	20	25.32	34	43.04	3.95	HP
5. Conserve water	2	2.53	4	5.06	15	18.99	24	30.38	34	43.04	4.06	HP
6. Conserve Gas	2	2.53	5	6.33	11	13.92	25	31.65	36	45.57	4.11	HP
7. Plant Trees/Flowers	6	7.59	4	5.06	14	17.72	24	30.38	31	39.24	3.89	HP
8. Choose organic materials	8	10.13	8	10.13	22	27.85	22	27.85	19	24.05	3.46	MP
9. Choose organic food	8	10.13	10	12.66	21	26.58	20	25.32	20	25.32	3.43	MP
10. Share climate change knowledge to others	11	13.92	5	6.33	22	27.85	19	24.05	22	27.85	3.46	MP
OAWM											3.76	HP

Rate

Descriptive Equivalence

5	Very Highly Practiced -	Practiced 81 - 100% of the time
4	Highly Practiced -	Practiced 61 - 80% of the time
3	Moderately Practiced -	Practiced 41 - 60% of the time.
2	Fairly Practiced -	Practiced 21 - 40% of the time.
1	Least Practiced -	Practiced 1 - 20% of the time.

## Climate Change Mitigation and Adaptation Framework for the Wesleyan Ministers in Pangasinan



1. Implement Gardening – Church (District) to the ministers - members
  - Gardening can be done in the backyard, rooftop, or any space that can allow plants to grow (trees, flowers, vegetables)
  - Since the respondents have limited space in their assigned churches, they can use containers for planting – any container will do – recycled and reusable materials must be encouraged.
  - The advantage of container gardening is being able to move your plants if it is too hot, too cold, windy, during typhoon and flood.
  - Segregation of garbage must be imposed – some will be recycled, reused and biodegradable materials must be placed in a compost pile/pit to be used as fertilizers.
2. Implement Walking/Biking – Church (District) to the ministers - members
  - When visiting parishioners or going for an errand nearby, walk, if necessary use a bicycle.

Figure 3. A climate change mitigation and adaptation framework developed for Wesleyan ministers in Pangasinan.

Finally, basing from the data gathered, a climate change mitigation and adaptation framework is developed.

### **Goal**

The goal of this framework is to position Wesleyan ministers as climate change mitigation and adaptation agents by following a model which is tailored to their own context, making their lifestyle more sustainable and healthier one.

### **Legal References**

These policies are necessary so that Wesleyan ministers will realize that they are working in partnership with the Government.

1. RA 9729

The state should include everyone and every institution that exist in the land to fight the negative effects of climate change. A policy of partnership, cooperation, and collaboration must be made in order to maximize our meagre resources (lawphil, 2009).

2. National Framework Strategy on Climate Change (2010-2022)

The key areas to be addressed by mitigation are energy efficiency conservation, renewable energy, environmentally sustainable transport, national REDD+ Strategy and waste management while the key areas in

adaptation are enhanced vulnerability and adaptation assessment, integrated ecosystem based management, climate-responsive agriculture, water governance and management, climate responsive health sector, and disaster risk reduction and management. The national framework strategy finds synergy between adaptation and mitigation and as expressed, mitigation is a function of adaptation (NEDA, 2013).

### **Biblical References**

1. Genesis 1:26-28

This biblical passage talks about how God created human beings and his mandate for man to be the great keeper of His creation. God created man in his own likeness and God commanded man to take care of the earth and all that is in it including birds and other animals. God created human being as a man and a woman to be able to bear children and occupy the whole earth and subdue it.

2. Genesis 2:15

This biblical passage is a reference to God's command for man to be a good steward of His creation.

God wants us to keep the earth in good shape and not to exploit it. This is a beautiful place that God has given us. If we choose to abuse it, we will soon regret it for the rest of our lives (Wellman, 2015).



## **Significant Areas of Intervention from the**

### **Data Gathered and Analyzed**

- A. Limited awareness of most Wesleyan Ministers on the causes of climate change.
1. Commonly identified causes of climate change by 50 to 68 percent of the respondents.
    - a. Pollution
    - b. Cutting of trees
  2. Known by 13 to 35 percent of the respondents.
    - a. Burning garbage
    - b. Improper waste disposal
    - c. Use of fertilizers/pesticides
  3. Known by 3 to 8 percent of the respondents.
    - a. Over-population
    - b. Intensive fishing
    - c. Natural decomposition
    - d. Abuse of natural resources
    - e. Mining/quarrying
    - f. Volcanic eruption/natural calamities
  4. The causes of climate change that are not mentioned by the respondents are agriculture, soil cultivation practices, especially rice cultivation, livestock ranching, nitric acid production, water vapour,

respiration and other natural causes like changes in earth's orbit, ocean circulation and temperature, tectonic movements, increasing brightness of the sun and greenhouse gases and greenhouse effect.

