

Ifugao migrants in and around the Northern Sierra Madre Natural Park

Edited by Jan van der Ploeg, Gerard A. Persoon and Mercedes D. Masipiqueña



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CVPED summer course 2007

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Introduction

Jan van der Ploeg, Gerard A. Persoon and Mercedes D. Masipiqueña

Problem definition

In the global policy arena, there is much attention for the relation between biodiversity conservation and the rights of indigenous peoples. Granting land rights to indigenous communities is now seen as an instrument to protect nature in developing countries. But this strategy is also questioned: Who is indigenous and who's not? Are indigenous communities indeed the environmental stewards as is often suggested? Is it fair to pose environmental restrictions on indigenous land claims? Or does the struggle of indigenous peoples distract environmentalists from the real problems? In short, how effective is the alliance between indigenous peoples and conservationists? And how does it work out in practice at the local level?

The Northern Sierra Madre Natural Park (NSMNP) is the largest protected area of the Philippines: it covers 360,000 hectares of tropical forest, mangroves and coral reefs. The protected area is home to a large diversity of species of plants and animals, among which the endemic and critically endangered Philippine eagle and the Philippine crocodile. In 2001 the area was officially declared a protected area. The Protected Area Management Board, in which indigenous communities are represented, is responsible for the formulation of a general management plan, which specifies a complex zoning system and provides details on the rules and regulations.

Logging and hunting activities as well as agricultural encroachment are threatening the protected area. Rural communities in and around the protected area often earn less than a dollar per day and depend heavily on forest resources for their daily subsistence and income. In this context of rural poverty, the Department Environment and Natural Resources (DENR), the government agency responsible for the protection of the park, finds it difficult to enforce environmental legislation.

Over the past years there has been an increase in the inflow of immigrants from the Central Cordillera, specifically Ifugao. These migrants settle in the buffer zones of the protected area to clear land where they cultivate bananas, rice and corn for subsistence. In several cases, this has led to rapid deforestation, soil erosion, and land conflicts with local communities in the Northern Sierra Madre, such as the Agta, Ybanag and Ilocano. Indeed, local people and politicians often pinpoint these immigrants as the main culprits of the ongoing deforestation in the protected area. This poses a set of serious challenges for protected area management and indigenous peoples' rights: Are the immigrants from the Cordillera indeed the primary actors of forest degradation in the Northern Sierra Madre Natural Park? What are the ecological effects of their slash-and-burn farming systems on endemic flora and fauna? Is it legitimate to stop these impoverished farmers from clearing 'empty' forest land? Can these indigenous communities claim land rights in the Northern Sierra Madre Natural Park under the Indigenous Peoples' Rights Act of 1997?

Very little scientific information is available on the Ifugao migrants in and around the Northern Sierra Madre Natural Park. The CVPED summer course 2007 aimed to gain

insight on the causes and consequences of Ifugao migration to the Northern Sierra Madre Natural Park, and relate this to the international discourse on indigenous peoples' rights and protected area management.

