

Multidimensional Poverty Indices of the Seven Tribes in the Province of Bukidnon

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Abstract

Poverty indices in the selected communities of the seven tribes of Bukidnon, Philippines were computed based on the international measure of poverty, the Multidimensional Poverty Index (MPI) of Oxford and UNDP (2010). The MPI measures dimensions to reflect the multiple deprivations of the tribes with respect to education, health and standard of living. Results show that the Higaonon and Bukidnon tribes are MPI poor, but the other five tribes are MPI severely poor. Thus, this paper shows key findings and how MPIs can be used as basis for recommendations to concerned institutions.

Keywords: multidimensional poverty index, tribes of Bukidnon, communities, health, standard of living.

Introduction

Poverty is a state of being deprived of the basic needs of an individual. Usually, it is associated with the need, destitution and lack of resources across a wide range of conditions.

In the Philippines, more than one third of the Filipinos live in poverty. In fact, 88 million Filipinos live in rural areas where poverty is widespread and most severe. For the rural people, agriculture is the primary source of income. Generally, illiteracy, unemployment and occurrence of poverty are higher among the people living in the upland areas and among the indigenous peoples. Accordingly, indigenous peoples are one of the vulnerable sectors in our society and are among the poorest in the country (IFAD, 2013).

A focus on deprivation is essential to human development. Poverty is complicated and thus multidimensional. The dimensions of poverty go far beyond inadequate income. It involves poor health and nutrition, low education, and skills, inadequate livelihood,

bad housing conditions, social exclusion and lack of participation. In 2010, the Oxford Poverty and Human Development Initiative (OPHI) of Oxford University and the Human Development Report Office of the United Nations Development Programme (UNDP) launched a new poverty measure that gives a multidimensional picture of people living in poverty, the Multidimensional Poverty Index (MPI). MPI identifies deprivations across health, education and living standards and shows the number of people who are multidimensionally poor and the deprivations that they face at the household level. It uses 10 indicators across dimensions. Figure 1 shows the indicators.

The new measure can help governments and development agencies wishing to target aid more effectively to those specific communities (Alkire, 2010). Oxford Poverty and Human Development Initiative (OPHI, 2011) developed MPI to show all the deprivations in the selected indicator, identify the poorest poor, show

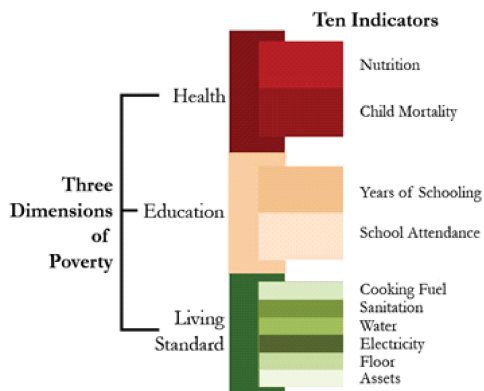


Figure 1. MPI indicators as used in the present study.

Source: Oxford Poverty and Human Development Initiative, 2011 and 2013.

which deprivation combinations are most common, reflect the results of effective policy interventions quickly and integrate many different dimensions of poverty related to Millennium Development Goals (MDGs). Added to this is the Wall Chart on Basic Social Services for All (BSSA) of the United Nations where it was emphasized the relevant key areas that need to be addressed. These are on population, primary health care, nutrition, basic education, drinking water and sanitation, and shelter. In this study, MPI indicators are used to determine the MPIs of selected communities of the seven tribes in the province of Bukidnon (Manobo, Umayamnon, Talaandig, Tigwahanon, Matigsalog, Bukidnon and Higaonon).

Each of the seven tribes has similarities and differences from each other peculiar in the tribe. The Manobos are found mainly in the municipalities of Pangantucan, Kalilangan and Kadilingilan, Bukidnon. They have their own archaic language which differs from other tribes. While the Umayamnon tribe from Cabanglasan, Bukidnon, is a nomadic

branch of the Manobo tribe. This tribe lives near the Umayam river for their source of daily sustenance. The most common tribe is the Higaonon. Their main source of income is from agriculture. The Bukidnons are lowland people who have adapted to Christian ways and modern living mostly found in the City of Malaybalay. The Matigsalog tribe is basically river people and lives along the Salug river of San Fernando (Cross-Culture Ministries, n.d.). The Talaandig tribe is found in barangays and municipalities surrounding the Mt. Kitanglad Range, which is also their historic domain. The members of the tribe are basically farmers and produce their crops at consumption levels (Tajonera, n.d.). The Tigwa or Tigwahanons are living all over the Municipality of San Fernando, Bukidnon. They occupy the banks and watersheds of Tigwa River. The areas where the Tigwa tribe lives are underdeveloped with poor infrastructure. Dispossessed of their tribal lands, they have little control over their lands. They are driven off the land by loggers and corporate plantations. They have failed to consolidate themselves and thus have no significant voice in politics. Because of their unattended grievances, they are prey to the community rebels and other rebellious movements who wish to use them against the government (National Commission on Indigenous Peoples, 2007). Until the present, the seven tribes in the province of Bukidnon still practice their respective traditional dances and rituals wherever they are.

