

# Survey on the Indigenous Knowledge Holders as Partners in the Conservation of the Ifugao Rice Terraces World Heritage Site in Hungduan, Ifugao, Philippines

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**Abstract:** *The study sought to identify the indigenous knowledge practices relevant to the dynamic conservation and adaptive management of the Ifugao Rice Terraces; and to identify the indigenous knowledge (IK) holders as custodians and partners in the conservation of the Ifugao Rice Terraces World Heritage Site (IRTWHS) in Hungduan, Ifugao. The study utilized survey questionnaire to gather data. Frequency and percent distribution were used to categorize and summarize the data. A total of 439 respondents were interviewed through chain referral technique to trace and track down the IK holders. Results show that most IKs are male-dominated. This means that majority, if not all, of the IKs are being done and led by men. Only in weaving that women are generally involved. These findings can be indicative of the distinctive and respective labor roles of men and women in the community. Likewise, findings manifest that majority of the IK holders belong to the age group of 61 years old and above. This signifies that most of the remaining indigenous knowledge holders are aged, which bolsters the findings of previous studies that IK is susceptible to being endangered as its holders or custodians are mostly elderly. Thus, IK transfer and transmission to the young generation is eminent; IK systematic documentation is compelling.*

**Keywords:** Indigenous knowledge practices, Ifugao Rice Terraces World Heritage Site, Hungduan, Ifugao.

## 1. Introduction

The Municipality of Hungduan in the developing province of Ifugao, Philippines is a rich repository of Indigenous Knowledge (IK), and is home to highly skilled artisans and knowledge holders. This is not surprising as Hungduan is part of the World Heritage Site and has been recently accorded recognition as a Globally Important Agricultural Heritage Systems (GIAHS) by the Food and Agriculture Organization (FAO).

It is said that the basic component of any country's knowledge system is its indigenous knowledge (IK). It encompasses the skills, experiences and insights of people, applied to maintain or improve their society and sustain their livelihood (World Bank, 1997). IK may refer to the local knowledge that is unique to a given culture or society. It is the basis for local-level decision making in agriculture, health care, food preparation, education, natural resource management, and a host of other activities in rural communities (Warren, 1991). Other authors define IK as a concept that is developed and adapted continuously to gradually changing environments and passed down from generation to generation and closely interwoven with people's cultural values.

However, previous studies on the subject matter indicate that many indigenous knowledge systems are now at risk of becoming extinct because of the rapidly changing natural environments and fast pacing economic, political and cultural changes on a global scale. Practices vanish, as they become inappropriate for new challenges or because they adapt too

slowly. IK is seen as waning and the custodians of these IK have decreased in recent years on a worldwide scale. It is said that many practices disappear only because of the intrusion of foreign technologies or development concepts that promise short-term gains or solutions to problems without being capable of sustaining them. The tragedy of the impending disappearance of indigenous knowledge is most obvious to those who have developed it and make a living through it. The implication for others can be detrimental as well, when skills, technologies, artifacts, problem solving strategies, and expertise are lost (Dutt, A., *et al.*, 2015a; Nyirenda, M., 2011; World Bank, 1998).

The study of Dutt, A., *et al.* (2015b) further averred that the result of such situation is the erosion of IK which is exacerbated by a weak legislative framework governing the use of IK and inadequate law enforcement. Also, limited research has been conducted and few on the profile of these important IK holders. This can be attributed to the fact that IK practice is difficult to measure and that precise data are lacking despite the advent of information communication technology.

This scenario is also reflective of the IK situation in Ifugao. A similar observation was noted that the practice of Ifugao indigenous knowledge is dying and waning which is highly detrimental to the Ifugao community and the Ifugao Rice Terraces World Heritage Site (IRTWHS). Apparently, the number of IK holders is declining and that IK practice is likewise eroding. This alarming situation signifies that the IRTWHS is not spared from becoming extinct as a result of vanishing IK holders and experts.

