

Research article

# Adaptive measures to climate change among the Higaonon communities in Naawan and Initao, Misamis Oriental, Mindanao, Philippines

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## Abstract

Traditional knowledge systems of indigenous peoples are now acknowledged globally as crucial in combatting climate change. Thus, this study was conducted to determine the adaptive measures to climate change undertaken by the Higaonon communities within the hinterlands of Initao and Naawan, Misamis Oriental, Philippines. Collections of data were done through Focused Group Discussion (FGD) and Key Informant Interview (KII) using semi-structured open-ended questionnaires. Results showed that the resiliency to climate change among the Higaonon communities in Initao and Naawan was inhibited by the absence of land entitlement, although claimed customarily and within their ancestral lands. Logging concession in the last decades, arrivals of migrants and further encroachment to their ancestral lands exacerbate the impacts of climate change into their lives and survival. These impacts had adversely affected their cultural practices and rights, thus, adoption of the modern techniques in fishing, farming and hunting was the alternative solutions for their communities to survive. Massive information campaign on the ill-effects of climate change, resource conservation and sustainable development and exercise of indigenous



people's rights are highly recommended to be implemented. This is geared to understand better the present and future impacts of climate change to these indigenous communities. **Copyright © AJSSAL, all rights reserved.**

**Keywords:** indigenous people, Higaonon community, Misamis Oriental, Mindanao

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## INTRODUCTION

Indigenous people universally used biodiversity as a buffer against variation, change and catastrophe (Salick and Byg 2007). With least contribution to biosphere greenhouse gas emissions due to their modest and maintainable routines and practices, Indigenous people's dependence and close relationship to the natural environment define them to be vulnerable to climate change (Bernardo 2014, AIPP 2016, Tauli-Corpuz, *et. al.* 2009, Tauli-Corpuz and Lynge 2008, Baird 2008, Salick and Byg 2007, Cultural Survival Quarterly Magazine 2008, Tebtebba foundation 2008, United Nations Permanent Forum on Indigenous Issues 2007, Carling, *et. al.* 2015, Baldo-Soriano *et. al.* 2010, Rovillos and Baldo-Soriano 2010 and Galloway-McLean 2009). Yet, they get the least help coping with its effects that they have to fight harder to influence decisions about mitigating and adapting to climate change (Baird 2008). It has been recognized internationally that the indigenous communities are extremely resilient; capable to develop and adapt gradually to a changing environment while maintaining closely the interwoven people's cultural values (World Bank 2014 cited in Barrero, *et. al.* 2015, Bernardo 2014, Tauli-Corpuz, *et. al.* 2009, Macchiet. *al.* 2008, Cultural Survival Quarterly Magazine 2008, Tebtebba foundation, 2008 and Carling, *et. al.* 2015), thus the traditional lifeways and knowledge of these people could contribute significantly to the design and implementation of sustainable mitigation and adaptation measures, by offering examples and models of effective adaptation based on valuable traditional knowledge (Macchiet. *al.* 2008, European Parliament. 2009, United Nations Permanent Forum on Indigenous Issues. 2007, Carling, *et. al.* 2015). However, Many Asian States still fail to fully recognize indigenous peoples and to acknowledge their valuable contribution to climate change mitigation and adaptation (Carling, *et. al.* 2015).

The lack of research into the ways in which minorities and indigenous peoples are being affected by climate change only exacerbates their disadvantage and vulnerability. For them to get the help they need, their situation must first be documented and recognized – by academics, development and environment NGOs, governments and intergovernmental organizations (Baird 2008). Hence, this study was conducted to monitor the awareness and adaptive measures of climate change of the two less-recognized thriving Higaonon communities in Misamis Oriental located in the hinterlands of the municipalities of Naawan and Initao.

The Higaonon tribe is one of the 18 Lumad (a group of Non-Moro Indigenous Cultural Communities in Mindanao) ethno-linguistic groups in the Philippines (Olowa 2012) which originally are coastal dwellers and then moved to the mountains during the Spanish regime (Canoy and Suminguit, 2011 and Tebtebba Foundation, 2011) to protect their cultural right (Tebtebba Foundation 2011). The Northern and Central regions of Mindanao, particularly in the provinces of Misamis Oriental, Bukidnon, Agusan del Sur, Agusan del Norte, and Lanao del Norte, as their habitations. They are described as the "people of the living mountains" and "people of the wilderness." Their name is derived from "higa" means "to live or reside," "gaon" means "mountain or highland," and "onon" means "people" (Saranza-Cajetas 2016, Asian Development Bank 2002, Canoy and Suminguit, 2011, UNAHI (United Association of Higaonon Tribes) 2008 cited in Barrero, *et. al.* 2015). Among all the ethnic groups of the area, Higaonons are the least known (Saranza-Cajetas 2016). Thus, results of the study would help them in preserving the traditional knowledge system in mitigating climate change and for their voices to be heard.

