Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Uncovering Factual Observations: Indigenous Knowledge, Beliefs and Practices on Climate Change and Disaster Preparedness

Vanessa Carla B. Dacayan [1]
1 – Abra State Institute of Sciences and Technology

Publication Date: April 27, 2026 DOI: **10.5281/zenodo.19815310**

Abstract

The study seeks to address the paucity of documented indigenous perspectives on climate change in Municipality of Bangued, Abra, while also investigating the gradual erosion of traditional knowledge transmission within the community. It aimed to thoroughly document indigenous knowledge, beliefs and practices in relation to climate change and disaster preparedness of 31 respondents to selected barangays of Bangued, Abra. Also, its objective is to understand how their beliefs affect our surroundings, especially farming.

Surveys and interviews were used to select respondents as well as cross checking these beliefs and practices with scientific concepts was utilized in determining their relevance and supporting their validity. Spiritual and agricultural practices further underscore the adaptability and relevance of indigenous forecasting methods. While traditional knowledge has long played a vital role in disaster preparedness, the integration of modern technologies has gradually shifted community-wide efforts toward more individualized approaches.

In conclusion, findings of this study highlighted the urgent need for documentation and preservation -- as many of these beliefs and practices are no longer actively transmitted or discussed. Furthermore, it emphasized the potential of integrating traditional and scientific approaches to enhance climate resilience, particularly within indigenous communities.

Keywords: *indigenous knowledge, climate change, disaster preparedness, cultural beliefs, traditional practices, Bangued Abra, Philippines, farming indicators, weather forecasting, scientific validation*

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

I. INTRODUCTION

The way that communities view and react to climate change is greatly influenced by urban myths and cultural beliefs. Local histories, values, and experiences are frequently reflected in these narratives, which have an impact on both individual and group responses to environmental issues. Myths about climate change, which can range from inflated stories of natural disasters to folklore about resilience, are informal sources of information that can both educate and misinform locals in many urban areas. Urban inhabitants are forced to negotiate complicated social landscapes that combine traditional beliefs with contemporary scientific understanding as climate change becomes more evident in the form of extreme weather occurrences. Given that these beliefs might influence how people perceive risk and behave when they are prepared, it becomes imperative to examine urban myths. For example, certain myths may cause complacency by downplaying the seriousness of climate-related threats, whereas others Cultural ideas and urban myths have a big influence on how communities view and react to climate change. Individual and group behaviors in response to environmental concerns are influenced by these narratives, which frequently reflect local histories, values, and experiences. Myths about climate change, from inflated stories of natural disasters to resilience folklore, are informal sources of information that can both educate and misinform locals in many urban settings.

People living in cities have to negotiate complicated social environments that combine traditional beliefs with contemporary scientific knowledge as climate change becomes more evident in the form of extreme weather occurrences. Given this, it is imperative to investigate urban myths since they have the potential to influence how people perceive risk and how they prepare. Some myths, for example, may minimize the gravity of climate-related risks, encouraging complacence.

It is evident that the society is in the middle of a crucial battle to distinguish fact from fiction. Increasing polarization and a growing distrust of the news media are creating microcosms of "reality" based on political and cultural bias. This battle over fact versus fiction is beginning to color every aspect of how groups see the world, but it has long plagued the environmental movement. Climate denialism—cynically adopted by political leaders primarily in the United States, and promoted by partisan media—is a well-known challenge for which public education is critical. These misconceptions about climate change cloud the understanding of everyday people and stall efforts to mitigate the impact through disaster preparedness.

Th e unprecedented rate of urban growth in the developing world is increasingly exposing the population and economic assets to the potential impacts of climate change and natural hazards. Th e world’s urban population is currently estimated at 3.3 billion. Most of the urban population resides in the developing world, where nearly all future urban growth will take place. During the next 20 years, it is projected that over 95 percent of the population growth in developing countries will take place in urban areas, with the urban populations of Africa and South Asia increasing by an average of 62 million people each year. In East Asia alone, 500

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

million people will become urban residents over the next 25 years, joining the current 750 million people living in cities.

Likewise, the geographic location where the bulk of the urban growth is happening also increases population exposure to climate change and natural hazards. Urban centers are often located in naturally hazardous zones, prone to floods and cyclones—Low Elevation Coastal Zones (LECZ); earthquake, volcanic, and landslide zones; and drought zones. Nearly two-thirds of the urban settlements with more than 5 million people are located partly in a low elevation coastal zone (Mc Granahan, Balk, and Anderson 2007). Indeed, 70 percent of the countries with populations in the low-elevation coastal zone have their largest urban area extending into that zone (Mc Granahan, Balk, and Anderson 2007). Climate change poses a risk of more extreme weather and can cause devastating urban flooding and coastal storms, as well as longer-term changes such as sea-level rise and increased ambient temperatures. Risks are especially high in low- and middle-income countries, where a third to a half of the population in cities lives in slums (Kinyanjui 2010).

Urban exposure of population and economic assets to natural hazards and to the impacts of climate change is therefore increasing significantly, with a high degree of vulnerability for a large share of cities, especially those located along the coastal areas. At the same time, the frequency and intensity of natural hazards are becoming more significant, compounded by the early manifestations of climate change, which are likely to result in more severe impacts in the decades to come.

The risks for each hazard—floods and cyclones, earthquakes, volcanoes and landslides, drought, and heat waves—vary considerably, with different impacts on the population. Notably, many cities are affected by multiple hazards. The Mexico City metropolitan area, for example, is affected by seismic risk, severe storms, heat waves, and droughts. Also, with no natural drainage for runoff from the surrounding mountains, the area is vulnerable to flooding, particularly to the west.

Natural changes in the sun’s activity or large volcanic eruptions have caused ancient shifts in the Earth’s temperatures and weather patterns, but over the last 200 years, these natural causes have not significantly affected global temperatures. Today, it’s human activities that are causing climate change, primarily due to the burning of fossil fuels like coal, oil, and gas.

Multiple independent studies over the past 19 years have found that between 90 and 100 per cent of scientists agree that humans are responsible for climate change, with most of the studies finding a 97 per cent consensus.

A 2021 study found a greater than 99 per cent consensus on human-induced climate change in the peer-reviewed scientific literature (reviewed by export in the same field prior to publication) - a level of certainty similar to that of the theory of evolution.

The Synthesis Report by the Intergovernmental Panel on Climate Change (IPCC), released in March 2023, categorically confirmed that human activity is the overwhelming cause

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

of climate change. The IPCC's comprehensive assessments are written by hundreds of leading scientists from around the globe, with contributions from thousands of experts, and endorsed by the governments of every country in the world.