B. Limited awareness of most Wesleyan Ministers on the impact of climate change.

1. Flooding is the only impact of climate change that is identified by 65 percent of the respondents.
2. Health risks is identified by 38 percent of the respondents.
3. Increased temperature/global warming is known by 27 percent of the respondents.
4. Other impact identified by 3 to 16 percent - typhoons/abnormal weather conditions, landslide/erosion, drought, heavy rain, natural disasters, destruction of the ozone layer, affects farming, loss of livelihood, reduced food supply, effect on global economy, pollution, poverty, rising sea level, reduced water supply and fish kill.
5. There are other climate change impact that were not identified by the respondents such as loss of wildlife habitation and loss of wildlife species, depletion of arctic ice and the dangerous devastation due to wildfire.

C. A slight misconception on the impact of climate change and that is to include pollution as an impact of climate change.

- D. Various activities contributing to climate change observed by the respondents in Pangasinan.
- E. The need to continue and fortify the mitigation and adaptation response to climate change by the Wesleyan ministers in Pangasinan.
- F. Share climate change knowledge, select organics and avoid burning of garbage are least practiced by some Wesleyan ministers in Pangasinan.

**Very Highly Practiced Mitigation and Adaptation Responses by 30 to 45 percent of Wesleyan Ministers**

- A. Conserve Gas
- B. Conserve Energy
- C. Conserve water
- D. Plant trees/flowers
- E. Reduce, recycle, reuse materials
- F. Segregate garbage

**Plan of Action**

- A. Conduct a climate change awareness seminar – This will address the limited awareness and misconception of Wesleyan ministers in Pangasinan on the causes and impact of climate change.
- B. Prepare and distribute pamphlets about climate change; its meaning, its causes, and its impact.

- C. Call for a song composition contest among ministers about the duty of every Christian to be a good steward of God's creation.
- D. Engage Wesleyan ministers in a Bible-based, Sustainable and Healthy Lifestyle based on the very highly practiced mitigation and adaptation responses that transpired.

## **Chapter 5**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

This chapter presents the summary of significant findings, conclusions generated from the findings and recommendations based from the conclusions.

#### **SUMMARY**

Climate change is happening and the world is a witness to its manifestations and impact. This study is focused on the awareness and response of Wesleyan ministers in Pangasinan to climate change. The researcher recognizes the authority and influence of every minister in every issue facing the church. If ministers are outstanding in their view of climate change, they can surely make an impact and influence to their congregations and communities. The aim of this study is to know the actual awareness and response of the respondents to climate change in order to develop a climate change mitigation and adaptation framework. The researcher is looking forward to the active involvement of the respondents in the climate change agenda.

The descriptive survey method of research was used with the questionnaire as the main instrument in the collection of data. There were 79 ministers that served as respondents from Wesleyan churches in Pangasinan. The data were supplemented by informal interviews and observations to verify some of the responses in the questionnaire and to gain

additional information needed to give more substance to the study. Frequency counts and percentages were used to address the stated problems in the study.

## **Findings**

The following are the significant findings of this study:

1. On the profile of the respondents, there are more male ministers (54.43%) than female ministers (45.57%) and many of them are ages 40-59 (43.04%). Most of the respondents are college graduate (79.75%) and very few of them (about 5%) took further studies after college. There is only one respondent with doctorate degree and only three of them with master's degree. Many of the respondents are ordained ministers (44.30%) and the greater percentage of them (35.44%) is just in their first to fifth year of ministry. Furthermore, a number (44.30%) of the respondents have at least one vehicle in their disposal and more than half of them (50.63%) are enjoying the benefits of using four or more appliances at home. Finally on their profile, more than half (50.63%) of the respondents have never attended a climate change seminar sponsored by the church, and more serious is that 65.82% have never attended Government-sponsored climate change seminars.
2. The respondents have identified eleven causes of climate change and these are pollution, cutting of trees, burning garbage, improper waste disposal, use of fertilizers/pesticides, over-population, intensive fishing,