Methodology

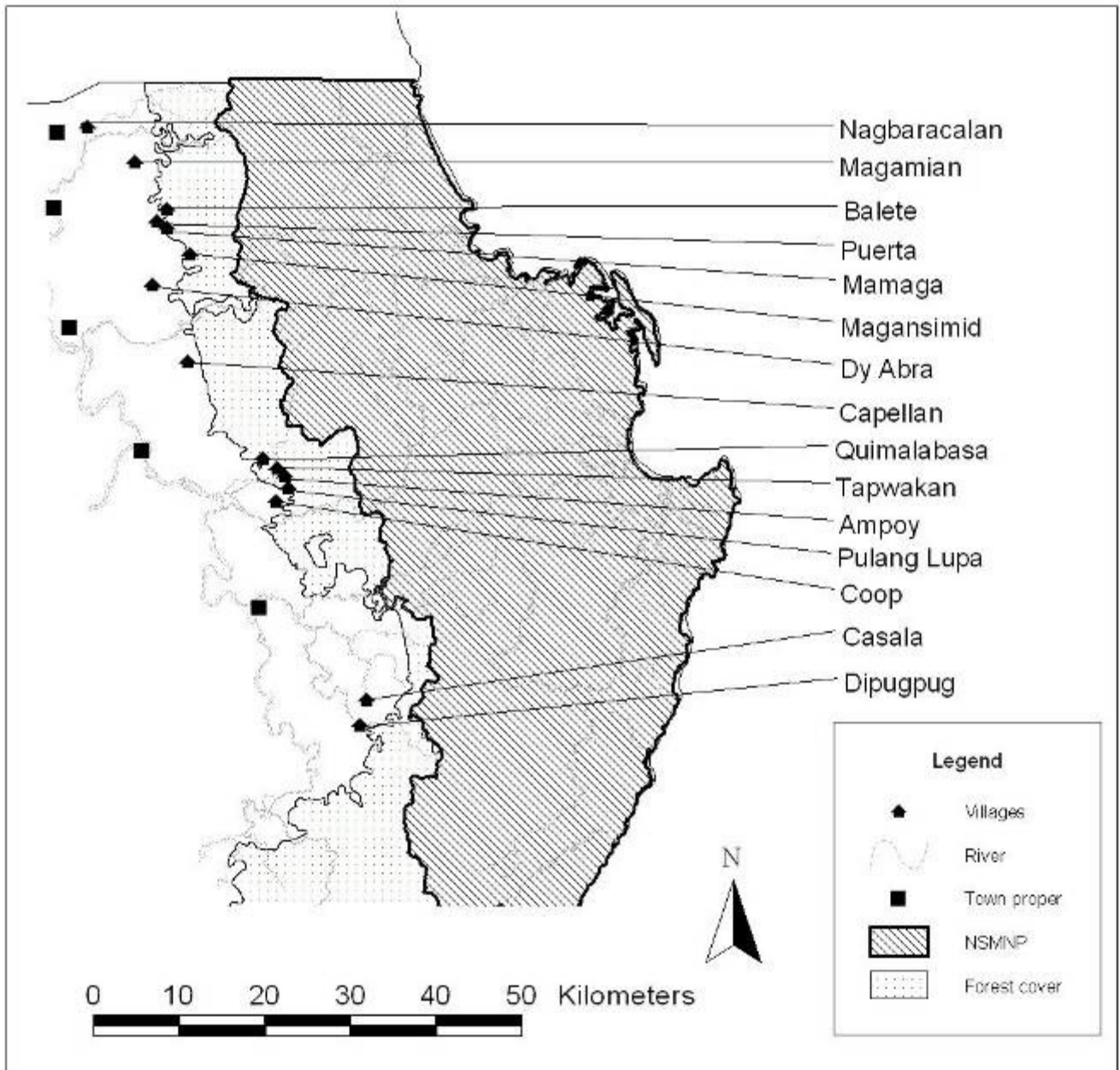
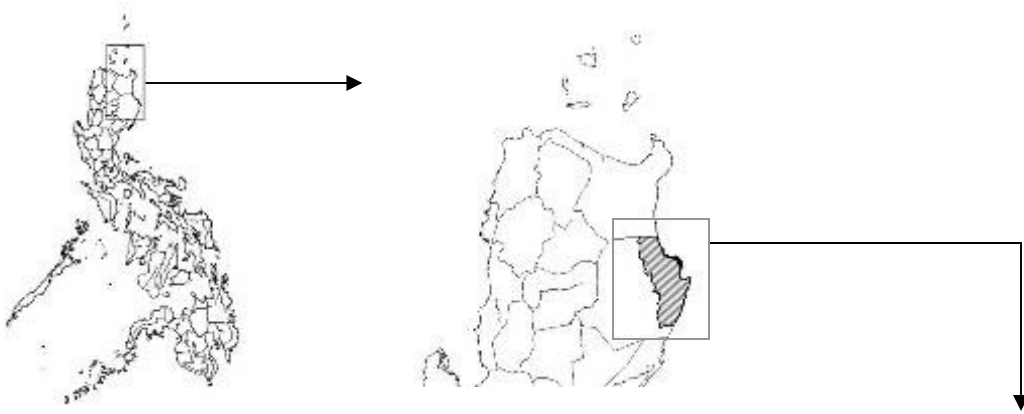
The aim of the CML summer course is to provide students the possibility to gain experience in working in an international and interdisciplinary team on a problem-oriented assignment in a developing country. The focus is on learning practical fieldwork skills and practicing research methods and techniques.