Cultural patterns can shift over time and are not locked into one monolithic definition but rather are lived, reaffirmed and edited by the people who form the culture by participating in it. Drastic change, however, can present deep challenges to otherwise generally cohesive narratives or patterns of behavior, disrupting traditional activities ranging from subsistence to recreation. Individual participation in cultural life can be severely limited by physical changes to the local environment including perturbed seasonality and increased competition over resources. Variations in responses to these challenges can fracture cultural groups as individuals make choices about how to seek stability and prosperity in new contexts. Previously existing divisions may be exacerbated, or new conflicts may arise as each as each person responds to their threatened interests. Even groups of individuals that largely agree on how to respond will face pressing challenges to successfully adapt to the changes resulting from a rise in global average temperature. Specific changes to local conditions are difficult to predict due to the complexity of the natural systems involved and their relationships to one another. This chaotic disruption to balance threatens the very concept of tradition.

At the same time, all humans now find ourselves within a critical time period of roughly the next 10 years (until 2030) in which collective actions of the global population can actually change the trajectory to prevent catastrophic climate change. Even as it is imperiled, culture remains an important key to successful climate adaptation. Traditional knowledge about how to interact with and care for natural systems is indispensable. Indigenous understanding in particular will be pivotal to stabilizing the climate. Contradictory on the surface but often complementary in practice, a rising culture of change pushes for local and global responses that prioritize climate mitigation and adaptation through changed consumptive behaviors, new green infrastructure, and a just distribution of access to resources. Implementing these preemptive changes will be critically important for effectively preserving the climate as humans have known it throughout the history of the species.

Culture has a critical role to play in humanity's reaction to climate change. In this time of forced editing of cultural practices, individuals and their values will be put to the test.

The global transformation that would be needed to limit warming to 1.5°C requires enabling conditions that reflect the links, synergies and trade-offs between mitigation, adaptation and sustainable development. These enabling conditions are assessed across many dimensions of feasibility – geophysical, environmental-ecological, technological, economic, socio-cultural and institutional – that may be considered through the unifying lens of the Anthropocene, acknowledging profound, differential but increasingly geologically significant human influences on the Earth system as a whole. This framing also emphasizes the global interconnectivity of past, present and future human– environment relations, highlighting the need and opportunities for integrated responses to achieve the goals of the Paris Agreement." (IPCC, 2018, p. 52).

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

"Society's response to every dimension of global climate change is mediated by culture. Climate change threatens cultural dimensions of lives and livelihoods that include the material and lived aspects of culture, identity, community cohesion and sense of place. There are important cultural dimensions to how societies respond and adapt to climate-related risks. Culture mediates changes in the environment and changes in societies." (Adger, W. Neil; Barnett, Jon; Brown, Katrina; Marshall, Nadine; O'Brien, Karen, 2013, p. 112)

"Culture is important for understanding both mitigation of and adaptation to climate change, and of course plays its part in framing climate change as a phenomenon of concern to society. Culture is embedded in the dominant modes of production, consumption, lifestyles and social organization that give rise to emissions of greenhouse gases. The consequences of these emissions—climate change impacts—are given meaning through cultural interpretations of science and risk. Culture is no less central to understanding and implementing adaptation: the identification of risks, decisions about responses, and means of implementation are all mediated by culture. Cultures are dynamic and reflexive and so are in turn shaped by the idea of climate change. Hence culture, and its analysis, is central to understanding the causes and meaning of, and human responses to climate change."

"Culture is a common good that broadens everyone's capacity to shape his or her own future. All individuals are vehicles of culture, as well as participants in its development. Culture itself is a process that allows us to understand, interpret, and transform reality." (UCLG- United Cities and Local Governments, 2015, p. 11).

"Human culture is strongly influenced by ecosystems, and ecosystem change can have a significant impact on cultural identity and social stability. Human cultures, knowledge systems, religions, heritage values, social interactions, and the linked amenity services (such as aesthetic enjoyment, recreation, artistic and spiritual fulfillment, and intellectual development) have always been influenced and shaped by the nature of the ecosystem and eco-system conditions in which culture is based. At the same time, humankind has always influenced and shaped its environment. Rapid loss of culturally valued ecosystems and landscapes lead to social disruptions and societal marginalization, now occurring in many parts of the world." (Millennium Ecosystem Assessment, 2005, p. 457).

People modify the ecosystems around them through cultural practices, values, and visions of the world. Human activities depend on and use "natural" spaces and biological resources that could otherwise disappear, such as agricultural heritage. Spaces and resources are bearers of culture partly as reminders of history, practical knowledge, and identity (e.g. food heritage); contribute aesthetic values (e.g. urban or rural landscapes); and condition the capacity for resilience. The knowledge people have of their surrounding ecosystems is of immense value. For centuries, their practices have shaped urban and rural landscapes. This traditional knowledge should be recognized and used to better understand how cultures and ecosystems interact, and enter into dialogue with academic knowledge, particularly in the context of regional development projects that may impact the ecosystem. These forms of knowledge must be developed and shared in order to promote ecological thinking and the values of sustainable

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

development. Nature and culture have evolved alongside one another and form a constantly evolving balance. Cultural diversity and biological diversity are therefore closely related."

The Philippines including the Province of Abra and the Municipality of Bangued is of no exception to the impact of climate change; and knowing that culture play a vital role in the way people respond to impending hazards and dangers posed by disasters and calamities, it is important to determine the existing myths and cultural beliefs and practices associated to climate change and their impacts to disaster preparedness. Hence, this study targets.

Theoretical Framework

Theoretical framework seeks to shed light on the complex interrelationships among urban myths, cultural beliefs, and climate change practices to better understand how these narratives influence how communities react to environmental emergencies. We can gain a better understanding of urban myths' impact on disaster preparedness and resilience by investigating their function, which is frequently anchored in local history and cultural identity. According to this concept, cultural narratives influence community behaviors and decision-making processes in addition to reflecting shared concerns and views around climate change. By using this lens, we hope to reveal how these beliefs affect practical disaster preparedness tactics, ultimately advancing more complex and culturally sensitive approaches to climate resilience.

Social Constructionism and Climate Change Myths

According to social constructionism, social forces such as media, cultural narratives, and shared beliefs influence reality and knowledge. Urban misconceptions about climate change frequently result from misinterpretations or oversimplifications of scientific data, which disseminate false information. Socially produced myths like "climate change is a hoax" and "climate change only affects polar bears" can cause people to become indifferent, confused, and less concerned about the dangers posed by climate change.