Volume 5 Issue 6, June 2016

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Considering all these, there is a need to include the public or the local people themselves in the decision making process such as, in developing policies for the protection, conservation and transfer of IK. The community people who value their IK should accord some protection. It is important though, that people who are interested in protecting IK should never do so in isolation from the people who use them. Accordingly, there is a need to have an understanding of the human communities that are dependent on the IK including culture, economics and social structure of the relevant society. Also, there is a more pressing need to be organized to do conservation and transfer of IK than large-scale infrastructure development would bring.

Apparently, the people of Hungduan, being a cultural minority remained yet largely unnoticed, such that their rich indigenous knowledge and practices are still rarely recognized and barely documented. Recognizing the susceptibility of the IK and its holders in the locality, it has now become a need to record and document these local knowledge and to trace the knowledge holders to preserve and sustain them for current and future generations. This is pivotal to the protection and conservation of the Ifugao Rice Terraces as a heritage, not only of the Ifugao but of the whole world.

Results of this study will serve as a baseline data for the establishment of a databank center in the local government unit that will capture the IK systems and/or practices in the municipality of Hungduan, which would be instrumental in due course in the eventual exchange, transfer and dissemination of IKs.

It is therefore, the goal of this study to identify and keep record of the indigenous knowledge systems and/or practices on cultural and environment resource preservation, and to identify the remaining indigenous knowledge holders as important knowledge custodians and partners in the conservation of the Ifugao Rice Terraces World Heritage Site. This is premised on the pronouncement made by UNESCO (2006) that: "indigenous knowledge systems regarding the building and maintenance of the terraces and irrigation systems and watershed management may disappear if not passed on."

## 2. Objectives of the Study

The study sought to identify the indigenous knowledge relevant to the dynamic conservation and adaptive management of the Ifugao Rice Terraces; and to determine the Indigenous Knowledge (IK) holders among the Tuwalis of Hungduan, Ifugao, as custodians and partners in the conservation of the Ifugao Rice Terraces World Heritage Site (IRTWHS).

## 3. Methodology

The study is a survey-descriptive research. The respondents who are also the key informants were interviewed using a survey questionnaire. Also, series of interviews were conducted to elicit information on the expertise of every IK

holder. A total of 439 respondents were surveyed. Chain referral technique was used to generate the respondents of the study inasmuch as there is an inadequate information for making the sampling frame. Referral technique is appropriate method for tracing and tracking down key informants or holders of the needed information. Using this approach, a few potential respondents from the barangays/communities were interviewed first, and they in turn gave names of other sources of information in the community. This process went on until there were no more other potential key informants referred to by the previous respondent.

The study was conducted in the nine barangays/communities of the Municipality of Hungduan, Province of Ifugao. Hungduan is one of the 11 component municipalities of the Province of Ifugao in the Cordillera Region in Northern Philippines. It is located at the northwestern corner of the Province and is bounded on the East by Kiangnan, on the West by Mountain Province, on the South by the municipality of Tinoc and on the North by the Municipality of Banaue. It has a total land area of 22,911 hectares spread in its nine (9) barangays. Its landscape is characterized by steep mountain terrain dissected by streams, rivers, and creeks. This municipality is known for the famous rice terraces, which were carved in the mountainsides about two thousand years ago. These terraces which are part of the Rice Terraces of the Philippine Cordilleras, were inscribed in the UNESCO World Heritage List as a *Living Cultural Landscape* making the Municipality of Hungduan one of the Heritage Sites in this part of the globe.

## 4. Results and Discussion

The Ifugaos, as custodians of the rice terraces, are also masters of their land. Physically, technologically, culturally and supernaturally, they have eked out an existence, merging day-to-day experience collected for centuries with belief systems which aid them in coping with the harshness of their environment. As such, they have become experts in managing the limited natural resources granted by their mountain forest abodes by combining their physical, mental and spiritual energies. Their struggle for existence has created a unique landscape and, at the same time, an attendant lifestyle that is distinctive. This synergy of the hearts, minds and souls of the people is reflected in the indigenous knowledge systems and practices (IKSP) relevant to the Ifugao Rice Terraces as discussed below.