The CML summer course 2007 focused on the role of Ifugao migrants in the management of the Northern Sierra Madre Natural Park. Thirty Dutch and Filipino students from different disciplinary backgrounds (biology, anthropology, forestry, agriculture, etc.) conducted fieldwork in 15 villages around the Northern Sierra Madre Natural Park.

The summer course started with several introduction lectures in Manila and Los Baños (see the summer course program in appendix 2). The following week the students finalized a research proposal and a questionnaire at the Cabagan campus of Isabela State University. From 3 to 25 July the students gathered data in the uplands of the Sierra Madre. In the final week of the course this report was written and presented to a multi-stakeholder audience.

We selected fifteen villages in Isabela based on the presence of migrants from the Cordillera: sitio Nagbaracalan in barangay Simanu Norte, sitios Magamian and Balete in barangay Limbauan, sitios Puerta, Mamaga and Magansimid in Masipi East, barangay Dy Abra, barangay Capellan, sitios Quimalabasa and Tapwakan in barangay Rang Ayan, sitios Ampoy, Coop and Pulang Lupa in barangay Batong Labang, barangay Casala and sitio Dipugpug (also often called Cinamnama) in barangay Del Pilar (see map 1). Filipino-Dutch student pairs collected data on demography, history, farming systems, forest utilization and other basic information in these villages (chapter 2).

The students individually operationalized a specific topic related to the Ifugao migrants in Sierra Madre. These questions were compiled in a questionnaire (see appendix 1). Around 130 people were interviewed by the students in the fifteen villages. The data was subsequently used by individual students to prepare a short report on their topic. The result is a *capita selecta* on Ifugao migrants in and around the Northern Sierra Madre Natural Park (chapter 3).



Map 1: Research sites in the Northern Sierra Madre Natural Park

Structure of the report

This report is the final output of the CVPED summer course 2007. It presents data collected in fifteen villages in the buffer zone of the Northern Sierra Madre Natural Park. Chapter 2 consists of fifteen village descriptions co-authored by a Filipino student and his or her Dutch counterpart. The villages are presented from North to South: starting with sitio Nagbaracalan in San Pablo to sitio Dipugpug in San Mariano (see map 1). The individual research themes of the students form chapter 3. The first two paragraphs (3.1. and 3.2.) deal with Ifugao migration to the Northern Sierra Madre. This is followed by eleven contributions highlighting different elements of the Ifugao farming systems in Isabela (paragraphs 3.3. to 3.13.). Paragraphs 3.14 to 3.18 describe the utilization of forest products. The remaining paragraphs (3.19 to 3.28) focus on village life and Ifugao culture. In addition, we have included the questionnaire (appendix 1), the program (appendix 2), and the notes on the various lectures that were given during the CVPED summer course (appendix 3).

Acknowledgements

The summer course took place in the framework of the Cagayan Valley Program on Environment and Development (CVPED), the academic partnership of Isabela State University in the Philippines and Leiden University in the Netherlands. We gratefully acknowledge the financial support of the Louwes Fund and Asia-Europe Foundation (ASEF). We thank the following people who made the summer course a success: Andres Masipiqueña, Arnold Macadangdang, Jane Placido, Wilda Calapoto, Eso Tarun, Dominador Zipagan, Rose Araño, Tess Balagasay, Charlie Tumaliuan, Clarissa Arida, Paula Schindeler, Norma M. Molinyawe, Dave de Vera, Gilbert Hoggang, Rolando Modina, Dante Aquino, Olive Beltran, Cecile Mangabat, Rodrigo Fuentes, Karl Villegas, Patricia Sanchez, Roberto Cereno, Dominic Rodriguez, Mari-Tes Balbas, Samuel Telan, Jessie Guerrero, Bernard Tarun, Romeo Quilang, Rose Araño, Geert de Snoo, Jose van Santen, Myrna Cureg, Grace Padaca, Aileen Gonzales, Resty Antolin, Edwin Macaballug, Tomas Reyes, Merlijn van Weerd, Tessa Minter, Denyse Snelder, Edith de Roos, Zeno Wijtten, Jose Antonio, Roland Yap, Floor Sanchez, William Savella, Ruben Bastero, Bern Persoon, Gaby de Leon, Janet Quilang, Nenita Magno, Christopher Mamauag, Edgar Go, Ludmilla van der Meer, Annelies Oskam, Jory Sjardijn, Jose Mari Diaz, Antonio Miro, Arnold Bautista, Renato Binbinon and Maria Theresa Aggabao.