Implications for Disaster Preparedness: The public's desire to participate in climate change or disaster preparedness initiatives may be weakened by these beliefs. Communities may become more vulnerable because of inadequate planning or delayed reactions to catastrophes brought on by misconceptions about the severity of climate impacts.

Cultural Resilience Theory

Cultural resilience is the ability of a group to use its social networks, cultural practices, and beliefs to adjust to outside pressures. Depending on how well they mesh with disaster preparedness plans, cultural practices and attitudes about climate change can either strengthen or weaken resilience.

Relevance to Climate Change: Traditional ecological knowledge (TEK) offers important insights into resource management, disaster preparedness, and sustainable practices in many cultures. Urban myths and misconceptions, such as superstitions or fatalistic views, can, however, occasionally impede the development of adaptive responses to climate-related calamities.

Implications for Disaster Preparedness: Communities may not take proactive steps to safeguard themselves against the effects of climate change if they maintain cultural views that minimize the significance of disaster preparedness (such as "It's God's will" or "Nature will balance itself").

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

On the other hand, readiness may be improved by ancestors' understanding of resilience or beliefs in group duty.

Modernization of Ecology and Mythological Thought

Overview of the Theory: Ecological modernization theory contends that economic and technology advancements can assist countries in tackling environmental issues, such as climate change. However, the development of contemporary, sustainable solutions may be impeded by mythical thinking or cultural beliefs that contradict scientific data.

Relation to Climate Change: Urban myths concerning climate change might occasionally have their roots in magical or supernatural thinking, which runs counter to the logical, fact-based methods needed for catastrophe preparedness. Beliefs in taboos, rituals, or omens, for instance, may affect a person's readiness to follow scientific advice.

Implications for Disaster Preparedness: Communities may be reluctant to embrace pragmatic solutions like flood prevention, early warning systems, or infrastructure upgrades if climate change is perceived as a mythological or superstitious issue rather than as a problem driven by science and policy. Effective catastrophe management may be hampered by this.

Collective Memory and Cultural Beliefs' Durability

Theory Overview: According to the collective memory theory, a group of people's cultural identity and behaviors are shaped by their shared interpretation of historical events. Cultural views on fate, disasters, and the role of human agency are frequently ingrained in the collective memory.

Climate Change Relevance: Myths concerning environmental changes or the effects of climate-related calamities may be passed down through generations in some societies. These ideas have the power to affect how communities view and react to climate dangers, which in turn affects how they prepare for disasters.

Consequences for Disaster Preparedness: Preparation efforts may be aided or hindered by collective memory. Communities that have been hit by natural catastrophes on a regular basis, for example, may have strong cultural traditions about resilience, but they may also have fatalistic views that restrict them from being proactive. The implementation of preparedness measures may also be less common in societies that hold myths about supernatural intervention or outside control over environmental occurrences.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Conceptual Framework of the Study

This research was conceptualized following research paradigm:

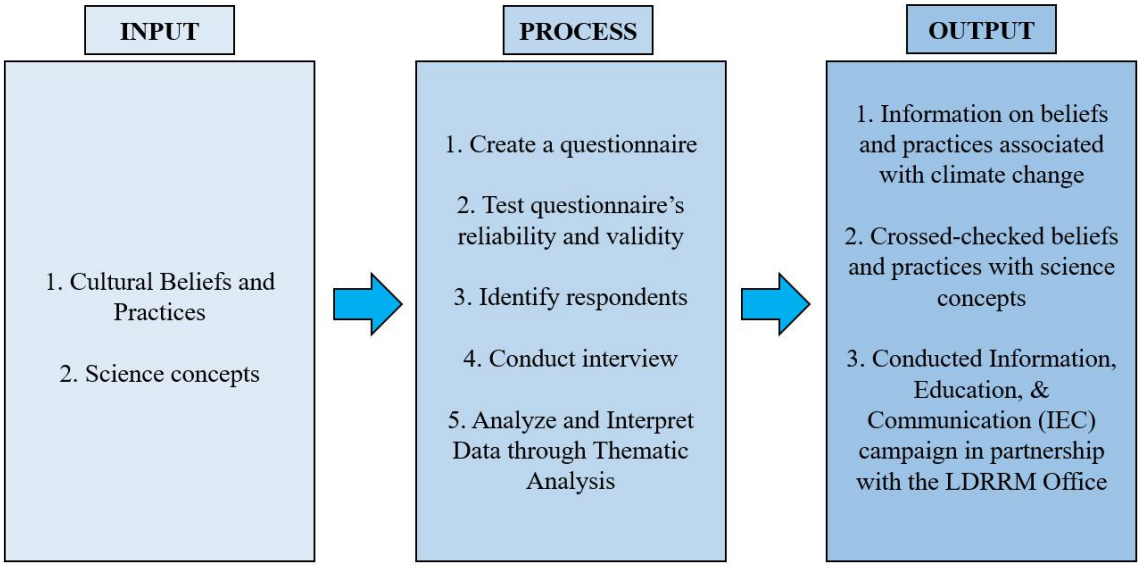

Figure 1. Research Paradigm

Figure 1 presents the general overview of the study. The cultural beliefs and practices on climate change, and the science concepts related to the beliefs and practices, were collected. To do this, a questionnaire was developed and then tested for its validity. Afterward, interview was conducted with the identified respondents from the different barangays of the Municipality of Bangued. The collected data from the interview were then analyzed and interpreted. In addition, the cultural beliefs and practices were cross-checked with scientific concepts to further explain the existence and occurrence of such phenomena. The findings were then presented to the community along with the conduct of an Information, Education, and Communication (IEC) campaign on disaster preparedness in partnership with the LDRRM office in the Municipality of Bangued.

Statement of the Problem

It was ventured in the study to determine the indigenous beliefs and practices associated to climate change and their implications to disaster preparedness.

Specifically, it sought to answer the following questions:

1. What cultural beliefs associated with climate change do the participants in the study believe in?
2. At what times or under what circumstances do these cultural beliefs arise?
3. What do the participants practice as a result of their cultural beliefs and practices to enhance their disaster preparedness?
4. What scientific concepts support the identified beliefs and practices?
5. What do these beliefs and practices imply regarding disaster preparedness?

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

II. METHODOLOGY

This chapter discusses the study design including the population and locale of the respondents, the data-gathering instruments and the process of its validation, the procedures to be conducted to collect data, and lastly, the statistical treatments used to treat the gathered data.

