Indigenous Knowledge and Practices in Response to Natural Disaster: The Case of Subanen in Brgy. Guinicolalay, Dinas, Zamboanga del Sur

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ABSTRACT

This is a case study on Subanen indigenous knowledge and practices pertaining to nature and in response to natural disasters in Guinicolalay, Dinas, Zamboanga del Sur. Selected Subanen timuays (chiefs) and old folks knowledgeable of their indigenous beliefs and customary practices were the sources of data in this paper.

Subanen belief system is animism – the worldview that non-human entities such as animals, plants, or inanimate objects or phenomena possess a spiritual essence. The Subanen informants refer to their religion as Denion Dilayaan. Their religion emphasizes the belief in the Supreme Deity, Magbabaya, who is the creator of everything. As the most powerful among the deities, Magbabaya is believed to control everything and cause natural calamities. Aside from being viewed as normal and part of nature, the informants viewed natural disasters as punishments by Magbabaya for their wrongdoings.

Through oral tradition, Subanen informants also learned from their ancestors that there are spirits living in nature and mythical creatures under the earth which also bring natural calamities. These spirits and their abode need to be respected to avoid harm and calamities.

Magbabaya sends warning to Subanen before a natural disaster happens through signs in nature and behavior in animals. Viewing this from symbolic interactionism perspective, one sees that the Subanen assign meanings to these signs. Through collective meanings, they make cultural preparations such as rituals to prevent if not mitigate the impending calamities in nature. Their ancestors developed methods of providing meaning in their social world and everyday life in dealing with nature full of spirits. Subanen were formerly dependent on nature for their livelihood thus their forefathers and old folks developed rituals in almost every activity which affects nature. Foremost of their myriad of rituals and generic to all rituals is the magbinukid, an offering ritual to Magbabaya and the spirits.

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Ancient Knowledge in Modern World

Cognizance of the importance of indigenous knowledge and practices in contemporary societies, the United Nations acknowledged that numerous local communities worldwide have prepared, operated, acted, and responded to natural disasters using indigenous methods passed on from one generation to the next.¹ For instance in the indigenous communities in Nenets Autonomous Okrug and Kamchatka regions of the Russian Federation, members in this indigenous community carefully observed the behaviour of some animals like dogs and birds and the colour of the sky as early warning of natural disasters.² Another indigenous people of the Nandeswar village, learned to prevent losses by using viable methods that have been practiced for generations.³

Taking into accounts the indigenous knowledge and practices of local people could help a community in the prevention, mitigation, preparedness and response to the effects of disasters. Such knowledge is important in the Philippines which is among the most vulnerable countries to natural disasters with an average of 20 typhoons or tropical storms each year.⁴ Mindanao, as in other parts of the Philippines, is frequently visited by typhoons. The most recent ones which hit Mindanao were Tropical Storm Sendong which devastated the neighboring cities of Iligan and Cagayan de Oro in Region 10 on December 16-17, 2011, Typhoon Pablo which ravaged the areas of Davao Oriental, Compostela Valley, Agusan del Sur, and Surigao del Sur on December 2012 (Vila, 2014).

While frequented with typhoons and with cultural diversity, not much is known about indigenous knowledge and practices in response to natural disaster among the 18 indigenous groups or Lumad in Mindanao.⁵

This paper is an attempt to fill in such research gap. This paper focuses on one of the Lumads in Mindanao, the Subanen’s indigenous knowledge and practices in response to natural disaster. The study focuses on the Subanen in Barangay Guinicolalay in the municipality of Dinas, Zamboanga del Sur.

Overview of the Subanen

Among the indigenous people in Mindanao are the Subanen who are found in the Zamboanga Peninsula which form part of the lumad of Mindanao. The Subanen groups are dispersed over a wide area of the Zamboanga Peninsula. The major localities they inhabit are
Dapitan, Dipolog, Manukan, Sindangan Bay, Panganuran-Colorado, Siocon, Quipit, Malayal Patalu, Bolong, Tupilak, Bakalay, Lei-Batu, Dumankilas Bay, Dinas, Lubukan, Labangan, Mipangi. The term “Subanen” comes from the word suba (river, mouth of the river, or upstream). Subanen generally known as gbansa Subanen, the Subanen nation. The farther they are from each other, the less likely for them to understand each other. According to Hapalla (2002) the Subanen spoken in Siayan, Zamboanga del Norte cannot be understood by those from Lapuyan-Margosatubig-Dinas, and the rest of the Baganian Peninsula.