Chapter 2: Area descriptions

2.1. Nagbaracalan and Nangka

Glory Cañete and Anna Piestrzynska

Nagbaracalan is a sitio of the barangay Simanu Norte of the town San Pablo Isabela. Nangka is the initial place of immigration is part of sitio Nagbaracalan and it doesn't have a separate administrative status. The distance between Nangka and Nagbaracalan is more or less 6 km. Nagbaracalan is located more or less 4 km from Simanu Norte. There is a distance of 3.5 km between the highway and Simanu Norte. Simanu Norte is situated 12 km from San Pablo.

We have spoken to one of the first migrants in the area, Leon Dulnuan and the former barangay captain, Julio Bueno, who was in charge during the first migrations in 1979 and they related us the following story: "In 1978 32 young Ifugao men were offered the opportunity to work in a sugarcane plantation in Cagayan valley. They grasped this opportunity and started working for the Cagayan Valley Sugar Milling Corporation (CASUMCO). After a year had passed the same person who had offered them the job in Cagayan asked if they wanted to own land. This was the beginning of Ifugao migration into the area. The 32 men settled in Nangka and built one house where they all lived. They started clearing the surroundings for their fields, but they had to go back to Ifugao in order to fetch supplies and when they returned to Nangka, after two weeks their house was burnt to the ground and all their possessions were gone. They rebuilt and started practicing kaingin and planted camote at first and then upland rice. They helped each other and were also helped by the Ilocanos from Simanu Norte during the harvest periods. From the 32 men only six settled permanently and were joined by their families. The relationships between the first Ifugao migrants and the people from Simanu Norte were very good at that time. So good in fact that the barangay captain, Julio Bueno, invited them to come and live closer to the main barrio, Simanu Norte. Thus Nagbaracalan was founded in 1984."

Before the Ifugao arrived into the area Ilocanos from Simanu Norte had already started clearing land for farming purposes. The Constantino brothers were the first to build their farms there in 1965. They witnessed two big migration movements into Nagbaracalan. The first group to arrive consisted out of Leon Dulnuan, Pablo Pagad, Lablabong Ottob, Ginhikna and two others who have passed away. They were joined by their wives while some of their children remained at Nangka to practice farming. The second big migration group arrived around 1997 and consisted out of more or less 7 families. Since 1984 single people continuously migrated in and out of Nagbaracalan. It is important to note that most of the inhabitants of Nagbaracalan are either relatives of each other or belonged to the same Ifugao community. The Ifugao of Nangka and Nagbaracalan form a united group with a very strong community sense. Leon Dulnuan told us the Ifugao are as one; they help each other, form a unity and talk about how they can improve their lives and their community. In times of trouble they share their food.

The barangay secretary, Eliza Cadabuna provided us with statistics concerning Nagbaracalan. The total number of households in Nagbaracalan and Nangka is 35 of which 22 are situated in Nagbaracalan (this is in accordance with our own count). The

total population is 137; 77 males and 60 females. The households consist mostly out of nuclear families. There is at least one single parent family and several extended families. Table 1 shows the age distribution from the 2007 census.

AGE DISTRIBUTION	TOTAL
0 – 6	25
7 – 12	23
13 – 16	14
17 – 21	12
22 – 40	47
41 – 60	18
60 and above	7

Table 1: Age distribution in Nagbaracalan and Nangka

The census gives a total of 146 people, which is not consistent with the gender distribution and total population statistics. The majority of the people living in Nagbaracalan are Ifugao, but there are also some Ilocanos residing there who married an Ifugao. The previously mentioned Constantino brothers and other Ilocanos, who have their farms there, still live in Simanu Norte. Ifugao and Ilocano are the majority languages in Nagbaracalan, while in Simanu Norte Ilocano, Tagalog, Ybanag, Ifugao and Ytawes are spoken. There are four churches in the main barrio; the church of Christ, the Roman Catholic Church, the Iglesia ni Cristo and the Jehovah’s witnesses. In Nagbaracalan most people are Roman Catholics, but many still practice Ifugao rituals such as the *buni* when the need arises. There are also several households that belong to the church of Christ and in fact construction on a church of Christ in Nagbaracalan is currently in progress.