Research Design

The phenomenological design was used to narrate indigenous beliefs and practices associated to climate change. Likewise, correlation was employed to determine the relationship of the profile of respondents and their perception as to indigenous beliefs and practices associated to climate change and their level of disaster preparedness.

Population and Locale

A total of 31 respondents from the Municipality of Bangued were determined through purposive sampling. The identification of the respondents was based from the coordination made to the respective barangay chairmen, and as per permission made to the NCIP Office in Bangued.

The population of the study is presented in following table:

Place	Frequency of Respondents	Percentage
Zone 1 (Linasin)	20	64.52
Zone 7 (Kabildatan)	5	16.13
Calaba	6	19.35
Total	**31**	**100%**

As shown, of the 31 total number of respondents, 20 came from Zone 1 (Linasin), five (5) from Zone 7 (Kabildatan) and six (6) from Calaba.

Data Gathering Tool

The main data gathering instrument utilized was a survey questionnaire developed by the researcher with assistance of professionals and expert in the field of study. This data gathering tool was comprised of three parts: Part 1 -- elicited the profile of the respondents, Part 2 -- elicited the cultural beliefs and practices associated to climate change, and Part 3 -- elicited information on the level of disaster preparedness of the respondents. Since the instrument was a newly constructed device, it was subjected to validation with the aid of three (3) experts in the field of study.

Data Gathering Procedure

Before conduct of the study, the researcher sought permission to various authorities. Foremost, a request letter address to the Municipal Mayor of Bangued was prepared with approval of the research adviser, which sought permission to undertake the study in the 31barangays of Bangued. Likewise, a communication letter addressed to barangay captains was crafted prior the floating of questionnaires to the randomly selected respondents. When permission was obtained from the aforementioned authorities, the researcher proceeded with data collection through floating of questionnaires, substantiated by interview. Also, necessary permission was also sought from Office of the NCIP.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

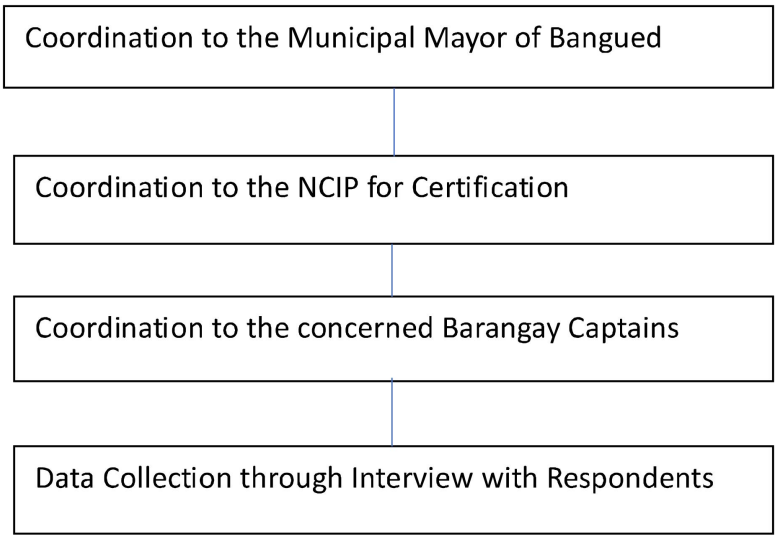

Figure 2. Data Gathering Procedure

Statistical Treatment of the Data

Although some parts of this research are qualitative, the quantitative portion was treated with following statistical tools:

- Frequency and Percentage was used to present the data on the profile of the respondents

III. RESULTS

This chapter presents, analyzes and interprets the data gathered.

It ventured to determine the indigenous beliefs and practices associated to climate change and their implications to disaster preparedness.

Specifically, it sought to answer the following questions:

Problem 1: What cultural beliefs associated with climate change do the participants in the study believe in?

The cultural beliefs associated with climate change that the participants believe in as revealed in the interview and focused group discussion are summarized in the table below:

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Table 1 Cultural Beliefs Associated with Climate Change

Responses	Implications/ Indications
lightning towards East	there is rain
there is unusual heat	the rain will come
lightning towards East and vice versa	there is rain
sound of Eagle	the rain will come not later than a week
April Rain	good indicator of good season
Shredding of leaves by certain tree species	indicates onset of rains
Occurrence of ants locally known as simot-simot	indicate good amount of rain
Occurrence of grasshoppers flying in household vicinity	indicates drought
Very high temperature in mid-November	indicates drought

An interview with the respondents has revealed their cultural beliefs associated with climate change.

Respondents said that the Municipality of Bangued is characterized with very high temperature and generally low rainfall with erratic pattern. Rainfall is seasonal and is experienced during June to November. Accordingly, the respondents, being most of them are farmers, utilize their indigenous beliefs and practices as indicators of climate change to assist them in farm level decisions in farming system such as crop choice and planting time. Some of these indicators include lightning towards East, unusual heat, lightning towards East and vice versa, sound of Eagle, April rain, shredding of leaves by certain tree species, occurrence of ants locally known as simot-simot, occurrence of grasshoppers flying in household vicinity, and very high temperature in mid-November.

According to Respondent # 4, "*No agkimat iti daya, namnamaem nga adda tudo na* (if there is lightning in the east, expect that it will rain.)" This was seconded by Respondent #11 stating; "*Sipud kinaubingko,napuutakon nga kasta ti mapaspasamak. Mamati ak la unay dayta kimat wenno kilawet nga aggapo iti daya kas mangipasimudaag iti tudo*.(Since I was a child, I had strong belief that when lightning came from the East, it will really rain)".

On the other hand, Respondent #12 stated, "*kasta met no sobra ti baranan, namnamaem nga agtudon*. (also, when there is unusual heat, expect that it will rain)". While Respondent #22 said, "*aglalo no agsinnublat nga aggapo ti daya ti kimat na, tumudo* (especially when lightning comes from the east and vice versa, it will rain".

Meanwhile, Respondent #29 shared her beliefs saying, "*dayta no aguni diay eagle, ada ti tudo diay* within 1 week.(if the eagle makes sound, it will rain within a week)". This was agreed by Respondent #2.

Additionally, Respondents # 1, 4, 5,& 6 believe that if it will rain in April, "*indikasyon nga ada napintas nga paniempo* (incation of good season)". Respondent # 31 stated during

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

interview, "*dagita panaglagas ti bulbulong ti daduma nga klase ti mulmula, indikasyon nga agrugin ti tudtudo; no ada simot-simot, natutudo; no adu ti dodon ti balbalay wenno arubayan ken no agtudo ti tingga ti Nobyembre, simamaga ken kalgaw daytan* (Shredding of leaves by certain tree species indicates the onset of rains , Occurrence of ants locally known as simot-simot indicates good amount of rain, Occurrence of grasshoppers flying in household vicinity, and very high temperature in mid-November, indicates drought)".