Subanen are animists. Animism encompasses the belief that there is no separation between the spiritual and physical (or material) world, and souls or spirits exist, not only in humans, but also in some other animals, plants, rocks, geographic features such as mountains or rivers, or other entities of the natural environment, including thunder, wind, and shadows. The physical world is inhabited by mortal people and the spirit realm exist the supernaturals, no ordinary mortals can see them, only the balian/balyan (medium or shaman) can. There are four kinds of supernatural beings: the souls (gimuud), the spirits (mitibug), the demons (getautelunan), and the deities (diwata). The Subanen believe that spirits and deities inhabit the most striking natural feature which are the handiwork of the gods, such as unusually large trees, huge rocks, peculiar shaped mounds of earth, isolated caves, and peaks of very tall mountains. The matibug are the closest friends of human beings, but they can be troublesome if ritual offerings of propitiation are not made. These offering are made of little rice, some eggs, and a piece of meat, betel quids, betel leaves, and areca nuts and with the shaman’s discretion, would suffice to placate the spirits. These offerings can be made in the house or in the files by the riverbanks under the trees, and elsewhere. The supernaturals are only after the sengaw (essence of the offering) and human beings are free to consume the food and wine. The getautelunan are dangerous and must be avoided. Some diwata can cause sickness but the deities residing in the skyworld are benevolent. In some Subanen sub-groups, there is a belief in a Supreme Diwata, known as Diwata Magbabaya. The balyan or balian occupies a very special place in the Subanen religious and social life. In general, the functions of balyan/balian are those of a medium who directs the living person’s communication with the spirits, of a priest who conducts sacrifices and rituals, and of a healer of the sick.
The Subanen social organization is constituted by a neighborhood of 5-12 households where members engage in frequent interaction. A bigger group of interacting communities may contain as many as 50 households. There is no political hierarchy on the village level. The timuay is the traditional title for the communal leader who is also the chief arbiter of conflicts between the families of a community. Timuay is a Maguindanao term for chief or leader, which connotes both civil and religious authority.

**Theoretical Framework**

Indigenous peoples around the world have used their traditional knowledge to prepare for, cope with and survive disasters and their methods and practices have originated within their communities and have been maintained and passed down over generations (Hasteh & Cunningham, 2013). Thus, indigenous knowledge not only has potential, but a power proven by thousands of years of survival and the use of it for disaster risk reduction is important because it represents the essence of self-reliance and sustainability and the strength of societies is based upon their ability to thrive with their own capacities and resources (Hasteh & Cunningham, 2013). According to Dekens (2007), “belief systems shape people’s understanding, perceptions, and responses to natural hazards”. These perceptions are mediated by cultural interpretations, in combination with a range of other factors proper to each community and household at a specific time and place which will influence how people are going to prepare themselves or not (Dekens, 2007).

In conceptualizing indigenous knowledge on nature and natural disaster, this is done through the informants’ worldviews on nature, spirits, Magbabaya, causes and signs of natural disasters. When viewed from symbolic interactionism and ethnomethodology perspectives, Subanen worldviews constitute part of their culture passed by their ancestors through oral tradition. How Subanen define, interpret, give meanings, or make sense of nature, natural disasters, spirits, and Magbabaya help them in the course of actions they will undertake. The signs they see in nature and animals which they interpret as warning of an impending natural calamities, Subanen would then find ways or methods to prepare and mitigate such calamities.

The methods used by Subanen to construct, account for and give meaning to their social world are their ways of connecting with the spirits. These methods are the different indigenous
rituals they perform. The old folks Subanen over the years have come to develop methods in order to give meanings and explanations to the things around them in their everyday life. These methods are in a form of rituals which Subanen believed will connect them to the spirits which guard nature. Connecting with the spirits can be done through the aid of the Balyan – the mediator between the Subanen people and the supernatural world, a spirit medium and part time religious practitioner (Suminguit, 1989:161).