natural decomposition, abuse of natural resources, mining/quarrying, volcanic eruption/natural calamities . Among the causes of climate change identified by the respondents, pollution has the highest percentage (68.35%) and over population has the lowest percentage (3.80). Very few of the respondents (7.59%) identified natural causes such as volcanic eruption and other natural causes. Among the respondents are a few keen observers (3.80%) noting over population as one of the causes of climate change. However, among the identified causes, only two causes is known by at least 50% of the respondents and these are pollution (68.35%) and deforestation (56.96%) while the other nine causes fall below 50 percent. The respondents failed to identify agriculture, soil cultivation practices, especially rice cultivation, livestock ranching, nitric acid production, water vapor, respiration and other natural causes like changes in earth's orbit, ocean circulation and temperature, tectonic movements, increasing brightness of the sun and greenhouse gases and greenhouse effect.

3. Among the impact identified by the respondents, flooding has the greatest percentage (64.56%) and the least that were identified are sea level rise, reduced water supply and fish kill with similar percentages (2.53%). However, there is a slight misconception by a few and that is to include pollution (3.80%) as one of the impact of climate change. Only flooding is known as an impact of climate change by at least 64% of the Wesleyan ministers and the rest such as

typhoons/abnormal weather conditions, landslide/erosion, drought, heavy rain, natural disasters, destruction of the ozone layer, affects farming, loss of livelihood, reduced food supply, effect on global economy, pollution, poverty, rising sea level, reduced water supply and fish kill, fall under the 50% mark. There are other impact of climate change that were not identified by the respondents and these are loss of wildlife habitation and loss of wildlife species, depletion of arctic ice and the dangerous devastation due to wildfire.

4. Television (T.V.) is the primary source of information (87.34%) for most of the respondents, followed by social media (79.75%) and conversation with common people (59.49%) respectively. Just a few of the respondents (17.72) are privileged to talk with people who have greater knowledge of climate change issues. The use of print media like newspapers (37.97%), books (30.38%), magazines (27.85%) and pamphlets (12.66%) is still a good source of information for the respondents. As expected, one of the sources of information on climate change is pastoral messages (46.84%).
5. The use of vehicles (39.24%), burning of garbage (39.2%) and throwing of garbage everywhere (32.91%) are very highly observed by at least 30% of the Wesleyan ministers in their local communities. On the other hand, deforestation is least observed by the respondents (34.18%).
6. Many of the respondents highly practiced conserving gas (45.57%) followed by conserving water (43.04%) and conserving electricity



(43.04%). The respondents indicated that sharing climate change knowledge to others is least practiced (13.92%) followed by choosing organic materials (10.13%), choosing organic food (10.13%) and avoid burning garbage (10.13%). The overall average weighted mean (OAWM) on the level of response of Wesleyan ministers in Pangasinan to climate change is 3.76 which is equivalent to "highly practiced" (HP).

7. From the data gathered, the researcher unearthed mitigation and adaptation framework suited for the respondents that is supported biblically and anchored to the national climate change framework.

### **Conclusions**

Based on the findings of this study, the following conclusions were generated:

1. Unlike other denominations, the Wesleyan Church allows women to the pastoral ministry having the same privileged like men to be ordained. Most of the ministers are college graduate and a handful pursued graduate studies to further their professional growth and development. Most of them are ordained ministers and the greater number is just in their first to fifth year of ministry. Furthermore, most of the respondents have a vehicle in their disposal and they are enjoying the benefits of using four or more appliances at home. Most of the Wesleyan ministers have never attended a climate change seminar

sponsored by the church and almost all of them have never attended Government-sponsored climate change seminars.

2. The Wesleyan Ministers have limited knowledge on the causes and impact of climate change.
3. The Wesleyan Ministers rely on various sources of information on climate change including pastoral messages and online resources.
4. Activities contributing to climate change are being observed in the localities which include the use of vehicles, burning of garbage and throwing of garbage everywhere.
5. Conserving energy is the common response of Wesleyan Ministers to climate change.