Problem 2: At what times or under what circumstances do these cultural beliefs arise?

Table 2 summarizes the times or circumstances cultural beliefs among respondents arise:

Table 2 Times or Circumstance Cultural Beliefs Arise

Responses	Times or Circumstances
lightning towards East (there is rain)	Weather forecasting
there is unusual heat (the rain will come)	Weather forecasting
lightning towards East and vice versa (there is rain)	Weather forecasting
sound of Eagle (the rain will come not later than a week)	Preparation for cropping
April Rain (good indicator of good season)	Crop harvest season
Shredding of leaves by certain tree species (indicates onset of rains)	During disaster preparedness
Occurrence of ants locally known as simot-simot (indicate good amount of rain)	During cropping season
Occurrence of grasshoppers flying in household vicinity (indicates drought)	During choice for weeding
Very high temperature in mid-November (indicates drought)	During choice for weeding

Results revealed these cultural beliefs among the respondents usually occur during varied times or circumstances such as cropping season, preparation for cropping, crop harvest season, during choice for weeding, weather forecasting, and during disaster preparedness. It can be observed from the responses of respondents that mainly, these cultural beliefs on climate change occur mostly in circumstances that affect their farming systems. This is because most of the respondents are engaged in farming as their main source of livelihood.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Problem 3: What do the participants practice as a result of their cultural beliefs and practices to enhance their disaster preparedness?

Table 3 Practices as a Result of the Cultural Beliefs and Practices

Beliefs and Practices	**Practices as a Result of the Cultural Beliefs and Practices**
lightning towards East	Time to prepare land for planting
there is un usual heat	Crop preparation
lightning towards East and vice versa	Time to prepare land for planting
sound of Eagle	Crop preparation
April rain	Harvest time
Shredding of leaves by certain tree species	Choice of crop variety, time to prepare to plant
Occurrence of ants locally known as simot-simot	Time to plant crops
Occurrence of grasshoppers flying in household vicinity	No weeding, otherwise will destroy crops
Very high temperature in mid-November	No weeding, no planting

Table 3 presents the practices as a result of cultural beliefs and practices to enhance disaster preparedness of the respondents.

As elaborated by majority of the respondents, there are several practices that the respondents do as a result of cultural beliefs related to climate change to enhance their disaster preparedness. For instance, lightning in the east and lightning towards east and vice versa as indicative of rain was addressed through the preparation for land for planting; the unusual heat indicative of heavy rain was likewise responded through crop preparation; sound of eagle was used as indicator for crop preparation; April time was suggestive that of them for harvest time; occurrence of ants locally known as simot-simot was used for planting time; while occurrence of grasshoppers flying in household vicinity and very high temperature in mid-November were addressed through the practice of no weeding, otherwise it will destroy crops. As the study revealed, most of the practices were geared toward improving farming systems.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Problem 4: What scientific concepts support the identified beliefs and practices?

Table 4 Scientific Concepts that Support Identified Beliefs and Practices

Beliefs and Practices	Scientific Concepts
lightning towards East	Lightning-induced raindrop expansion beneath the melting layer
there is un usual heat	Rise in temperature enhances evaporation which raises precipitation levels
lightning towards East and vice versa	Lightning-induced raindrop expansion beneath the melting layer
sound of Eagle	Bird's sensitivity to slightest change in barometric pressure
April rain	basing on the seasonal cycle
Shredding of leaves by certain tree species	Plant life cycle and phenology of abiotic factors
Occurrence of ants locally known as simot-simot	Life cycle of the ants including laying and hatching of eggs
Occurrence of grasshoppers flying in household vicinity	Effect of hot and humid weather to grasshopper population
Very high temperature in mid-November	Transition of wet and dry season

Results identified beliefs and practices regarding climate change among respondents and the researcher delved into some scientific concepts that support them. Each were elaborated in the following:

Lightning towards East and rain. Piepgrass et al. (1982) found a strong link between lightning frequency and rainfall. These findings suggest that lightning-induced raindrop expansion beneath the melting layer, rather than an increase in precipitation in the cloud's mixed phase zone, may be the cause of the correlation between lightning frequency and rainfall with a 4-min time lag (the shorter one). The new information offers a strong foundation for parameterizing the electrical processes in weather/climate models, especially when combined with previous work on stratiform clouds (MUDIAR et al., 2018).

In the Philippines, lightning pointing east can be a good predictor of impending rain, particularly when combined with other meteorological indicators.

Unusual heat and likelihood of rain. As temperatures rise, greater evaporation occurs, which raises precipitation levels overall. This may show up as more rainfall, along with severe storms and possible flooding, which may also add to the feeling of excessive heat because of higher humidity. Relatedly, the World Meteorological Organization (WMO) reported that this year's extreme weather, especially in the summer, has included flooding and strong rainfall in the Philippines.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Sound of Eagle and rain that will come not later than a week. Birds are very sensitive to the slightest changes in barometric pressure and temperature. Sensitivity of Eagles to sounds/ noise that is made by an impending rain caused them to make sounds.

April Rain as good indicator of good season. The Climate of the Philippines is tropical and maritime. It is characterized by relatively high temperature, high humidity and abundant rainfall. It is similar in many respects to the climate of the countries of Central America. Temperature, humidity, and rainfall, which are discussed hereunder, are the most important elements of the country's weather and climate.

Using temperature and rainfall as bases, climate of the country can be divided into two major seasons: (1) rainy season, from June to November; and (2) dry season, from December to May. The dry season may be subdivided further into (a) cool dry season, from December to February; and (b) hot dry season, from March to May.

Although the dry season lasts from November to April, temperatures are high during March and April, with highs of 34°C. Wet season falls between May and October, but the rain isn't constant.

It can therefore be implied from the above bases that April indicates a good season or weather condition.

Shredding of leaves by certain tree species indicates onset of rains. Plant life cycles narrowly correlate with the phenology of these other organisms as well as with abiotic factors. Monitoring the phenology of organisms in natural and disturbed ecosystems is important in the context of global environmental change, since throughout the world the equilibrium of wild and agricultural ecosystems depends on climatic factors (van Vliet, 2020).

Unusual weather events also influence plants/ trees, possibly jeopardizing food security and human health (Fisher et al., 2012).