**Research Site**

The Subanen are distributed in Zamboanga Peninsula region, some of them are found in the Municipality of Dinas, in Zamboanga del Sur. According to old folks Subanen, Dinas got its name from a Maguindanao term *dinas* meaning not unlucky or lucky. This is explained by the traditional belief of the Maguindanaoans that the location of Dinas is a sign of good luck because all rivers in Dinas face east which to the Maguindanaons is good luck.

The whole area of Dinas is generally characterized by moderately rolling terrain to steep mountains with the center of the municipality located on a hilly area. Dinas is bounded on the north by San Pablo, on the south by Dimatating and Margosatubig, on the east by Malubog Bay, and on the west by San Miguel and Lapuyan. Dinas has been the cradle of Islamic culture and civilization in the province and the bulwark of anti-Hispanic sentiments and colonization in the entire peninsula of Zamboanga del Sur. Nearly half of Dinas population today are Maguindanaoan Muslims.

There are still barangays in Dinas which are inhabited by the Subanen like Guinicolalay which is the locale of this study. Guinicolalay is bounded by Brgy. Daplayan on the North, Brgy. East Mispulao on the South, Brgy. Nian on the East, Brgy. Old Mirapao on the West. The name was derived from two Subanen terms *Gui* and *Colalay*. *Gui* is a Subanen term for cogon grasses which covered the land owned by *Colalay*, a Subanen. Maguindanaoan hunters described the place as *Gui-ni-Colalay*, literally means the land covered with cogon grass owned by Colalay. At present, the barangay is the home of the three ethnic groups namely: Visayan (75%), Maguindanao (15%) and Subanen (10%). Guinicolalay is classified as type IV in which it has no distinct dry or wet season and is favourable to the cultivation of crops. During the months of April-May, it is a long summer season and the people have difficulty in producing agricultural
crops due to the climate condition while heavy rains occur from June-October with June as the rainiest month (Barangay Profile, 2014).

Barangay Guinicolalay was chosen as the research site because it is part of the ancestral domain of the Subanen and it is more accessible compared to other Subanen communities. Due to the coming of the Muslim and Christian settlers, many Subanen were displaced from their land and move up to the hinterland.

Figure 1. Map of Zamboanga del Sur

Figure 2. Spot Map of Brgy. Guinicolalay
Research Methods

The study uses a case study method - an “empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used” (Creswell, 2004). The researchers stayed in the barangay research site for almost two weeks to interview selected Subanen and make observations in Guinicolalay. Purposive sampling was used in selecting the informants needed in the study. It is a sampling method in which researchers pick cases that are judged to be typical of the population in which one is interested, assuming that errors of judgment in the selection will tend to counterbalance each other. There were four (4) key informants – two male and two female Subanen – interviewed by the researchers. They were selected on the basis of their position in the community (as timuay or chieftain and as elderly) and of their being authentic (“pure-blooded”) Subanen, known in the community as knowledgeable of their beliefs and practices in nature in general and on natural disasters, in particular. The Subanen informants have an average age of 71 years old with some elementary education. Despite their advance age, the male informants are still engaged in farming activities. Two informants said they practiced the Subanen religion, Denion Dilayaan. Although two informants claimed they belong to Catholic and Protestant religions, they still believed in Magbabaya and observed ceremonies and rituals.

Research ethics were observed. The researchers went to the Barangay Captain to seek prior informed consent to conduct interviews and observation in the community and to document the research process. Informed consent is the principle of research ethics that requires investigators to inform research subjects of all questionable features of the research before the subjects decide whether to participate or not. After seeing the Barangay Captain, who helped them identify the prospective informants, the researchers visited the identified informants who were explained the purpose of the study and were asked of their informed consent. The researchers were not asked to provide offering or perform ritual as a customary entry protocol to the community because the Barangay Captain, a Timuay, is a close family friend of one of the researchers. The researchers were accompanied by a resident in the community who served as a guide-cum-translator. Being accompanied by someone from the community ensures that the researchers will not be harmed by some natives who practice “black magic”. Subanen are known
for their ‘black magic such as poisoning someone through tapping the shoulder of his/her victim and even by mere looking at the victim can transmit sickness or poison.