## **Recommendations**

Based on the conclusions generated, the researcher recommends the following:

1. Wesleyan ministers can become climate change mitigation and adaptation agents if they are given proper training. The Wesleyan Church can provide climate change seminars for the Wesleyan Ministers.
2. The Wesleyan churches or ministers can initiate partnership with government and non-government agencies in the climate change agenda.
3. Ministers are encouraged to go for further studies and they may also explore other means to widen their professional armory.

4. Ministers must continue getting updated information on climate change by reading books, magazines, and online resources to enrich their awareness.
5. Wesleyan ministers should continue to conserve renewable and non-renewable energy, choose organics, and share climate change knowledge.
6. Wesleyan ministers may adopt the climate change mitigation and adaptation framework to have a Bible-based, sustainable and healthier lifestyle.
7. Future researchers may conduct a parallel study with other agencies of the government covering other variables not included in this study.

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## LETTER TO THE DISTRICT SUPERINTENDENT

Wesleyan Bible College  
Rosales, Pangasinan

June 2020

Dear Rev. \_\_\_\_\_:

Warm Christian greetings!

I have the honor to ask permission to float my questionnaire to the ministers in your district. This is in connection with my doctoral course for Doctor of Philosophy, major in Development Studies degree at Pangasinan State University, Urdaneta City, Pangasinan.

The title of my dissertation is "AWARENESS AND RESPONSE OF WESLEYAN MINISTERS IN REGION 1 TO CLIMATE CHANGE: BASIS FOR A CLIMATE CHANGE MITIGATION AND ADAPTATION FRAMEWORK."

Rest assured that the information gathered will be held confidential. Your kind understanding, encouraging your ministers to participate in this undertaking and approval of this request is highly appreciated.

Respectfully yours,

(SGD) **RHEYNIL AMBONI SAGUD**  
Researcher

A Questionnaire on the Awareness and Response of Wesleyan  
Ministers in Pangasinan to Climate Change: Basis for a Climate Change  
Mitigation and Adaptation Framework

Name: (optional) \_\_\_\_\_

District: \_\_\_\_\_

Local Church: \_\_\_\_\_

**Part 1: Minister's Profile**

Instruction: Please put a "check" mark on the space (\_\_\_) that best describe you.

**A. Gender**

1. Male (\_\_\_)
2. Female (\_\_\_)

**B. Age (Please write):** \_\_\_\_\_

**C. Educational Attainment**

1. High School Graduate (\_\_\_)
2. College Graduate (\_\_\_)
3. Masterate (\_\_\_)
4. Doctorate (\_\_\_)

**D. Civil Status**

1. Single (\_\_\_)
2. Married (\_\_\_)
3. Widow (\_\_\_)

**E. Ministerial Status**

1. Student Minister(\_\_\_)
2. Licensed Minister(\_\_\_)
3. Licensed Deacon/Deaconess(\_\_\_)
4. Ordained Deacon/Deaconess(\_\_\_)



5. Ordained Minister(\_\_\_\_)

F. Years in the Ministry

1. 1-5 years (\_\_\_\_)
2. 6 – 10 years (\_\_\_\_)
3. 11 – 15 years (\_\_\_\_)
4. 16 – 20 years (\_\_\_\_)
5. 21 and above (\_\_\_\_)

G. No. of vehicles/motorcycles

1. 1 (\_\_\_\_)
2. 2 (\_\_\_\_)
3. 3 (\_\_\_\_)
4. 4 and above (\_\_\_\_)

H. No. of appliances used at home

1. 1 (\_\_\_\_)
2. 2 (\_\_\_\_)
3. 3 (\_\_\_\_)
4. 4 and above (\_\_\_\_)

I. No. of seminars attended sponsored by the church (Please write): \_\_\_\_\_

J. No. of seminars attended sponsored by the government (Please write): \_\_\_\_\_

Part II. Awareness of Ministers on the causes and impact of Climate Change (The Climate Reality Project).

A. With your knowledge, please write the possible **CAUSES** of climate change. Use the space provided for.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

B. With your knowledge, please write the possible **IMPACT** of climate change. Use the space provided for.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

Part III. Sources of information about climate change. Please identify your sources of information regarding climate change.

- |                         |   |
|-------------------------|---|
| _____ 1. T.V.           | _____ 7. Magazines                      |
| _____ 2. Radio          | _____ 8. Pastoral messages              |
| _____ 3. Social Media   | _____ 9. Conversation with other people |
| _____ 4. Online sources | _____ 10. Conversation with experts     |
| _____ 5. Newspapers     | _____ 11. Books                         |
| _____ 6. Seminars       | _____ 12. Pamphlets                     |

Others (please write): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Part IV. Activities observed in the locality that contribute to climate change.