Shedding of leaves in deciduous trees in autumn is a dramatic phenomenon, an aesthetic delight, but for the plant it is a process by which it gets rid of organs that are no longer needed. Abscission usually follows senescence of the organ, but senescence is not essential for an organ to be abscised. The shed organs include leaves, flowers, floral parts, mature fruits, and whole branches that are old or decaying. Shedding of otherwise healthy organs occurs as part of a natural thinning process, whereby excess vegetative or floral buds, young fruits, or unpollinated ovaries or flowers are shed (https://www.sciencedirect.com/topics/earth-and-planetary-sciences/shedding).

Occurrence of ants locally known as simot-simot indicate good amount of rain. The phenomenon of ‘flying ants’ or the simot simot explains that every year the termites lay their eggs deep under the ground. After rainfall and a nice hot spell, the eggs will hatch. They will come out in swarms. These hungry winged insects will fly out and

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

consume everything in sight until their wings ultimately fall off. After this the 'ants' will begin the process again in search of starting a new termite colony. Winged Ants that come together in large groups and deliberately enter homes signify heavy rains. These Ants enter through holes and openings in windows, ceilings, and floors and once inside, swarm fluorescent bulbs and wirings. Lyons (2017) stated that moths, flies, and many other flying insects are naturally attracted to light (positive phototaxis) and this intentional behavior of Ants is hard not to notice.

Occurrence of grasshoppers flying in household vicinity indicates drought. The relationship between temperature and rainfall affects the extent to which crops will be damaged by grasshoppers. Under dry, hot conditions a small grasshopper population may do as much damage as a large grasshopper population will under cool, wet conditions. Rainfall may affect a localized grasshopper population to a lesser extent. Rainfall will only have an effect if a heavy downpour occurs immediately after an extensive hatch. A cool, wet June, however, will not seriously affect grasshopper populations. The main effect of a warm humid summer is the increased potential of disease in grasshopper populations, which will help reduce densities the following year.

Very high temperature in mid-November indicates drought. In the Philippines, mid-November usually marks the end of the wet season and the start of the dry season, which is characterized by lower rainfall and temperatures. While the transition to the dry season can bring some periods of warm weather, it's not typical for very high temperatures to persist throughout mid-November.

Droughts in the Philippines are more common during the dry season, which lasts from December to May, with the peak of the hot, dry season occurring from March to May. While the dry season is expected, unusually high temperatures during this time can exacerbate drought conditions.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Problem 5: What do these beliefs and practices imply regarding disaster preparedness?

The implications of beliefs and practices regarding disaster preparedness are summed-up in the following table:

Table 5 Implications of Beliefs and Practices Regarding Disaster Preparedness

Beliefs and Practices	Implications of Disaster Preparedness
Lightning towards east/lightning towards the east and vice versa	offered signs for people to predict hazards
There is unusual heat	enhanced the process of providing warnings
Sound of eagle/ April Rain	offers effective climate solutions, such as sustainable agriculture systems and climate-resilient water management;
Shredding of leaves by certain tree species	paved the way for community-based solutions to climate change
Occurrence of ants locally known as simot-simot	indigenous communities have developed their own early warning systems of an impending disaster
Occurrence of grasshoppers flying in household vicinity	mitigated the impact of disaster through sound disaster preparedness
Very high temperature in mid-November	early detection of climate change has led to disaster preparedness

An interview conducted with the respondents revealed the following implications of the indigenous beliefs and practices regarding disaster preparedness:

Offered signs for people to predict hazards. According to the respondents, indigenous beliefs and practices have offered them signs to predict hazards. With the use of their connection to their environment using their ingrained indigenous beliefs and practices, they are able to foresee the impending occurrence of heavy rains, droughts, and even devastating disasters.

Enhanced the process of providing warnings. Respondents during the interview, said that their indigenous beliefs and practices have enhanced the process of providing warnings. They specifically mentioned that their experience of the natural signs such as lightning in the east, the sound of eagle, occurrence of flying ants has helped them improve their means of providing warnings to address the occurrence of disasters.

Offers effective climate solutions, such as sustainable agriculture systems and climate-resilient water management: As a result of indigenous beliefs and practices, most of the respondents mentioned they have been offered with effective climate solutions, such as those that have improved their agriculture systems (improved cropping), as well as resilient water management system, in response to prolonged dry spell or drought season.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Paved the way for community-based solutions to climate change. Respondents during interview have also claimed that their indigenous beliefs and practices has paved the way for community-based solutions to climate change; wherein observed changes to the normal weather or climate patterns have been collectively addressed by the community, which was done through constant engagement and collaborative partnerships with each indigenous community.

Mitigated the impact of disaster through sound disaster preparedness. Through the indigenous beliefs and practices of respondents, they were able to mitigate the impact of disaster through their sound disaster preparedness. Relatedly, the indigenous communities and their culture are inseparable from all phenomena related to their land, territories, and natural resources (Nourgam, 2019). Their local strategies were based on how much they were affected by calamities in terms of lives lost, destruction to properties and livelihood and how often the hazards occur. For their communities to survive, it was imperative for them to transfer traditional knowledge across generations (Espinosa, 2019).

Early detection of climate change has led to disaster preparedness. Connection between indigenous knowledge and disaster preparedness lies in the close relationship of communities with their environment–the sea, rain, wind, clouds, vegetation and wildlife offered signs for people to predict hazards (Scott et al., 2018). According to respondents, early detection of climate change due to their ingrained indigenous beliefs and practices, has led them into disaster preparedness.

IV. DISCUSSION

Findings of the study are summarized as follows:

On what cultural beliefs associated with climate change do the participants in the study believe in?

The interview with the respondents has revealed their cultural beliefs associated with climate change.

Respondents said that the Municipality of Bangued is characterized with very high temperature and generally low rainfall with erratic pattern. Rainfall is seasonal and is experienced during June to November. Accordingly, the respondents, being most of them are farmers, utilize their indigenous beliefs and practices as indicators of climate change to assist them in farm level decisions in farming system such as crop choice and planting time. Some of these indicators include lightning towards East, unusual heat, lightning towards East and vice versa, sound of Eagle, April rain, shredding of leaves by certain tree species, occurrence of ants locally known as simot-simot, occurrence of grasshoppers flying in household vicinity, and very high temperature in mid-November.

According to Respondent # 4, "*No agkimat iti daya, namnamaem nga adda tudo na* (if there is lightning in the east, expect that it will rain.)" This was seconded by Respondent #11 stating; "*Sipud kinaubingko,napuutakon nga kasta ti mapaspasamak.*

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Mamati ak la unay dayta kimat wenno kilawet nga aggapo iti daya kas mangipasimudaag iti tudo.(Since I was a child, I had strong belief that when lightning came from the East, it will really rain)".