## METHODS

In observance of their traditional customary rites and practices, rituals were conducted as embodied in their traditional process of gathering information from the tribe to give respect and seek guidance of *Magbabaya* (God) and the *Maulin-ulin* (Spirit of Ancestors). Omitting the ritual from the activity and any sign of disrespect of the



ritual ceremony from the visitor that can be felt by the *Magbabaya* and, in worst cases, will cost a life of certain person. The ritual did not only ask wisdom and guidance from their God but also to check the intention of the people. If the intention is good, the activity will proceed with a warm participation of the members of the community. Documentation of the ritual was prohibited. Personal interviews and Focused Group Discussion (FGD) with the council of elders and leaders were used in the gathering of relevant information pertaining to their adaptation to climate change. Questionnaires were also used to determine their level of awareness and traditional mitigating measures to climate change.

## RESULTS AND DISCUSSION

A total land area of 1,200.11 hectares and 4,000 hectares are claimed by the Higaonon communities in Initao and Naawan, respectively, as their ancestral land. The Higaonon tribe of Naawan is situated in Barangay Lubilan, while in Initao, they are inhabiting Barangay Sinalac and its neighboring barangays. Majority of these cultural communities are living and earning their means of livelihood primarily through farming, fishing, hunting and other related traditional means of survival within their ancestral domain claims.

The issuance of Certificate of Ancestral Domain Title (CADT) of the two cultural communities is still pending before the National Commission on Indigenous Peoples Central Office. Prior to the inception of the Indigenous Peoples Rights Act of 1997 (RA 8371), their ancestral domains were subjected or covered by a tenurial instrument issued by the Department of Environment and Natural Resources through the Integrated Forestry Management Agreement (logging concession). In the year 1964, 1979 and 1983, the rich and virgin forest of the Higaonon tribe in Naawan that served them as the living pharmacy and the source of life was burnt by the logging companies. Opposition from the tribe was ignored by the concessionaires due to lack of legal instrument thereby informing the tribe that the government owned the land. This led into massive entries of migrants as a consequence of logging concession thus creating human activities detrimental to the culture and rights of the Higaonon communities and to the environment.

The same incident that happened among the Higaonons in Naawan, the lush vegetation of the mountains of Initao which is claimed by the Initao Higaonons as their ancestral domain were also denuded due to the advent of large scale logging in the area. In an account, the logging concession permitted by the DENR had made the lives of these communities miserable. The encroachment of the migrants and their different activities such as mining, unsustainable farming system and logging had broken down the last stronghold of Higaonon people in Initao which until now the extent and remnants of the activity are still visible as shown in the google earth image (Figure 1).



On the other hand, the aggressiveness of the neighboring Higaonon community which is in Naawan had protected their green forest. After the 1994 logging operations in Naawan, the *Bagani* (community task force) were actively pursuing the encroachers, loggers and miners in the area, thus according to them their ancestral domain is now the last green mountains in the province of Misamis Oriental. These green mountains supply the drinking water of the municipality and its neighboring towns, meaning that, without the protection of the forest from the Higaonon communities (guardian of the watershed), the water supply will not be sustained. With their different experiences, this community learnt to be more vigilant in protecting their ancestral domain.

As keen observer of climate change (Salick and Byg 2007), the indigenous people of the two municipalities were very much aware of the abnormalities of the climate, and this was aggravated by adverse impacts and remnants of the logging operations previously done in the said areas. Denuded mountains had resulted to massive soil erosion, landslide, drying of rivers and absence of wild flora and fauna such as wild animals; boar, birds, monkeys, freshwater fish; shrimp, and native trees; lauan, magkono, narra, and other hard woods. The loss or migration of culturally important species would make it more difficult for elders to exercise and pass their traditional ecological knowledge to the next generation (Tebtebba, 2008). Aside from Bohol, tarsiers are also found within the ancestral domain of the Higaonon in Naawan and Initao but now in dwindling population. The rivers that served as their fishing areas are either dried up or dearth of fish. Their fertile soil was replaced with a barren land. The use of *Pisliticide* (*pislit* meaning pressing the pests using the thumb to kill the animals) technique in removing the pest, early planting of crops before the hatching of worm or other pests, and "*panuig*" (yearly planting) to control pest infestation were no longer practiced due to the unpredictable weather and climate patterns, thus adoption to modern farming techniques (the use of synthetic pesticides and inorganic fertilizers) forced them to be practiced in order to survive. Their own initiative to replant indigenous tree species was the most remarkable ways to adapting climate change. Using species of crops planted based on the seasons were also considered such as the use of *tinigib* corn variety instead of what was given by the agricultural practitioners. In short, this new generation of Higaonons tried to adapt the impacts of climate change by modifying their usual and traditional practices for them to survive.