Please indicate your answer by putting a "check" mark on the space provided for after each indicator to determine the level of your awareness.

Rate	Descriptive Equivalence	
5	Very Highly Observed	81 – 100% of the population/household is doing the activity
4	Highly Observed	61 – 80% of the population/household is doing the activity
3	Moderately Observed	41 – 60% of the population/household is doing the activity
2	Fairly Observed	21 – 40% of the population/household is doing the activity
1	Least Observed	1 – 20% of the population/household is doing the activity

Activity	5	4	3	2	1
1. Burning of garbage.					
2. Use of vehicles.					
3. Land clearing/kaingin.					
4. Massive use of fertilizers and pesticides.					
5. Large-scale poultry (chicken, ducks, etc.) production					
6. Large-scale animal (goat, cow, etc.) production					
7. Deforestation					
8. Throwing of garbage everywhere.					
9. High energy consumption.					
10. Excessive use of water.					

### Part V. Response of Ministers to Climate Change.

Please indicate your answer by putting a "check" mark on the space provided for after each indicator to determine the level of your response to address climate change.

Rate	Descriptive Equivalence	
5	Very Highly Observed	Practiced 81 – 100% of the time
4	Highly Observed	Practiced 61 – 80% of the time
3	Moderately Observed	Practiced 41 – 60% of the time
2	Fairly Observed	Practiced 21 – 40% of the time
1	Least Observed	Practiced 1 – 20% of the time

Response	5	4	3	2	1
1. Avoid burning garbage					
2. Segregate garbage					
3. Reduce, reuse and recycle materials					
4. Conserve electricity					
5. Conserve water					
6. Conserve gas					
7. Plant trees/flowers					
8. Choose organic materials					
9. Choose organic food					
10. Share climate change knowledge to others					

B. If you have other innovative/new and creative practices in order to reduce the risks of climate change, please enumerate it below:

- 1.
- 2.
- 3.
- 4.
- 5.

## CONTENT VALIDATION OF THE QUESTIONNAIRE

NAME: \_\_\_\_\_

DESIGNATION: \_\_\_\_\_

**Direction:** Read each statement in the Evaluation Sheet and rate each item using the scale below by putting a **check (/) mark** on the appropriate column of the evaluation sheet.

5 – Highly Valid = No flaws observed, nothing more is desired to make it better.

4 – Valid = Very little flaws are observed, minor recording of few items needed.

3 – Moderately Valid = The overall usefulness is diminished only slightly.

2 – Fairly Valid = Several flaws are observed; overall usefulness is greatly diminished

1 – Not Valid = Major revision is needed to make it useful.

Statements	Scale				
	5	4	3	2	1
1. All the directions in the instrument are clear.					
2. Each of the items/statements is clearly stated.					
3. Each of the items/statements is readable.					
4. The instrument is comprehensive, e.g. it covers all areas that are important to the study.					
5. The items/statements in each concept correspond to the subject matter/topic.					
6. The items/statements in each concept are consistent to reality.					
7. The items/statements in each concept show a reasonable range of variation.					
8. The items are formulated in accordance to the explicit/implicit objectives of the study.					
9. The items are systematically and sequentially arranged.					
10. The items do not overlap with each other.					

\_\_\_\_\_  
Evaluator's Signature

Date: \_\_\_\_\_

## CURRICULUM VITAE

### PERSONAL INFORMATION

**NAME : Rheynil Amboni Sagud**

**BIRTHDAY :** January 5, 1976

**PARENTS:** Reynaldo Villanueva Sagud

Nelia Banawag Sagud

**CIVIL STATUS:** Married

**SPOUSE:** Erlic Bang-as Sagud

**CHILDREN:**

Minchah Zoe – October 22, 2004

Shalom Grace – July 27, 2007

Mattan Earl – March 9, 2009

**RELIGION:** The Wesleyan Church of the Philippines



### EDUCATIONAL BACKGROUND

- **DOCTOR OF PHILOSOPHY, Major in DEVELOPMENT STUDIES**  
Pangasinan State University (2020)  
School of Advanced Studies  
Urdaneta City, Pangasinan
- **MASTER OF SCIENCE IN THEOLOGY (BIBLICAL STUDIES)**  
Asia-Pacific Nazarene Theological Seminary (2002-2003)  
(Not graduated)
- **MASTER OF DIVINITY (BIBLICAL STUDIES)**  
Asia-Pacific Nazarene Theological Seminary (Summer2002)  
Kaytikling, Taytay, Rizal
- **BACHELOR OF ARTS IN THEOLOGY**  
ROSALES WESLEYAN BIBLE COLLEGE, INC. (2015)  
Rosales, Pangasinan