On the other hand, Respondent #12 stated, "*kasta met no sobra ti baranan, namnamaem nga agtudon*. (also, when there is unusual heat, expect that it will rain)". While Respondent #22 said, "*aglalo no agsinnublat nga aggapo ti daya ti kimat na, tumudo* (especially when lightning comes from the east and vice versa, it will rain". Meanwhile, Respondent #29 shared her beliefs saying, "*dayta no aguni diay eagle, ada ti tudo diay* within 1 week.(if the eagle makes sound, it will rain within a week)". This was agreed by Respondent #2.

Additionally, Respondents # 1, 4, 5,& 6 believe that if it will rain in April, "*indikasyon nga ada napintas nga paniempo* (incation of good season)". Respondent # 31 stated during interview, "*dagita panaglagas ti bulbulong ti daduma nga klase ti mulmula, indikasyon nga agrugin ti tudtudo; no ada simot-simot, natutudso; no adu ti dodon ti balbalay wenno arubayan ken no agtudo ti tingga ti Nobyembre, simamaga ken kalgaw daytan* (Shredding of leaves by certain tree species indicates the onset of rains , occurrence of ants locally known as simot-simot indicates good amount of rain, occurrence of grasshoppers flying in household vicinity, and very high temperature in mid-November, indicates drought)".

On what times or under what circumstances do these cultural beliefs arise?

Study revealed that these cultural beliefs among the respondents, usually occur during varied times or circumstances such as during cropping season, preparation for cropping, crop harvest season, during choice for weeding, weather forecasting, and during disaster preparedness. It can be observed from responses of the respondents that mainly, these cultural beliefs on climate change occur mostly in circumstances that affect their farming systems. This is because most of them are engaged in farming as their main source of livelihood.

On what do the participants practice as a result of their cultural beliefs and practices to enhance their disaster preparedness?

As elaborated by majority of the respondents, there are several practices they do as a result of cultural beliefs related to climate change to enhance their disaster preparedness. For instance, lightning in the east and lightning towards east and vice versa as indicative of rain was addressed through the preparation for land for planting; the unusual heat indicative of heavy rain was likewise responded through crop preparation; sound of eagle was used as indicator for crop preparation; April time was suggestive for harvest time; occurrence of ants locally known as simot-simot was used for planting time; while occurrence of grasshoppers flying in household vicinity and very high temperature in mid-November were addressed through the practice of no weeding otherwise it will destroy crops. As the study revealed, most of the practices were geared toward improving farming systems.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

On what scientific concepts support the identified beliefs and practices?

Study identified beliefs and practices regarding climate change among respondents and researcher delved into some scientific concepts that support them. Each were elaborated in the following:

Lightning towards East and rain. Piepgrass et al. (1982) found a strong link between lightning frequency and rainfall. These findings suggest that lightning-induced raindrop expansion beneath the melting layer, rather than an increase in precipitation in the cloud's mixed phase zone, may be the cause of the correlation between lightning frequency and rainfall with a 4-min time lag (the shorter one). The new information offers a strong foundation for parameterizing the electrical processes in weather/climate models, especially when combined with previous work on stratiform clouds (MUDIAR et al., 2018).

In the Philippines, lightning pointing east can be a good predictor of impending rain, particularly when combined with other meteorological indicators.

Unusual heat and likelihood of rain. As temperatures rise, greater evaporation occurs, which raises precipitation levels overall. This may show up as more rainfall, along with severe storms and possible flooding, which may also add to the feeling of excessive heat because of the higher humidity. Relatedly, the World Meteorological Organization (WMO) reported that this year's extreme weather, especially in the summer, has included flooding and strong rainfall in the Philippines.

Sound of Eagle and rain that will come not later than a week. Birds are very sensitive to the slightest changes in barometric pressure and temperature. Sensitivity of Eagles to sounds/ noise that is made by an impending rain caused them to make sound.

April Rain as good indicator of good season. The Climate of the Philippines is tropical and maritime. It is characterized by relatively high temperature, high humidity and abundant rainfall. It is similar in many respects to the climate of the countries of Central America. Temperature, humidity, and rainfall, which are discussed hereunder, are the most important elements of the country's weather and climate.

Using temperature and rainfall as bases, the climate of the country can be divided into two major seasons: (1) rainy season from June to November; and (2) dry season from December to May. Dry season may be subdivided further into (a) cool dry season from December to February; and (b) hot dry season from March to May.

Although the dry season lasts from November to April, temperatures are high during March and April, with highs of 34°C; meanwhile, wet season falls between May and October, but the rain isn't constant.

It can therefore be implied from the above bases that April indicates a good season or weather condition.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Shredding of leaves by certain tree species indicates onset of rains. Plant life cycles narrowly correlate with the phenology of these other organisms as well as with abiotic factors. Monitoring the phenology of organisms in natural and disturbed ecosystems is important in the context of global environmental change, since throughout the world, equilibrium of wild and agricultural ecosystems depends on climatic factors (van Vliet, 2020).

Unusual weather events also influence plants/ trees, possibly jeopardizing food security and human health (Fisher et al., 2012).

Shedding of leaves in deciduous trees in autumn is a dramatic phenomenon, an aesthetic delight, but for plants, it is a process by which it gets rid of organs that are no longer needed. Abscission usually follows senescence of the organ, but senescence is not essential for an organ to be abscised. The shed organs include leaves, flowers, floral parts, mature fruits, and whole branches that are old or decaying. Shedding of otherwise healthy organs occurs as part of a natural thinning process, whereby excess vegetative or floral buds, young fruits, or unpollinated ovaries or flowers are shed (https://www.sciencedirect.com/topics/earth-and-planetary-sciences/shedding).

Occurrence of ants locally known as simot-simot indicate good amount of rain. The phenomenon of 'flying ants' or the simot simot explains that every year termites lay their eggs deep under the ground. After rainfall and a nice hot spell, eggs will hatch. They will come out in swarms. These hungry winged insects will fly out and consume everything in sight until their wings ultimately fall off. After this the 'ants' will begin the process again in search of starting a new termite colony. Winged Ants that come together in large groups and deliberately enter homes signify heavy rains. These Ants enter through holes and openings in windows, ceilings, and floors and once inside, swarm fluorescent bulbs and wirings. Lyons (2017) stated that moths, flies, and many other flying insects are naturally attracted to light (positive phototaxis) and this intentional behavior of Ants is hard not to notice.