All the households get their income from farming. People do not appear to be involved in illegal logging nor hunting. There are two main creditors; Rogelio Gollayan in San Pablo and Josephyn Cauan in Cabagan. Some people have a portable radio and cell phones. We have also found out some have televisions and DVD players but cannot use them because there is no electricity. According to statistics received from the barangay secretary there are 35 radios, 3 jeeps, 5 hand tractors, 4 pump wells and 20 open pits (for human waste disposal) in Nagbaracalan. We have noticed that there are only 3 used pump wells because one has dried up several years ago. There are no healthcare facilities in Nagbaracalan, the health centre is in Simanu Norte and people have to walk 30 minutes to get there. We experienced that people were very willing to buy food supplements and medicine of uncertain origin and effects for extremely high prices from a visiting charlatan. The main health problem appear to be lung diseases; pneumonia, bronchitis etc. Most young couples had 2 or 3 children in opposition of the elderly couples who had around 7 or more. Some people only eat what they harvest.

People can send their children to elementary school but only few have money for higher education. Most of the elderly residents are elementary undergraduates while their children are elementary graduates with a few exceptions who are still enjoying higher education. The elementary school they attend is situated at the main barrio. There is also an industrial and educational high school, first until fourth year. Both the elementary as

well as the high school are manned by 7 teachers and about 300 children attend elementary while more or less 240 attend high school. There is also one library in Simanu Norte. To get from Simanu Norte to Nagbaracalan the Pinacanauan River has to be crossed while one is following a rough road. This road is inaccessible for jeeps during the rainy season.