### Existing Indigenous Knowledge Practices in Hungduan

Results of the study disclose that the following IKs are still being practiced relative to the management and conservation of the IRTWHS in the Municipality of Hungduan:

- **Mun-abol** – The indigenous practice of weaving is crucial in the conservation and sustainability of the IRT because the traditional apparels are highly significant in the social class where people belong. The *nawotwot* (poor) wears a different cloth design from those who belong to the affluent families or *kadangyan*. The designs on the woven cloth, usually on skirts, loincloth or *wanoh*, or blankets differ as to social class. The skill in producing such

garments is important since social class and apparels are highly relevant to acquisition, ownership and maintenance of the rice terraces. Also, traditionally woven garments is a requirement throughout the life of an Ifugao – there has to be the birth blanket and the death blanket.

- **Mun-anup** – The indigenous practice of hunting wild animals in the forest for household consumption. Men usually go hunt for wild pigs, deer, birds and other wild animals that abound in the forest.
- **Mumbaki** - The *mumbaki* plays an important role in the community as spiritual leader, the traditions and practices bearer, a genealogical consultant, and a medicine man. They are spiritual leaders for only they can say prayers and petitions directly to the gods. He may know whether the petition is favorable or not. On the other hand, he intercedes in curing illnesses that are found to have been caused by the gods, human spirits, evil spirits and human curses. Those who become *mumbaki* may come from any class of society. The making of a *mumbaki* happens to be by interest and talent. Usually in a family who has a father or grandfather who practices the *baki*, it would happen that one or more of the children may eventually learn to be one someday. Their learning starts from the home when frequent listening and witnessing the *mumbaki* is a better form of learning.

Being a *mumbaki* is also a calling. However, a *mumbaki*'s job is usually free of charge (except for some meat he brings home) and requires very great deal of discipline. For example, some ritual performances require the *mumbaki* not to sleep with his wife, not to take a bath, not to work in the fields, not to eat certain kinds of food. Violations of the supposed disciplinary procedures or *ngilin* may result very badly.

- **Munhabat** – The construction of the Ifugao native house entails a lot of skills, effort, patience and sacrifice because there are a lot of belief systems and rituals attached to it. Starting in choosing a location for the house entails the performance of rites until the house-warming ritual. Carpenters start work from choosing the trees and cutting of timber from the forest, to construction of the house until the finishing touches on the cogon roof. Along the process, there are rituals performed by the house owner for the safety and protection of the workers and good blessings for the house.
- **Munkiwa** - The Ifugao native rice wine or “baya” is prepared to grace feasts, rituals and special occasions. It is made by cooking together in ratio and proportion the “*Ipuggo* and *dayakkot*” (glutinous rice) and fermented by the use of the “*binokbok*”. The “*binokbok*” is the sun baked dough mixed with the roots of the “*on-wad*”, a type of grass herb abundant in the rice fields. The “*binokbok*” can also be dried in the “*hay-ungan*”. The “*binokbok*” which is crushed to fine powder is sprinkled to the rice, mixed thoroughly, and then placed in a large rattan basket covered with banana leaves. After three days, the rice which is already moist because of fermentation is placed in the jar and securely covered with banana leaves. The rice wine (*baya*) is extracted after two weeks or more. The longer the fermentation is, the stronger the wine is (*nap-got*).

- **Munpahat / Muntonton** – There are people in the community who are adept at memorizing genealogies of their respective clans up to nth generation. These people however, are mostly the *munbakis* because they get to know the ancestors that they invoke during ritual performances.