According to Erni (2008), IPs in the Philippines are fully recognized by the government as well as their rights. In fact, in 1997, the government enacted the Indigenous Peoples Rights Act (IPRA) that recognizes, protects and promotes their rights. In 2007, civil society organizations assessed how IPRA progressed. Findings revealed that IP concerns have not been

sufficiently mainstreamed within government agencies.

In the case of the IPs, Rovillos and Morales (2002) acknowledged that the IPs should be regarded as those with a social and cultural identity distinct from the dominant or mainstream society. This makes them vulnerable to being disadvantaged in the process of development, thus, the focus in this study. According to the authors, the IPs asserted that they are not poor, but are living in difficult circumstances brought about specifically by loss of land and access to resources.

It is on this premise that this paper intends to address specific tribal communities' deprivations so that they are given importance and support by our local government units and other agencies in terms of the indicators they are most deprived of, considering their distinctive identities.

Objectives

This paper pursued the following objectives: (1) to describe the different multidimensional poverty indices of the selected communities of the seven tribes of Bukidnon; and (2) to determine the significant relationship of each tribe's MPIs and the social, political, cultural and economic dimensions.

Methodology

The respondents of the study included the selected communities of the seven tribes of Bukidnon, namely Bukidnon, Talaandig, Higaonon, Umayamnon, Tigwahanon, Matigsalog and Manobo. They are located in the different municipalities of the province of Bukidnon. Below is the list of tribes and their corresponding area: Manobo - Mt. Kalatungan Range, Pigtauranan,

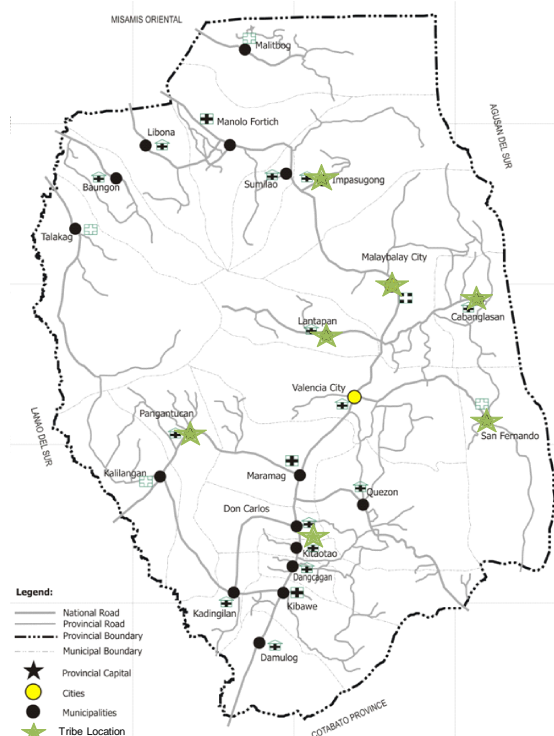


Figure 2. Map of the Province of Bukidnon showing the municipalities where the seven tribes are located

Map Source: Provincial Development and Physical Framework Plan 2007-2013

Pangantucan; Umayamnon – Cabanglasan Proper; Talaandig – Bul-ogan, Songco, Lantapan; Tigwahanon – San Fernando; Matigsalog – Quezon; Bukidnon – Daraghuyan, Dalwangan, Malaybalay City; and Higaonon – Impasugong. Figure 2 shows the map of the Province of Bukidnon and the corresponding municipalities/city where the selected communities are located. All the households in the identified communities were taken as respondents. The respondents were those IPs who speak the dialect, practice their culture and tradition, by blood, self identification or ascribed by others and ethnic minority group (IPRA).

To determine the poverty incidence among the seven tribes, Multidimensional Poverty Index (MPI) was used. MPI uses different factors to determine poverty beyond income-based lists. It uses a range of deprivations that afflict an individual's life. The measure assesses the nature and intensity of poverty at the individual level in education, health outcomes and standard of living. These are the three dimensions of MPI. MPI reveals a different pattern of poverty than income poverty. MPI is measured using 10 indicators. Poor households are identified and an aggregate measure constructed using the methodology proposed by Alkire and Santos (2010). Each dimension (1/3) and indicator within a dimension is equally weighted.

The following ten indicators are used to calculate the MPI:

■ Education (each indicator is weighted equally at 1/6)

1. Years of Schooling: deprived if no household member has completed five years of schooling
2. Child Enrolment: deprived if any school-aged child is not attending school in years 1 to 8

■ Health (each indicator is weighted equally at 1/6)

3. Child mortality: deprived if any child has died in the family
4. Nutrition: deprived if any adult or child for whom there is the nutritional information is malnourished

■ Standard of Living (each indicator is weighted equally at 1/18)

5. Electricity: deprived if the household has no electricity
6. Sanitation: deprived if they do not have an improved toilet or if their toilet is shared (MDG Definition)
7. Drinking water: deprived if the household does not have access to clean drinking water or clean water is more than 30 minutes walk from home (MDG Definition)
8. Floor: deprived if the household has dirt, sand or dung floor
9. Cooking fuel: deprived if they cook with wood, charcoal or dung
10. Assets: deprived if the household does not own more than one of: radio, TV, telephone, bike, or motorbike

A person is considered poor if they are deprived in at least 30% of the weighted indicators. The intensity of poverty denotes the proportion of indicators in which they are deprived. Appendix A shows the scoring of the MPI indicators and their corresponding weights.