- **BACHELOR OF THEOLOGY**  
Rosales Wesleyan Bible College, Inc. (1999)  
Rosales, Pangasinan
- **COMPUTER PROGRAMMING**  
STI College, San Fernando City, La Union (1998)
- **COMPUTER TECHNOLOGY**  
Christian Technical School (1997)  
San Fernando City, La Union
- **SAN FRANCISCO NATIONAL HIGH SCHOOL (1992)**  
Sudipen, La Union
- **SAN FRANCISCO ELEMENTARY SCHOOL (1988)**  
Sudipen, La Union

#### **ELIGIBILITY**

- **PRC LICENSURE EXAM FOR TEACHERS (LET) PASSER**  
September 2018  
Rosales, Pangasinan Testing Center  
Rating: 82.20 %

#### **WORK EXPERIENCES**

- **FACULTY MEMBER (2004 - PRESENT)**  
**BIBLE COLLEGE VICE-PRESIDENT (2016 - PRESENT)**  
Rosales Wesleyan Bible College, Inc.  
Zambrano St., San Pedro West, Rosales, Pangasinan 2441
- **BIBLICAL STUDIES TEACHER**  
Philippine Wesleyan Graduate School  
Rosales, Pangasinan
- **ADJUNCT GREEK SUBJECT TEACHER**  
Sinipsip Wesleyan Bible College  
Buguias, Benguet
- **ADMINISTRATIVE PASTOR (March 2019 - March 2020)**  
SUBUSOB WESLEYAN CHURCH  
Rosario, La Union

- **ADMINISTRATIVE PASTOR (2008 - 2009)**  
BARANGOBONG WESLEYAN CHURCH  
Tayug, Pangasinan
- **ADMINISTRATIVE PASTOR (2007 - 2008)**  
(WESLEYAN) COLLEGE CHURCH  
Rosales, Pangasinan
- **ADMINISTRATIVE PASTOR (2003 - 2004)**  
CUENCA WESLEYAN CHURCH (2003-2004)  
Cuenca, Pugo, La Union
- **ADMINISTRATIVE PASTOR (1998 - 1999)**  
DIMAMAGA WESLEYAN CHURCH  
Vintar, Laoag, Ilocos Norte

#### **SEMINARS/TRAININGS/WORKSHOPS ATTENDED**

- 2019 REGION 1 HIGHER EDUCATION CONFERENCE ON GENDER ISSUES  
(Eliminating Violence in Philippine Higher Education System)  
December 11, 2019  
Rosebowl Steakhouse and Restaurant, Bauang, La Union
- NATIONAL MINISTERIAL CONGRESS  
October 21-24, 2019  
Supreme Hotel, Baguio City
- NATIONAL WBC FACULTY CONSULTATION (Partners in Shaping the Next  
Generation of Leaders)  
May 10-13, 2016  
Jabez Center, Cubao, Quezon City
- THE FACES AND FACETS OF HUMAN TRAFFICKING (An  
Awareness-Raising Workshop on Human Trafficking)  
August 21-22, 2015  
RWBC, Rosales, Pangasinan
- HIGHER EDUCATION MANAGEMENT AND INFORMATION SYSTEM  
(HEMIS) ASSESSMENT AND VALIDATION CONFERENCE: TOWARDS A  
MORE INNOVATIVE PHILIPPINE HIGHER EDUCATION  
February 12, 2016  
Megatent, Libis, Quezon City



- 7<sup>th</sup> NAKEM INTERNATIONAL CONFERENCE (Our Right to Languages, Our Right to Emancipatory Education)  
Co-sponsored by Nakem International, University of Hawaii, Manoa, U.S.A.; Nakem, Batac, Ilocos Norte; and DepEd - Region 1  
December 7, 2012  
Regional Educational Learning Center (RELC), DepEd, San Fernando City, La Union