Source: Interview with key informants

### Profile of Indigenous Knowledge Holders According to Sex across all IK

**Table 1:** Distribution of the IK holders according to sex

Indigenous Knowledge	Sex		Total	Percent Distribution
	M	F		
Mun-abol	0	24	24	5.47
Mun-anup	56	0	56	12.76
Munbaki	40	0	40	9.11
Munhabat	39	0	39	8.88
Munkiwa	16	18	34	7.74
Munpahat	44	7	51	11.62
Munpaot	54	0	54	12.30
Muntuping	92	0	92	21.00
Mun-udih	49	0	49	11.16
<b>TOTAL</b>	<b>390</b>	<b>49</b>	<b>439</b>	<b>100%</b>
<b>Percent Distribution</b>	<b>88.88</b>	<b>11.16</b>		

Table 1 shows a summary of the total number of indigenous knowledge holders in the municipality of Hungduan. Data manifest that there are 24 (5.47%) *mun-abol*, 56 (12.76%) *mun-anup*, 40 (9.11%) *munbaki*, 39 (8.88%) *munhabat*, 34 (7.74%) *munkiwa*, 51 (11.62%) *munpahat*, 54 (12.30%) *munpaot*, 92 (21%) *muntuping*, and 49 (11.16%) *mun-udih* in the municipality of Hungduan. These IK holders are found in all the nine barangays of Hungduan, namely: Abatan, Baang, Bangbang, Bokiawan, Hapao, Lubuong, Maggok, Nungulunan, and Poblacion.

Generally, the IKs are dominated by men having a total of 390 or 88.88% male IK holders. It can be gleaned from the Table that majority, if not all, of the other IKs are being done and led by men, except for *munkiwa* and *munpahat*, whereby women are also involved. Results reveal that *mun-abol* (weavers) is women-dominated IK, having 100% female IK holders. These results may be indicative of the distinctive and respective labor roles of men and women in the community.

### Profile of Indigenous Knowledge Holders According to Age

**Table 2:** Profile of IK holders according to Age across all IK

Indigenous Knowledge	Age of Respondents				
	≥30	31-40	41-50	51-60	≤61
Mun-abol	1	3	4	8	8
Mun-anup	0	7	15	15	19
Mun-baki	0	1	1	3	35
Munhabat	0	3	4	14	18
Munkiwa	0	0	4	13	17
Munpahat	0	1	2	1	47
Munpaot	1	8	13	21	11
Muntuping	0	4	13	26	49
Mun-udih	1	1	6	20	21
<b>TOTAL</b>	<b>3</b>	<b>28</b>	<b>62</b>	<b>121</b>	<b>225</b>
<b>Percent Distribution</b>	<b>0.69</b>	<b>6.40</b>	<b>14.12</b>	<b>27.56</b>	<b>51.25</b>

Table 2 shows the profile of IK holders according to age. Results manifest that a little over one-half (51.25%) of the holders of the different indigenous knowledge in Hungduan belong to the age group of 61 years old and above, followed by 51-60 years old age bracket with 27.56%. Portion of the IK holders belong to the age groups 41-50, and 31-40 years old (14.12%, and 6.40%, respectively). Only a handful (0.69%) is below 30 years old. Statistical data show that the IK holders are already in their declining years.

This signifies that most of the remaining indigenous knowledge holders are aged, which bolsters the findings of previous studies that IK is susceptible to being endangered as its holders or custodians are mostly elderly. This also indicates the need for knowledge sharing and transfer to the young generation so that the IK systems and/or practices relevant to the conservation of the Ifugao Rice Terraces could be perpetuated and be passed down from generation to generation.

## 5. Recommendations

Based on the findings of the study, the following recommendations are made:

- 1) Systematic documentation and recording of the different IKs, and the profiling of IK holders of the different ethno-linguistic groups of the province of Ifugao should be conducted.
- 2) Heritage learning centers with IK data bank system should be established in the communities for culture appreciation and knowledge transfer. Also, information resources that support research and learning about indigenous knowledge, its importance and use in present-day society should be made available and promoted in the locality.
- 3) A further study on the different IKs and their transfer and transmission be conducted.

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