A researcher-made checklist was used to determine the deprivation of each household using the 10 indicators. Unstructured interview was also done to validate the responses made by the respondents.

In the calculation of MPI, OPHI (2010) suggested a formula given as,

$$\text{MPI} = H \times A,$$

where H = percentage of people who are MPI poor (incidence of poverty)
 A = average intensity of MPI poverty across the poor (%).

The incidence of poverty among households can be calculated by assigning a 1 to a household having a weighted score of at least 33.33%, otherwise 0. Then the average is taken. The average intensity of MPI poverty across the poor can be determined by using the average of the sum of the weighted scores of every household. Households considered are with the MPI poor status, meaning having a weighted score of at least 33.33% of the weighted indicators.

To determine the relationship of the MPIs of the tribes in relation to their social, political, cultural and economic dimensions, chi square was used.

Results and Discussion

MPIs of the Selected Communities of the Seven Tribes of Bukidnon

Table 2 indicates the MPIs of the seven tribes of Bukidnon considering the three dimensions of 10 indicators, namely:

health (nutrition and child mortality), education (years of schooling and school attendance) and standard of living (cooking fuel, sanitation, water, electricity, floor and assets).

Among the tribes, the Tigwahanon has the highest poverty incidence (i.e., 97.83% of the Tigwahanon tribe is MPI poor, and on the average, those who are MPI poor suffer from deprivation in 64.30% of the indicators).

Looking more closely at the specific indicators, Table 3 further shows that in terms of education, all the indicators pointed out that the tribe is deprived of at most 61% and 80%, respectively. In terms of their standard of living, they are most deprived in their assets and cooking fuel (as all the other tribes are).

Figure 3 reveals that almost a quarter of the tribes' poor as measured by the MPI are the Tigwahanon (22%) and the Talaandig (21%). Thus, incidence of MPI poverty is greatest in these tribes as well as the intensity of poverty.

It can be noted that the MPIs within tribes vary. Among the tribes, the Tigwahanon tribe ranked first followed by the Talaandig of Bul-ugan, Songco as MPI poorest, while the Higaonon of Impasug-

Table 2

MPIs of the Selected Communities of the Seven Tribes of Bukidnon

Tribe	Number of Respondents	Factor H (%)	Factor A (%)	MPI
Bukidnon	51	47.10	44.40	0.209
Talaandig	52	94.20	65.00	0.613
Higaonon	29	37.90	40.90	0.155
Tigwahanon	46	97.80	64.30	0.629
Umayamnon	32	81.30	50.90	0.413
Manobo	29	93.10	53.30	0.496
Matigsalog	51	80.40	48.80	0.392
Total	290			

Legend:

- Factor H = Percentage of Indigenous Peoples who are MPI poor (Incidence of poverty)
- Factor A = Average intensity of MPI poverty across the poor (%)
- MPI = Multidimensional Poverty Index (Intensity of poverty at the individual level in education, health outcomes, and standard of living)

Table 3
 Percentage of the MPIs of the Selected Communities of the Seven Tribes of Bukidnon

Tribe	MPI Poor	Not MPI Poor
Bukidnon	47.06% (24)	52.94% (27)
Talaandig	94.23% (49)	5.77% (3)
Higaonon	37.93% (11)	62.07% (18)
Tigwahanon	97.83% (45)	2.17% (1)
Umayamnon	81.25% (26)	18.75% (6)
Manobo	93.10% (27)	6.90% (2)
Matigsalog	80.39% (41)	19.61% (10)

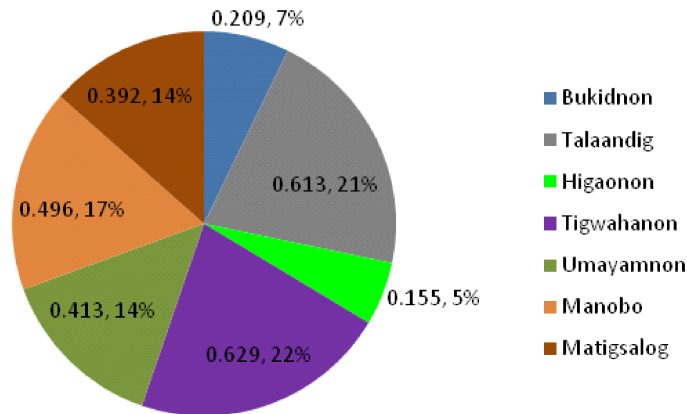


Figure 3. Tribal distribution in MPI Poverty.

ong and Bukidnon of Dalwangan tribes have the least MPIs, respectively.

MPI can also look at the poverty of each member of the tribe in a different way (see Figure 4). The shaded boxes show the indicators where the tribe is deprived.

The common indicators among the tribe where they are deprived are cooking fuel, sanitation, electricity and assets. In particular, Figure 5 illustrates the poverty profile of the Tigwahanon and Bukidnon tribes according to their MPIs. These two tribes got the least and the second highest MPIs, respectively. The bigger MPI value a tribe has, the more deprivations it has in the three dimensions. Although the Bukidnons got the second least MPI, it is still considered MPI poor. Among the three dimensions, they are most deprived in their

standard of living unless if there is an available water system in the vicinity. The average monthly income of the Bukidnon tribe is Php 2,687.00 (monthly income ranges from Php1,000,00 to Php 7,000.00 or 23 – 163 US \$). The average number of children per household is 4.