Natural signals that were used to trigger activities in the past are now less reliable (Macchi 2008, Salick and Byg 2007). As in the Arctic, the increasingly unpredictable weather has also undermined older people's ability to interpret their environment and make decisions such as when to plant crops. This, in turn, has damaged community respect for them, and reduced people's confidence that their community's intimate knowledge of their environment will guarantee their livelihoods. Instead they have become more interested in alternative means of survival, such as helping drug-traffickers or allowing gold prospectors and loggers into the forest (Baird 2008). The outmigration of indigenous youth to seek economic opportunities elsewhere because climate change has limited further their opportunities in their own communities, could lead to erosions of indigenous economies and culture (Tebtebba 2008).

In an account, the communities observed a fish kill in the river in which they suspected as a result of the use of synthetic pesticides because they washed their manual backpack-type sprayer in the river, consequently contaminating their river.

The Higaonon traditional knowledge systems and practices were also adversely affected during the concession period. Productions of herbal medicines were reduced and desecration of burial grounds and sacred places were also observed as a result of the entry of the migrant settlers in their ancestral domain areas as logging contractors and workers. Commercial poultrys were also constructed along the rivers thus polluting their fishing grounds. Additionally, consent from the tribes was not considered prior to the construction of projects such as dams and water reservoir.

The forests are the lives of these cultural communities; source of food, source of income supporting their families and their children's education, and their place of worship. They recalled that this was not the place they remembered; abundant freshwater fish, wild fruits and animals, fresh air, and bountiful harvest of farmed crops. Big difference of the climatic change was observed by the communities as it affected their cultural practices and lives directly.

The absence of the Ancestral Domain Title inhibited this people to adapt sustainably to climate change. They could not perform their obligations as stewards of the forest because people do not respect their rights without the legal documents. The Higaonon elders in Initao emphasized that respect is one of the best ways to help them in coping up with the adverse impact of climate change. Respecting their rights, culture and the environment is a key element of survival and sustainability. They found hardships to return to their traditional way of living which they perceived to be the only solution to mitigate the adverse impacts of climate change, since they could not directly lobby the government who will issue permits and clearances, and to other people who continually encroach their



land because their customary rights were not respected due to the absence of land title. They have no political and judicial power to sue those who encroached upon their sacred mountain because they are just, according to them, a minority and marginalized community. Discrimination against minorities and indigenous peoples makes it harder for them to cope with the impacts of climate change (Baird 2008). Indigenous peoples experience social and political inequalities may severely limit adaptive capacity (Norton-Smith, *et. al.* 2016). These communities are currently and patiently waiting for the approval and issuance of the Certificate of Ancestral Domain Title before the NCIP, but their greatest fear is they may have the land title but they do not have resources anymore for them and for the future generations.

## CONCLUSIONS AND RECOMMENDATIONS

Besides climate change, logging concession adversely affected the Higaonon cultural communities in Initao and Naawan. The adaptive capacity to climate change of these communities hinges on the issuance and granting of the Certificate of Ancestral Domain Title (CADT). The title gives an assurance on the security oftenure over the land that is considered their source of livelihood, place of worship, living pharmacy and their home since time immemorial. The land title also serves as their greatest weapon in protecting their environment since other people would not respect them without it. The tedious process on the issuance of the title and the on-going encroaching activities in the ancestral land fear these communities that it would be too late for them to protect and conserve their resources. Hence, the following are highly recommended to help the Higaonon communities in Naawan and Initao in coping up with climate change:

1. The National and Local Government Units, the Academe and Civic organizations shall continuously initiate/conduct massive Information and Education Campaign (IEC) regarding the causes of climate change and its adverse effects to the different indigenous people areas/groups considering the facts that they are usually living within the forestall areas where their ancestral domains and lands are situated, and they are the most vulnerable sectors to environmental changes.
2. The National Commission on Indigenous Peoples, as the primary agency whose mandates is to protect, respect the indigenous peoples shall facilitate the different indigenous peoples group for the speedy processing and issuance of their Certificate of Ancestral Domain Title (CADT) and the formulation of their Ancestral Domain Sustainable Development and Protection Plan (ADSDPP) that would serve as blue print of the IP community.

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