After data were collected, recorded interviews were transcribed. Transcribing is a straightforward technical task that involves judgments about what detail to choose, data interpretation and data representation (Bailey, 2008). Transcribed interview results were analyzed using a thematic approach. Thematic analysis has been defined as a method for identifying, analysing and reporting patterns (themes) within data (Braun & Clarke, 2006:79 cited in Williamson & Whittaker, 2011:78).

Subanen Informants’ Notions on Magbabaya, Spirits, Nature, Disaster, Climate Change

The Subanen are animists who believe in the spirits as part of nature and are said to inhabit the most striking natural features which are considered the handiwork of the gods, such as unusually large trees, huge rocks balancing on a small base, peculiarly shaped mounds of earth, isolated caves, and peaks of very tall mountains. Animist worldview sees non-human entities such as animal, plants, or inanimate objects or phenomena having a spiritual essence. Subanen believe in a Supreme Being which they call as ‘Shapo Magbabaya’ or ‘Magbabaya’ who is the Unseen and the Creator of everything. Belief in the gods and spirits makes the Subanen god-fearing and is depicted in their great respect for others and for nature (Elago et. Al, 2013).

In this study, Subanen informants believe that nature is a great creation of Shapo Magbabaya and resources in nature are provisions for all human beings. They believe further that there are spirits who live in nature such as rivers, mountains, big trees, forests and in land. These spirits are owners and guardians of nature thus it is very important that the Subanens should give reverence to them through rituals. Rituals are performed by Subanen before entering or nearing the abode of the spirits such as forest and river. They also perform rituals when they extract resources from nature such as fishing, farming, and cutting of trees. Subanen rituals are meant to show respect to the spirits and to appease the spirits in giving them good harvest and good weather. While clinging to their indigenous belief system, two informants claimed they are members of the Roman Catholic and Christian Alliance churches.
Another study on indigenous people has resemblance in the finding of this study that of members of cultural communities who embraced Christian denominations yet retaining their indigenous beliefs and practices. A study among Mandaya in Cawayan, Davao Oriental, Batangan et al. (2004) found out that some Mandaya, while retaining their indigenous culture, employ Christian rituals. They make offerings and community rituals during the harvest season but these are done in honor of Saint Isidore, the Catholic patron saint of the farmers, instead of nature spirits.

Subanen informants whose agricultural livelihood depend on nature, observed there are changes which had occurred in their environment There are indications in their accounts that climate today is very different than before. They also explained that dry and rainy seasons no longer occur in their usual months or period. Typhoons can occur even in the supposed ‘dry season’ and any time of the year. They also claimed that rains and typhoons are more intense at present compared to many years ago. These observations of Subanen informants are what others called, climate change. Since Guinicolalay has an agri-based economy, Subanen plant root crops particularly cassava, ube (winged yam), sweet potato and banana during the months of April and May. These crops are referred to as lagutmon in Bisaya term which means root crops. These root crops can easily adapt to dry season. That is why, even in times of long dry season, Subanen can still get by because they have some adaptation in planting with the changes in climate.

Natural Disasters and their Causes

Three natural disasters - drought, earthquake, and typhoon and its consequent flood and landslide and their causes were among the interview findings.

- **Drought and its Causes**

  As an agricultural-based economy, Subanen in Guinicolalay had experienced drought in their community. Interview results attributed drought to the Supreme Being, Magbabaya. As the most powerful of all deities, Magbabaya controls everything even changes in climate and occurrence of natural disaster. Drought, as a natural disaster, is viewed by the informants as a punishment of Magbabaya. This is how one informant viewed natural disaster:

  “This is why we get punishment from Magbabaya. Many people have been disobeying God’s will that is why He gave us drought.”
Other sins which incite the anger of Magbabaya and spirits include failure to perform ritual and violations of incest taboo by some members in the community. According to an informant:

“For us, the cause of drought is incest, a relationship between father and daughter or mother and son. If we know there is an incest in the community, we throw a young coconut to the house of the persons committing the taboo. It would be nice if you really throw it on the violators when they get out of the house. This will break the curse of drought and it will rain.