On the other hand, the Tigwahanon tribe is the poorest among the tribes according to the MPI. In fact, 30.30% of them has an income of Php 2,500.00 per month only (income ranges only to Php 500.00 – Php 6,000.00 per month or 12.5 – 150 US \$) and their average monthly income is Php2,718.00. Their main source of income is farming (about 78.05% of the respondents) within the community. Their meager average amount of income per households is far below the poverty line

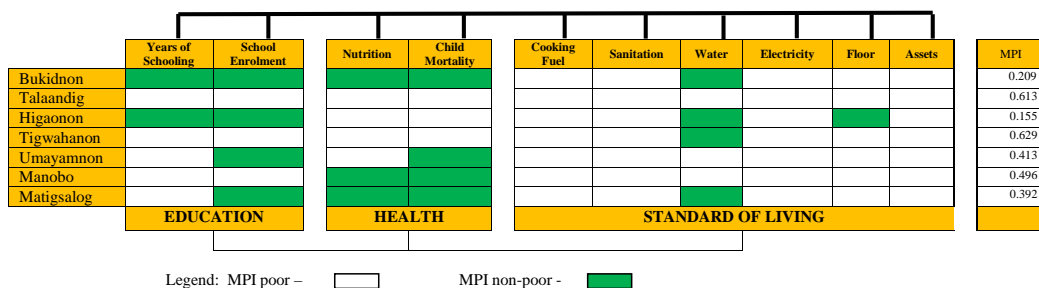


Figure 4. Poverty profiles of selected tribal communities of the seven tribes of Bukidnon.

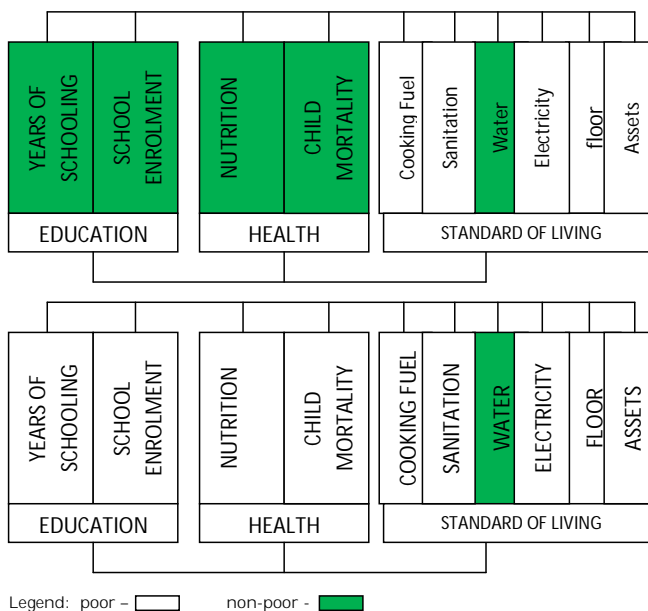


Figure 5. Poverty profiles of the selected communities of Bukidnon and Tigwahanon tribes, respectively.

of Php 7,700.00 income per month (NSCB, 2011). The average number of children per household is 4.

Relationship of Bukidnon and Tigwahanon Tribes' MPIs Significant Dimensions on Social, Political, Cultural and Economic

Given the MPIs of the tribes, I then proceeded to find out the significant variables that can relate to the deprivations of the two tribes. These are in terms of

social, political, cultural and economic dimensions of the tribe. The MPIs of each respondent is categorized into high, average and low MPIs. Results revealed that only the social and political dimensions have a significant relationship to their MPIs.

Social Dimension

Geographical location (dwelling or abode), presence of electricity and health center (basic necessities), presence and

location of comfort rooms (sanitation) and children's level of education are among the social dimensions that contributed to their MPIs. Appendix A presents the contingency tables of these variables. As reflected in the tables, the presence of electricity in the community is the strongest determinant to the tribes' MPI. Results further illustrate that about 11.9% of the variance is accounted for by the relationship between the MPIs and social dimension as measured in the chi-square. The geographic location of the tribal communities is a significant predictor to their MPI's as manifested on the p-value. This may be attributed to the limited access from the government infrastructure and basic social services and support programs such as access roads for the 4 wheel vehicles, electricity, water systems, day care and health centers, schools, irrigation, schools and health services, among others. Due to the geographic location of these tribes as mostly within the remote barangays and sitios, program awareness is wanting particularly on market information systems, agricultural technologies, proper grooming and sanitation, among others.

In the case of the Tigwahanon tribe, they are mostly based in the Municipality of San Fernando, Bukidnon. Most of them establish their dwelling place along the Tigwa River. Geographically, the Municipality of San Fernando is the last municipality of the province adjoining the municipality of Talaingod, part of Davao del Norte. It was in 2010 that the government opened roads to connect Bukidnon to Davao del Norte using the San Fernando-Talaingod route. Unfortunately, until this time (2013) the road is still under construction. The availability of public transports remains to be a concern since only two-wheeled vehicles are used. This condition makes it difficult for the Tigwahanons to transport

their agricultural products. In addition, access leading to the main road are mostly not accessible, hence produce are transported using farm animals (horses and carabao). This scenario makes it difficult for them. The tribe's working time and additional harvest cost are a burden to them, thus in some instances this has reduced the quality products of their products. The increased rainfall incidence and frequency of flooding in the area make access and road maintenance more difficult and costly, considering that creeks and rivers cut across the road systems.