Occurrence of grasshoppers flying in household vicinity indicates drought. The relationship between temperature and rainfall affects the extent to which crops will be damaged by grasshoppers. Under dry, hot conditions a small grasshopper population may do as much damage as a large grasshopper population will under cool, wet conditions. Rainfall may affect a localized grasshopper population to a lesser extent. Rainfall will only have an effect if a heavy downpour occurs immediately after an extensive hatch. A cool, wet June, however, will not seriously affect grasshopper populations. The main effect of a warm humid summer is the increased potential of disease in grasshopper populations, which will help reduce densities the following year.

Very high temperature in mid-November indicates drought. In the Philippines, mid-November usually marks the end of wet season and start of dry season, which is characterized by lower rainfall and temperatures. While the transition to the dry season can bring some periods of warm weather, it's not typical for very high temperatures to persist throughout mid-November.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

Droughts in the Philippines are more common during dry season, which lasts from December to May, with the peak of hot, dry season occurring from March to May. While the dry season is expected, unusually high temperatures during this time can exacerbate drought conditions.

On what do these beliefs and practices imply regarding disaster preparedness?

An interview conducted with the respondents showed the following implications of indigenous beliefs and practices regarding disaster preparedness:

Offered signs for people to predict hazards. According to respondents, indigenous beliefs and practices have offered them signs to predict hazards. With the use of their connection to their environment using their ingrained indigenous beliefs and practices, they are able to foresee the impending occurrence of heavy rains, droughts, and even devastating disasters.

Enhanced the process of providing warnings. Respondents during the interview, said that their indigenous beliefs and practices have enhanced the process of providing warnings. They specifically mentioned that their experience of the natural signs such as lightning in the east, sound of eagle, occurrence of flying ants has helped them improve their means of providing warnings to address the occurrence of disasters.

Offers effective climate solutions, such as sustainable agriculture systems and climate-resilient water management: As a result of the indigenous beliefs and practices, most of respondents mentioned that they have been offered with effective climate solutions, such as those that have improved their agriculture systems (improved cropping), as well as resilient water management system, in response to prolonged dry spell or drought season.

Paved the way for community-based solutions to climate change. Respondents during interview have also claimed that their indigenous beliefs and practices has paved the way for community-based solutions to climate change, wherein observed changes to the normal weather or climate patterns have been collectively addressed by the community, through constant engagement and collaborative partnerships with each indigenous community.

Mitigated the impact of disaster through sound disaster preparedness. Through indigenous beliefs and practices of the respondents, they were able to mitigate the impact of disaster through their sound disaster preparedness. Relatedly, indigenous communities and their culture are inseparable from all phenomena related to their land, territories, and natural resources (Nourgam, 2019). Their local strategies were based on how much they were affected by the calamities in terms of lives lost, destruction to properties and livelihood and how often the hazards occur. For their communities to survive, it was imperative for them to transfer traditional knowledge across generations (Espinosa, 2019).
Early detection of climate change has led to disaster preparedness. Connection between indigenous knowledge and disaster preparedness lies in close relationship of communities

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 4 (2026)

with their environment–the sea, rain, wind, clouds, vegetation and wildlife offered signs for people to predict hazards (Scott et al., 2018). According to the respondents, early detection of climate change due to their ingrained indigenous beliefs and practices, has led them into disaster preparedness.

V. RECOMMENDATION

Based on findings of the study, following conclusions were derived:

1. There are several cultural beliefs of the respondents related to climate change;
2. The study revealed that these cultural beliefs among the respondents, usually occur during varied times or circumstances such as during cropping season, preparation for cropping, crop harvest season, during choice for weeding, weather forecasting, and during disaster preparedness;
3. As elaborated by majority of the respondents, there are practices that the respondents practice as a result of cultural beliefs to enhance their disaster preparedness;
4. Cultural beliefs and practices on climate change of respondents are supported by scientific concepts which means there is integration of traditional/ indigenous concepts and scientific concepts among them;
5. The interview conducted showed there are implications of indigenous beliefs and practices regarding disaster preparedness.

Recommendation

Based on the findings and conclusions derived from the study, the following recommendations are advanced:

1. It is highly recommended that there should be a means to integrate indigenous beliefs and practices in developing localized and relevant climate change adaptation strategy in Municipality of Bangued through the Local DRRM;
2. Since cultural beliefs related to climate change occur during varied times among respondents, these should be considered to assist them in their crafting of effective response to disaster.
3. That community residents of Bangued should sustain their effective disaster preparedness with integration of cultural beliefs and practices.
4. Scientific concepts supporting indigenous beliefs and practices regarding climate change should be considered by indigenous communities in order to effectively respond to the impeding disasters and hazards.
5. Another study should be conducted including other groups of respondents that must be undertaken in order to shed more light on this study.

REFERENCES

Al-Fraihat, D., Joy, M., & Sinclair, J. (2020). Evaluating E-learning systems success: An empirical study. Computers in Human Behavior, 102, 67–86.

CEDAT. (2019). Cambio Climático y Derechos de Grupos Vulnerables en las Américas (Civil Society Report on Climate Change and Rights of Vulnerable Groups in the Americas). CIDH, Washington, D.C.

ICCROM, IUCN, UNESCO et al. (31 May - 3 June 2016). Report on the International Conference on Safeguarding African World Heritage as a Driver of Sustainable Development. Arusha, Tanzania.

IPCC. (2014). Climate Change 2014: Synthesis Report. Summary for Policymakers. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. (R. P. Core Writing Team, Ed.) Geneva, Switzerland: IPCC.

IPCC. (2018). Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. (P. Z.-O. V. Masson-Delmotte, Ed.)

Kee, H.-E. (2011). Changing Climate, Changing Culture: Adding the Climate Change Dimension to the Protection of Intangible Cultural Heritage. International Journal of Cultural Property , 18 (3).

Knur, F. (2014). The United Nations Human Rights-Based Approach to Climate Change — Introducing a Human Dimension to International Climate Law. In S. von Schorlemer, & S. Maus (Eds.), Climate Change as a Threat to Peace: Impacts on Cultural Heritage and Cultural Diversity. Peter Lang AG.

Koenig, K. (2019). The Amazon Sacred Headwaters: Indigenous Rainforest "Territories for Life" Under Threat. Amazon Watch, Stand.earth, AIDESEP, COICA, CONFENIAE, Gobierno Territorial Autónomo de la Nacion Wampís, ORPIO, Pachamama Alliance.

New Urban Agenda. (2017). Habitat III: United Nations Conference on Housing and Sustainable Urban Development. New Urban Agenda. A/RES/71/256. Quito: United Nations.