- Earthquake and its causes
  In the local history of disaster, Subanen recalled the great earthquake in 1976 which caused a massive tidal wave in Pagadian City. The timuay informant believed it was the will of Magbabaya. Other informants explained that a mythical pig living under the earth could cause earthquake when it moves. They believed that this is the pig of Baebolan, a spirit,

  “When the pig of Baebolan moves, it causes earthquake. Our world seems to rest on top of the pig of Baebolan. That is why, when the pig moves, an earthquake will occur and many people would shout, ‘Braaa! Braaa!’” to make the pig stop from moving.”

- Typhoon and its causes
  From the Subanen informants, there are different causes of typhoon. Typhoons are believed to have caused by Bayawan, a spirit. It is also believed that when a mythical fish (kasili) under the earth wants to surface, a typhoon will happen.

  “There is an eel (kasili) under the earth who wants to come out. It is only through typhoon that it can come out.”

  Others believed that when there is an incest taboo in the community, there will be a consequent typhoon. Man’s abusive practices in nature (cutting trees, denuding forest) are also believed to cause typhoons.

- Flood and its causes
  One of the great floods which Subanen experienced was during the great 1976 earthquake in Moro Gulf in which it was during that time that a heavy rain occurred in the area. Informants recalled the river in Dinas overflowed thus causing flood in their community. The informants believed that such flooding was the will and punishment of Shapo Magbabaya. A few of them
offered a practical explanation that man’s illegal logging and indiscriminate cutting of trees resulting to denuded forest will cause flood.

- **Landslide and its causes**

  The belief in a mythical fish, kasili, is again mention as a cause of another natural disaster, a landslide. When the mythical fish moves, landslide will occur for it to get out of the depths of the earth. Practical explanations of landslide such as saturation of land due to heavy and prolong rain and denuded forests are cited by some informants.

  "There is a very huge eel that lived under the earth. That’s why there’s a landslide because it wants to come out and swim to the sea."

  Several explanations for the causes of natural disaster were generated from the themes of the interview results. Foremost is the religious explanation which views natural disaster as part of the will and the punishment of Shapo Magbabaya. Shapo Magbabaya as the Supreme Being of the Subanen has control of all his creation, including nature. He also punishes people through natural disasters because of their sins and failure to perform ritual/s. Cultural explanation is also used to identify causes of natural disasters. There are mythical creatures under the earth and their movements cause calamities. A forbidden sexual relationship, incest, is believed to cause natural disaster. The same finding on incest as causing a natural disaster is also found among the Lepcha people. The Lepcha people have no real concept of sin. When an individual does something terrible, such as indulging in incest, fraud, murder, violating accepted norms of hunting/food gathering or showing disrespect, he/she invites no individual divine punishment. Such acts by the individuals produce horror rather than revulsion from others because each one could result in a whole year of disaster and collective suffering by the entire village via a series of divine acts reflected as a natural calamity (Jha and Jha, 2011).

  Practical or common sense explanation also constitute the Subanen explanation of natural disasters. Disasters are viewed as caused by people’s continuous abusive acts toward nature, indiscriminate cutting of trees resulting to denuded forests. Disasters are also seen as a natural phenomenon as there are rainy and dry seasons. In the study of Mwaura (2008), there is a wide variety of indigenous knowledge among the communities in South Africa, in which it greatly influences the way people react to natural disasters. There is, for instance, strong belief among
many communities that hydrological hazards are caused by human action and they believe that such hazards are released by specific deities in response to human misbehavior (Mwaura, 2008: 66-67). Same finding is reflected in this study: Subanen believed that natural disasters happened as a form of punishment of Magbabaya because for the wrongdoings of the people.

“Reading” Nature, Animal behaviour and Omens: Signs of Natural Disaster

Shapo Magbabaya punishes the people who are abusive to nature by giving them natural disasters. It was also believed that there are signs which served as warning of a coming natural disaster. These warnings are in the form of unusual animal behavior and changes in the environment. These beliefs were perpetuated through oral tradition from their balyan, parents and from their ancestors, and also directly from their observations. Viewing from symbolic interactionist perspective, human beings act toward things on the basis of the meanings that the things have for them (Kivisto, 2011). Thus, among Subanen, when they see these signs, they resort to rituals to prevent if not mitigate the effects of natural disaster.