The increase in population in the municipality further pushed the tribe to the remote sitios and barangays. As a result, they seldom get the government basic services programs and make them more dependent on the natural resources within their ancestral domains (i.e., use of firewood in cooking and construction of houses). There are a number of Certificate of Ancestral Domain Title (CADT) applications submitted by the different Tigwahanon tribes with the NCIP office in Malaybalay City. Until now, only one was approved by the NCIP, a government agency responsible in the CADT issuance. While the tribe practices their indigenous knowledge systems and practices within the tribe, this could have been more significant with the issuance of CADT. In the sustainable access of natural resources, the tribal leaders can manifest their approval and prior consent to any development project and activities inside their native title. Due to the absence of CADT, the tribe oftentimes evades from the socioeconomic development and proposed projects of the government doubtful of possible exploitation of land they call their own.

Sometime in April 28, 1993, the Department of Environment and Natural Resources (DENR) granted a rattan cutting permit to a tribal community in San

Fernando (Manobo Tribal Datu Agro-Industrial Corporation MDAITDC) covering 10,000 hectares with an approved volume of 762,412 linear meters of rattan poles. The permit allows them for a period of 25 years to expire in 2003 and renewable for another 25 years. The approval aims to increase the socio-economic development of the tribe. It also serves as capital endowments for other income generating projects other than natural resource extraction. The permit upon expiry in 2003 was however, no longer renewed by the DENR citing opposition from the tribe themselves and violations to the terms and condition. Inquiry by the DENR-CENRO revealed that most of the Board of Directors are family members and mostly residents of Valencia City and not from San Fernando. The project did not achieve its intention to alleviate their income because instead of becoming stockholders, they became laborers/workers (Mirasol, 2012).

The provincial government likewise issued a small scale mining permit for pyrites extraction to a tribe sometime in 2005, but was stopped due to misunderstanding among the elders and environmental violations. At present, except for those employed with government and political positions, most of the tribe is engaged in illegal small scale gold mining at Sitio Kiranggol, Barangay Dao as laborers, haulers and some engaged in small scale mining themselves. The tribal council of elders however, has very limited influence over these activities as the mining operation is presently controlled by lawless arm group together with migrant operators and financiers as ventilated by the tribal leaders during the two-day workshop conducted in 2012. What was disturbing was the reported participation of small children in these activities notwithstanding the mercury contamination affecting their health and

future. Recently, the Mines and Geo-Science Bureau of the DENR Region 10 issued the Cease and Desist Order (COD) with the request to the LGU and the PNP to implement the order.

Due to lack of funds, some members of the tribe are the easy contact for lumber and rattan illegal traders with the opening of the San Fernando- Talaingod road. IP farmers are among the poor members of the community, due to the high cost of capital inputs (seeds and fertilizers), lack of modern technology and limited access to government support and lending facilities, thereby reducing them to hand-to-mouth existence. The National Greening Program of the government through the DENR is a light in the tunnel, however, except for the cost for seedling production and labor for planting, actual benefits can only be realized after 10 years of planting.

The Bukidnon tribe on the other hand, is located at barangay Dalwangan, Malaybalay City. The farm to market road is however, not accessible to four-wheel vehicles hence similar to the Tigwahanon tribe, the common means of transportation is either horse back or carabao sledge. The area is at the foot of Mt. Kitanglad Range Natural Park, hence flooding is not an issue, instead landslides occur during the rainy season and forest fires during summer. The area is well suited to numerous high value vegetables owing to cool weather and high elevation. This condition however, increases the potential for encroachment by migrant Igorots (IPs living in the uplands of Cordillera region) who introduced high value vegetable production which causes the displacement of the tribe. Encroachment however, had been contained gradually starting in the 2000 when the park was set aside and designated as a protected area pursuant to Republic Act 8978, also known as the Mt. Kitanglad Act of 2000. The tribes tribal

guards have been instrumental in assisting the government through the DENR in enforcing park laws hand-in-hand with the Tribal Justice Systems.

Geographically the Bukidnon tribe is close to the national highway as compared to the Tigwahanon tribe in San Fernando. Added to this is the presence of multinational pineapple and banana producing companies, cut flower, high value vegetables, piggeries and poultries that extend support to road maintenance and employment to some members of the tribe. These companies are dependent on the water coming from their CADT covering an area of 4,300 hectares for which they have issued prior consent. The CADT within the Mt. Kitanglad Range Natural Park is rich in biodiversity and unique physical features, caters to nature lovers and bird watchers for which the tribe shares 25% of the entrance fee collected with the Protected Area Management Board (PAMB), the local governing authority of the park.

The tribe is gradually empowered and has increased its capacity to assert their rights after the issuance of their CADT and active participation to the Protected Area Management Board (PAMB). In 2012, their tribal *Bae* has been appointed member to the barangay council after being voted to be IP barangay mandatory representative. At present, the Bukidnon is MPI poor, but the existing fundamentals tend to point to future positive socioeconomic development. This means better CADT management, environmental stability and sustained head water management (Tarino, 2012).