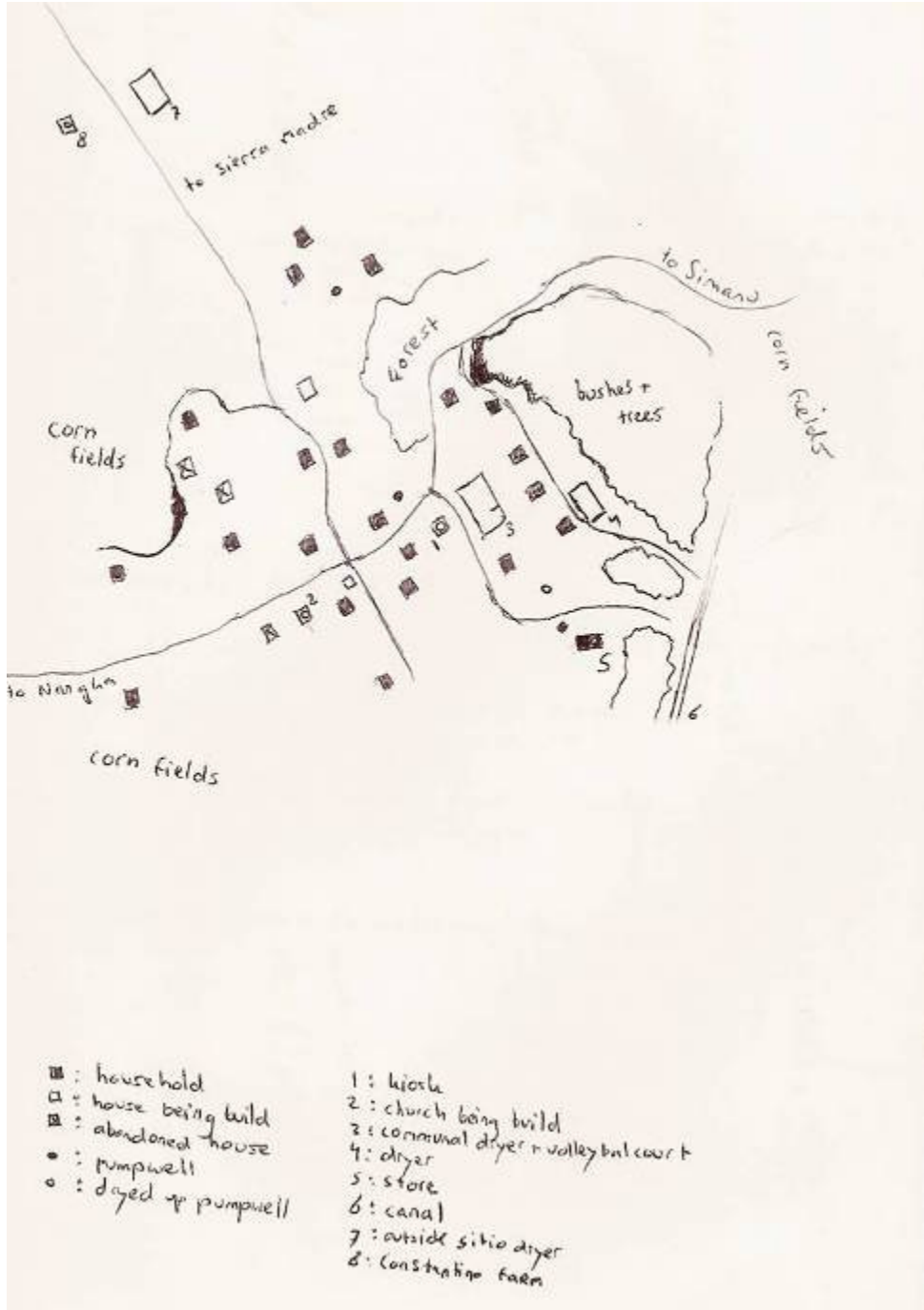
Most of the houses in Nagbaracalan are built from wood and have either cogon or galvanized iron rooftops. There are several cemented houses with rooftops made from galvanized iron. There are three abandoned houses while there are two new houses in the process of construction. During our stay we did not witness continuation of construction; this is also the case with the church of Christ, which is under construction. The village also contains two stores. In 1982 the government funded an irrigation canal of about 4 km length. It is owned by the National Irrigation Administration (NIA). The LGU has two so-called priority projects in Nagbaracalan; the construction of an all weather road together with an electricity net. The projects have been paralyzed since the death of the former barangay captain. The barangay secretary as well as the people from Nagbaracalan told us that the NCIP is in charge of these projects.

The main crop is yellow corn followed by white corn and banana. Some people also plant irrigated rice and diverse bean species and eggplant. From all of our respondents just two of the first inhabitants own a land title; the others have been waiting for two years now to receive the land titles for which they applied. People have told us they are not involved in logging, but that they plant trees on their land for personal use. This has been confirmed by the Constantino brothers, as well as some barangay officials and our own observations. Although many people do not know what the Northern Sierra Madre Natural Park is they are very concerned about the forest and realize that deforestation is linked to soil erosion and water shortages. They are however painfully aware that the people involved in *kaingin* and illegal logging are doing this because they have no other means to provide for their livelihoods. The distance from the forest to Nagbaracalan is between 3 to 4 hours walking. Around two years ago 30 young Ifugao men settled in the forest (the place where they settled has no name yet) to practice *kaingin* and hunting. They visit Nagbaracalan regularly.

The present barangay captain is Narcisso Bautista and he visits the Nagbaracalan occasionally. People give very varied answers when it comes to government agencies visiting their village, but there is general agreement that the LGU only visits every three years just before election. People mentioned the presence of NCIP meetings they attended sometimes in the main barrio. It is possible confusion exists around the terms NCIP and LGU. At present there are no NGOs active in Simanu Norte. Plan International used to be active here around 1985, but as far as we understood only in the main barrio.