• Signs in nature

There are signs in nature which Subanen interpret as warnings of a coming disaster.

“During hot season, the river seems to vaporize. When rain is about to come, the algae are swept by the river.”

An informant also said:

“The typhoon is brought about that cloud I had mentioned. It’s in the northern winds, you would know if there’s a typhoon because of the north wind. The cloud that looks like it’s heeding toward the north direction, which indicates rain and flood. The cloud seems a huge tree.”

In relation to the indigenous ways of the Subanen in knowing disasters, they interpret and tried to give meanings to the things around them. The relation between indigenous knowledge and disaster risk reduction lies in the close relationship of communities with their environment and as indigenous knowledge comes from an intimate relation with the natural environment; communities have learned to read the signs in the sea, the rain, the wind, clouds, vegetation and wildlife to predict hazards (Hasteh and Cunningham, 2013). Such practice is also observed in the indigenous communities in Nenets Autonomous Okrug and Kamchatka regions of the Russian
Federation in which the hunters, gatherers and herders interviewed in this study described how careful observation of the behaviour of animals, and of the appearance and colour of the sky, is used as early warning of natural disasters.

- **Signs in behavior of animals**
  
  Aside from signs in nature, Subanen informants believe there are also animal behaviors which warn them of a forthcoming calamity.

  "During New Year, when the cow or horse or any of the animals that eat grass, wail, it meant drought."

  One informant also said:

  "When the goats repeatedly wail, there will be landslide."

  In another study in Tanzania particularly the Muheza District of Tanga, natives have viewed animal behaviour as their way of predicting a coming natural disaster. The appearance of armyworms meant delayed rainfall and if large swarms of red ants appeared in October-November, if large swarms of bees appeared flying from hills to lowlands, and if a large number of moist anthills appeared in August-September, these were signs that the season was going to be wet. However, the overabundance of swarms of armyworms in September-October heralded drought while other items used in prediction and early warning in Tanzania included vegetation and the flowering of such trees as the Nandi flame tree (Delonixregia) and mangoes, air movements and temperatures, underground rivers, clouds and celestial bodies.(Mwaura 2008: 70)

- **Dreams/Omens**
  
  Other forms of warning could be through a dream or from the Balyan (shaman). One informant shared her experience:

  "There was a time when there was a dripping of water which wet my eyes; it was an omen that there is strong rain coming."

  Informant believed their Balyan has the power to foresee upcoming natural disasters so he gives warnings before these disasters occur. Informants' knowledge about such things came mostly from their parents and ancestors and also by observing their surroundings. Roncoli et al (2001) as cited by Makwara (2013) observe that a similar study in Burkina Faso showed that farmers forecasting knowledge encompasses shared and selective experiences. Generally, elderly
people formulate hypothesis about seasonal rainfall by observing natural phenomena while cultural and ritual specialists draw predictions from divination, dreams or visions.

**Cultural Rituals and Customary Response for Disaster: The Subanen Experience**

Rituals are important to the Subanen especially those pertaining to nature. Subanen informants believed that these rituals serve as their way of showing reverence to the spirits and also it is their way of asking permission to the spirits whenever they ask for a favor. These rituals also help them to appease spirits whenever they abuse nature which is the spirits’ abode.

If and when Subanen knew of a coming natural disaster like typhoon and drought, they will perform a ritual called the *magbinukid* and the *kanobiton*. Informants believed these rituals are effective ways to stop drought and typhoon. In cases landslide occurs, Subanen perform the *magbinukid* to ask Magbabaya not to let another landslide to happen.

An informant described how a magbinukid is performed:

> “We do the Magbinukid in the river where the big rock is. The ritual is performed by a balyan. Recently our balyan died and there is no successor yet. When I first joined a magbinukid, we set up a bamboo where a saucer is placed which contains an egg sprinkled with apog, chicken, and rice. Each household attending the ritual will bring eggs, chicken and rice as offering. Balyan will be chanting and praying while dancing accompanied with gong will be done.”