Political Dimension

Appendix C indicates the contingency tables of significant variables on the political dimension in terms of power system and conflict resolution. In power

system, *who heads the tribe*, and *the manner of selection of a tribal leader* are significant variables, while in conflict resolution, *the manner conflicts are being resolved within the tribe* are significant to the MPIs of the tribes. Among the significant variables on power system, the strongest determinant to their MPIs is *who heads the tribe*. Gonzales (2012, in press) highlighted in his study that in a tribe, the leader (*Datu or Bae*) exercises tremendous power and authority over his/her community and dictates decisions. This may be the reason why the tribal leader plays an important role in the MPIs of the tribe. Results further show that about 9.4% of the variance is accounted for by the relationship between the MPIs and political dimension measured in the chi-square.

In their political system, the one who heads the tribe plays a significant role on the MPI's of the tribal community. The tribal head serves as the automatic focal person of the tribe in establishing a link with the government and support institutions. He/she also serves as a channel of information, education and integrity of the whole tribe. On good housekeeping and governance, the tribal head serves as a model and keeper of indigenous knowledge systems particularly on matters relating to conflict resolution, resource use and allocation, boundary conflict and the tribal justice systems. The tribal head also ensures that tribal knowledge and practices are transferred to the next generations such as in the establishment of the school of living traditions, among others.

Leadership in the Tigwahanon tribe is similar to all the seven tribes. Leadership title is inherited by blood and shall assume the task of leading the tribe and enjoys respect and recognition from and among its tribal members based on the indigenous knowledge systems and genuine cultural practices. However, the introduction of modern development, in-migration, peace

and order condition and their quest for socioeconomic survival, made them fragmented. A number of smaller tribal communities is formed, thus increasing the number of tribal leaders, yet limited opportunity and capacity to meet, exchange experiences and update on their own tribe's issues and concerns. This is coupled by the influence from some political leaders, capitalists, national government agencies and other support institutions that may have different culture and belief with the tribe that resulted to some extent de-culturation. This was manifested by the number of overlapping CADT claims among the Tigwahonon tribe, a number of tribal communities opposing against CADT claim of the other tribal communities over the same area and in some cases different mode of tenure instrument preference. This resulted to slow pace of CADT claim recognition so with development interventions, unstable peace and order and limited entry of community based support institutions.

There is seemingly lack of agreed modalities among tribal leaders of resolving conflict as often than not the tribe is dictated significantly by the interest of whoever is supporting them. This condition in some instances made tribal control dysfunctional and gives avenues for arm influence group in cohort with some misguided tribal leaders to govern natural resource extraction and access in favor of capitalists. This was again manifested by the tribal leaders themselves during the two-day strategic planning workshop in San Fernando in 2012. The case at hand is the present small scale gold mining operations at Sitio Kiranggal Barangay Dao accordingly controlled by an armed group and with the presence of approximately more than a thousand of individuals. Some of them are from San Fernando, but mostly from the adjoining municipalities and provinces. The recent

killing of the Baranagy Captain and Kagawad of Barangay Dao both known pillars of the tribe are instances of the growing misunderstanding and tribal leader's difficulty in solving conflict using their traditional practices (Tribal Chieftains of San Fernando, 2012).

Presently, the Municipal Tribal Chieftain is employed with the Municipal Government of San Fernando. He oversees concerns of the tribe and consolidates the needs of the various tribal communities. Livelihood projects are fragmented too, isolated and not sustained due to peace and order condition causing some members of the tribe to transfer from one place to the other not only because they are nomadic but the frequent encounters between the armed groups and the government forces. This condition limits the presence of support institutions such as NGOs thereby depriving the tribe of the needed support. The government's basic infrastructures and services (schools and health centers) can hardly be accessed by the tribe due to the distance from their residence (minimum of 3 kilometers).

In the case of the Bukidnon tribe, having the second highest MPI and owing to its relatively smaller tribal territory which is only 4,300 hectares, there is only one recognized tribal leader who is a tribal *bae* based on their traditional structure. The roles and line of responsibilities for the tribe governance systems were identified such as the tribal guard, ritualist, herbalist (pharmacist), and council of elders, among others. Hence, every individual has a very important role to play in the tribe's program and projects. Park/tribe visitors undergo a cleansing ritual as part of their cultural practices, a manifestation that the tribe extends its control and influence within their territory. As a CADT holder, the tribe was able to weather opposition from the other tribal leader and was able to present convincing evidence and arguments with the government through the NCIP. With

assistance from the Mt. Kitanglad Range Natural Park PAMB, it was also successful in harmonizing plans with the Community Based Forest Management Agreement holder of the same area and jointly undertakes activities consistent with their harmonized plan.

The tribe is represented in the PAMB, the governing board of the park of which a portion of the tribe's CADT is inside the park. The tribe is assisted by the Kitanglad Integrated NGOs in the documentation, promotion and established linkages with other support institution that lead to the conduct of capacity and infrastructure development of the tribe. This is demonstrated by the funding support for the construction of the tribe's heritage center funded by the World Bank, Geographic Information System (GIS) mapping, computer literacy and documentation techniques from other support institutions and individuals through KIN, an NGO. Recently, the tribal leader was a resource speaker in local and international engagements. Through linkages, the tribe is now a recipient of a livelihood project from Philippine Federation for Environmental Concern (PFEC) to produce essential oil out from citronella.