One informant added:

> “We went to Batopintig where Subanen pray. Even though the Magbinukid was not yet completed, it already rained. The ritual requires one pig, seven chicken and thirty boiled eggs. All of the people who brought the food offering were given their share after the ritual. The food was unsalted. Spirits do not like salt.”

Another ritual performed when there is a drought is called, *kanobiton*:

> “Kanobiton is the ritual for drought. It requires an offering of chicken and pig. The ritual is done only by the Balyan with the Subanen in the community in attendance. It could be done anywhere”
In times when natural disasters cannot be prevented, such as the occurrence of drought, after an earthquake and/or a typhoon, the Balyan would perform the rituals called *dagaan tubig* and/or the *magpadugo* (shedding of blood of animals like pig or chicken) as an offering to appease Magbabaya and the spirits.

Another ritual believed in by Subanen informants to stop drought is known as *Lapiraw*. It is a ritual performed in order to ask help from Magbabaya to send them rain so they could start planting rice and other crops. The *Lapiraw*, as described by the Timuay informant, looks like a windmill made of tall bamboos, intended to invite wind and rain. The making of *Lapiraw* ritual is a tedious one. It needs a lot of preparation such as preparing for bamboos to make windmill-like structures, hunting for a kasili or eel, preparing animals such as pig and chicken, and Subanen members should bring with them chicken eggs and rice. The hunting of the eel is done upon the ritual and only members of the family that is given the ability to hunt successfully for an eel can carry out this task. The same thing is also observed in the making of the *Lapiraw* – only members of the family gifted with this skill are allowed to perform the task.

Cultural practices were derived from the Subanen forefathers’ ways of responding to a natural disaster. One is the *Magbinukid* which shows their great dependence to their beliefs and culture and their strong faith to Shapo Magbabaya. In times of disaster, they immediately go to safe places if they knew that their life would be at risk, otherwise, they would stay at home in their own community and wait for the instructions of the Balyan. During a natural disaster, affected Subanen seek help from fellow Subanen rather than from “BIsaya”. Subanen age-old rituals and practices are their ways of responding and mitigating natural disasters. According to the informants, their Balyans have the ability to communicate with the spirits and can also see spirits through their naked eyes. That is why, only the Balyans can performing the rituals.

Similar findings are also noted in other indigenous peoples around the world who have used their traditional knowledge to prepare for, cope with and survive disasters and their methods and practices have originated within their communities and have been maintained and passed down over generations (Hasteh and Cunningham, 2013). In the districts of Mansehra and Battagram in the North West Frontier Province (NWFP) of Pakistan, during recovery, performance of rituals like “khatam,” or the recitation of the Holy Quran, and offering of prayers take place after big disasters (Kominoas cited by Shaw, et al., 2008:42).
Conclusion

Overall, Subanen informants in Guinicolalay have shown how their indigenous knowledge and practices have helped them cope with previous natural disasters in their community. Animism has continued in the belief system of the Subanen in this barangay as shown in how they give reverence to spirits in rivers, trees, forests, and nature in general. Belief and respect of the spirits living in nature is still part of their everyday life as they fish and farm for their livelihood. Such reverence to nature is translated into rituals they religiously observed and preserved in their community.

Viewing the findings from a symbolic interactionism perspective, Subanen are keen on the signs in nature and animals and the meanings and interpretations they provide. It is important to note the indigenous knowledge and practices of the Subanen because they view signs, omens, behaviour of animals and changes in the environment as early warning signs of an impending natural disaster. Such interpretations would help them in preparing, preventing and mitigating the effects of such disasters. Meanings and symbols allow Subanen to make sense of spirits, nature and natural disaster.

In viewing indigenous practices in an ethnomethodological perpective, Subanen ancestors had methods such as their cultural rituals to connect with the spirits surrounding them and passed them on to present generations. Subanen considered rituals as their methods of respecting and appeasing the spirits in nature.

The use of indigenous knowledge for disaster risk reduction is important because it represents the essence of self-reliance and sustainability and the strength of societies is based upon their ability to thrive with their own capacities and resources (Hasteh and Cunningham, 2013). Indigenous knowledge not only has potential, but a power proven by thousands of years of survival (Hasteh and Cunningham, 2013).
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