Conclusion

The selected communities of the seven tribes of Bukidnon are generally deprived of the basic services of the government based on the MPIs identified by the study. These communities have limited access and opportunities for good nutrition, reduced child mortality, school attendance, sanitation, potable water and the use of electricity. These deprivations contributed to their children's low years in schooling, dependence on forest resources particularly in cooking, house floor direct on soil and limited assets. Deprivation factors include peace and order condition,

absence of tenure instrument, deculturation, conflict of interest among the support institutions (politicians/capitalist) and modalities of solving conflicts among the tribe, among others.

Recommendations

Recognizing the deprivations of the selected communities of the seven tribes of Bukidnon, policy makers can direct policies on the access and delivery of the basic services to them. It is important as well to support capacity development of the second line leaders such as the youth for sustainability and stability of the tribe. To minimize land conflicts and improved natural resource management, the tribes should officially secure Certificate of Ancestral Domain Title and formulate Ancestral Domain Sustainable Development Protection Plan (ADS DPP). The plan will guide the tribal communities in establishing linkages with the government and support institutions to help them implement their plans and programs towards the attainment of their vision and aspirations. There should also be a strong representation of the IPs to the government to address the core issue of economic development, cultural integrity and peace and order. Capacity building initiatives among tribes need to be strengthened using customary laws and practices. Specifically, it is recommended that the following suggestions be given top priority:

1. promote dialogue among tribal leaders, organize and make functional the Council of Elders for each tribe to increase their capacity to address conflicting CADT claims and assist government in the issuance of Ancestral Domain Title. Government and support institutions can be tapped to provide resources for meetings, transportation and documentation including the support needed by facilitators jointly identified

- and agreed upon by the concern tribal leaders;
2. award Certificate of Ancestral Domain Title to qualified IP communities the soonest possible time and capacitate their respective Council of Elders to decide and control resources extraction and access consistent with the Philippine laws and indigenous knowledge systems and address in-migration;
 3. formulate their respective Ancestral Domain Sustainable Development and Protection Plan (ADSDPP) duly affirmed by the NCIP. The government with other support institutions can be tapped for these very important activities particularly on consensus building process;
 4. identify sustainable and responsible resource extractive activities based on ADSDPP and government to issue permit and regulate said activities with the primary goal of ensuring that local resources should benefit local people;
 5. promote and initiate the principles of payment for environmental services as most of the Ancestral Domains are head waters supporting industrial companies such as pineapple and banana plantations, among others, in the concept of native title and sustainable supply of goods and services particularly water. Likewise, a share on entrances fees collected by the park management to visitors entrance fees;
 6. tap tribal communities in the implementation of the DENR National Greening Program, Community Based Forest Protection activities and other government projects involving their ancestral domain;
 7. capacitate IP communities in disaster related preparedness as they are one of the most vulnerable sectors in the society;
 8. increase tribe's participation in local planning bodies by the LGU's (barangay, municipal and provincial levels) to ventilate needs for basic infrastructure and support services;
 9. promote transfer of cultural practices to the next generation through the tribe's school of living tradition; and
 10. establish linkages with support institution for possible projects needed by the tribes.

References

- Alkire, S., & Santos, M.E. (2010). *Multidimensional poverty index*. The Oxford Oxford Poverty and Human Development Initiative (OPHI), Department of International Development at Oxford University.
- Colombia - Global Humanitarian Assistance. (n.d.). Columbia.
- Cross-Culture Ministries. (n.d.). *Information of the seven tribes of Bukidnon*. Cross Culture Ministries.
- Department of International Development, Oxford Poverty and Human Development Initiative. (2013). *MPI*.
- Gonzales, M. (2012). Political life of the indigenous tribes of Bukidnon. *The Bukidnon State University Research Journal* (in press).
- International Fund For Agricultural Development (IFAD). (2013). *Rural poverty in the Philippines*.
- Mirasol, F. Jr. (2012). Interview with the PENRO - Bukidnon and PASu of MKRNP.
- Multidimensional Poverty Index. (2013). In *Wikipedia, The Free Encyclopedia*.
- Multidimensional Poverty Index - Psychology Wiki. (n.d.).
- Multidimensional Poverty Index - Wikipedia, the free encyclopedia. (n.d.).
- National Commission on Indigenous Peoples NCIP. (2007).
- News Articles UNDP. (n.d.).

- Oxford Poverty and Human Development Initiative (2011). *Multidimensional Poverty Index 2011*.
- Oxford Poverty and Human Development Initiative. (2013). *Global Poverty Index*.
- Rovillos, R. & Morales, D. (2002). Indigenous peoples/ethnic minorities and poverty reduction Philippines. Asian Development Bank.
- Socio Economic at a Glance. (2012). *Recent Data on Poverty in India*. Retrieved from <http://socioeconomyataglance.blogspot.in/2012/09/recent-data-on-poverty-in-india.html>.
- Tribal Chieftains of San Fernando. (2012). Focus group discussion during the Strategic Planning of Environmental Concerns. San Fernando, Bukidnon.
- Tajonera, E., (n.d.). Talaandig.
- Tarino, A. (2012) Interview with the tribal chieftain of Daraghuyan, Dalwangan, Malaybalay City.
- Unahi Mindanao. (n.d.). Higaonon tribe history.

Appendix A. Scoring of the MPI Indicators and Corresponding Weights

	Indicator	Score	Weight
I. Education			$\frac{1}{3}$
1. Years of Schooling:			$\frac{1}{6}$
	• deprived if no household member has completed five years of schooling	1	
	• not deprived if a household member has completed at least five years of schooling	0	
2. Child Enrolment			$\frac{1}{6}$
	• deprived if any school-aged child is not attending school in years 1 to 8	1	
	• not deprived if any school-aged child is attending school in years 1 to 8	0	
II. Health			$\frac{1}{3}$
3. Child mortality:			$\frac{1}{6}$
	• deprived if any child has died in the family	1	
	• not deprived if not one child has died in the family	0	
4. Nutrition:			$\frac{1}{6}$
	• deprived if any adult or child for whom there is the nutritional information is malnourished	1	
	• not deprived if any adult or child for whom there is nutritional information is not malnourished	0	
III. Standard of Living			$\frac{1}{3}$
5. Electricity:			$\frac{1}{18}$
	• deprived if the household has no electricity	1	
	• not deprived if the household has electricity	0	
6. Sanitation:			$\frac{1}{18}$
	• deprived if they do not have an improved toilet or if their toilet is shared	1	
	• not deprived if they have an improved toilet or if their toilet is not shared	0	
7. Drinking water:			$\frac{1}{18}$
	• deprived if the household does not have access to clean drinking water or clean water is more than 30 minutes walk from home (MDG Definition)	1	
	• not deprived if the household have access to clean drinking water or clean water is not more than 30 minutes walk from home (MDG Definition)	0	
8. Floor:			$\frac{1}{18}$
	• deprived if the household has dirt, sand or dung floor	1	
	• not deprived if the household has no dirt, sand or dung floor	0	
9. Cooking fuel:			$\frac{1}{18}$
	• deprived if they cook purely with wood, charcoal or dung	1	
	• not deprived if they have the option to use wood, charcoal or dung for cooking	0	
10. Assets:			$\frac{1}{18}$
	• deprived if the household does not own more than one of the following: radio, TV, telephone, bike, or motorbike	1	
	• not deprived if the household does owns more than one of the following: radio, TV, telephone, bike, or motorbike	0	

Note: "0" or "0%" indicates no deprivation in that indicator, while "1" or "100%" indicates deprivation in that indicator.
Source: Oxford Poverty and Human Development Initiative, 2011.

Appendix B. Contingency Tables on the Social Dimension of the Selected Communities of Bukidnon and Tigwahanon Tribes

Contingency Table on Significant Variable on the Social Dimension, Geographical Location of the Selected Communities of Bukidnon and Tigwahanon Tribes

MPI	Geographical Location		TOTAL
	Upland	Lowland	
High	13	3	16
Average	37	19	56
Low	7	12	19
TOTAL	57	34	91

$\alpha = 0.05$

p-value = 0.018

Cramer's V-square = 0.088

Contingency Table on Significant Variable on the Social Dimension, Presence of Electricity of the Selected Communities of Bukidnon and Tigwahanon Tribes

MPI	Presence of Electricity		TOTAL
	Yes	None	
High	11	3	14
Average	27	30	57
Low	4	15	19
TOTAL	42	48	90

$\alpha = 0.05$

p-value = 0.003

Cramer's V-square = 0.119

Contingency Table on Significant Variable on the Social Dimension, Sanitation of the Selected Communities of Bukidnon and Tigwahanon Tribes

MPI	Presence and Location of Comfort Rooms			TOTAL
	Inside the House	Outside the House	Others (i.e. no CR at all or only pits)	
High	1	3	9	13
Average	5	15	40	60
Low	2	5	13	20
TOTAL	8	23	62	93

$\alpha = 0.05$

p-value = 0.001

Cramer's V-square = 0.095

Contingency Table on Significant Variables on the Social Dimension, Presence of Health Center of the Selected Communities of the Bukidnon and Tigwahanon Tribes

MPI	Presence of Health Center		TOTAL
	Yes	None	
High	11	3	14
Average	47	12	59
Low	17	4	21
TOTAL	75	19	94

$\alpha = 0.05$

p-value = 0.007

Cramer's V-square = 0.105

Contingency Table on Significant Variable on the Social Dimension, Education of Children of the Selected Communities of Bukidnon and Tigwahanon Tribes

MPI	Educational Level of Children			TOTAL
	Elementary	High School	College	
High	4	5	1	10
Average	12	13	4	29
Low	4	4	2	10
TOTAL	20	22	7	49

$\alpha = 0.05$

p-value = 0.01

Cramer's V-square = 0.093

Appendix C. Contingency Table on the Political Dimension of the Selected Communities of Bukidnon and Tigwahanon tribes

Contingency Table on Significant Variable on the Political Dimension, Who Heads the Selected Communities of Bukidnon and Tigwahanon Tribes

MPI	Who heads the tribe?		TOTAL
	Datu	Bae	
High	7	8	15
Average	28	31	59
Low	10	11	21
TOTAL	45	50	95

$\alpha = 0.05$

p-value = 0.000

Cramer's V-square = 0.337