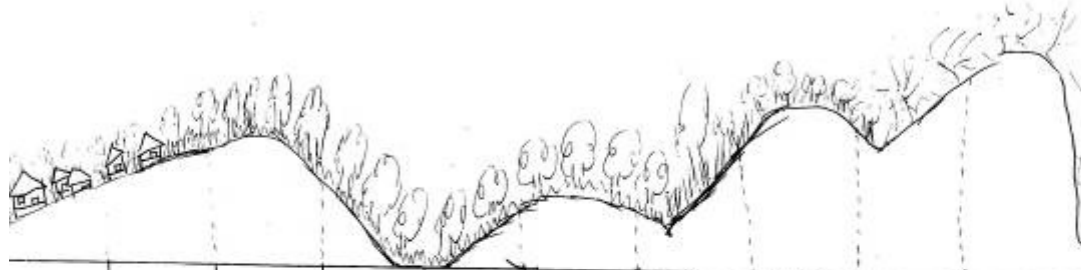
The two main problems which are pointed out by the local people are: (1) the water system (the water level is low in the summer), and (2) the irrigation system (water shortage from March until May).

Map



Transect

Area of Colony
Nagtahanalan to Mangla



Soil	Brown	Reddish-Brown	Reddish-Brown	Reddish-Brown	Reddish - Brown	Rocky (General forest)	Rocky (General forest)	Brown	Brown
Veget.	Lean Acacia Avocado Guanac Banana Jackfruit Mango	Acacia Lean Banana Stringbeans Mango	Pomele Lean Acacia Banana Jackfruit Mango Stringbeans	Lean Mango Banana Guanac Kasip Acacia	Lean Mango Banana Guanac Kasip Acacia	Coconut Guanac Some Small Trees	Coconut Guanac Some Small Trees	Unregulad Rice upland rice Lean Banana Mango Coconut	Same ←
land use	Farming & residential	Farming	Farming	Farming	Farming	up: canopy down: pasture	up: canopy down: pasture	Farming residential	Farming residential
Remarks	Farmers are busy working & harvesting	Same ←	Same ←	Same ←	Same ←	Unfer- tile, rocky	unfertile rocky	good for pasture & farming	Same ← open & barren

2.2. Magamian

Edwin B. Diciano and Angelica Mendoza

Administrative status: barangay Limbauan, municipality of San Pablo.

Distance to market: Cabagan market (2 hours walk to Limbauan plus 40 minutes by jeepney to Cabagan).

Distance to main road: 2 hours walk.

History

The first migrant of the village is a man coming from Quirino in Ifugao. He says he left Ifugao because he needed to pass the land he had there to his eldest daughter that got married around year 1993; therefore he needed new land to raise 3 more children. He heard from friends, who were already settled in Simanu (2 hours walk from Magamian), that it was possible to get good land in the Northern Sierra Madre so he came to them to check the opportunities. His friends in Simanu are also Ifugaos and they helped him getting a job (working on their fields) so that he could save some money to start building a house of his own in the Sierra Madre. When he gathered enough money he went back to Quirino to get his tools and family, but before departure he asked the mayor of San Pablo for permission to work and use those lands. He received a positive answer and after some time he returned with his family and 11 more men that helped him doing the *kaingin* of the area where they set 4 *kalapaus*. Afterwards when he had more money coming from the first harvests, he started building a bigger house in the upper part where Magamian is located now. This process took approximately 2 years. From the 11 men that came with him around 6 also settled in Magamian and live there as well. After them, some friends and relatives has also settled in the area. At present there are 31 households (see map for location) coming mainly from Quirino and Banaue in Ifugao.

Boundaries

The DENR has provided the people in the village a map of the region with some boundaries set by the government. Inhabitants don't understand the map and can't identify all the boundaries on it, just some few relatively easy points like big trees and stones that delimit the area. See sketch map of the region for an idea of the area.

Land claims

Around the years of 2000 and 2001, Magamian looked pretty much like in the present. Lost of land was being cultivated by the people but they didn't knew how much and up to that time they didn't claim for it. Some engineers (2 men) came to the area and said they were from the government and that they will measure their lands in order for them to get the land tittles. Each person had to pay them according to the amount of land they were using, but after the payment they never finished the job and left with the communities' money. Not everybody paid.

Some time later the DENR came to Magamian and explained these people were fake engineers and that they had to write a request letter in order to get some governmental help. In this request letter they ask the government permission to plant trees and protect the area in order to pay their taxes and get their land titles. The government answer is that they need the lot number of the lands so that they are able to help them. The people in the village don't know if the process has stopped. Those were the last actions taking place in Magamian related to land claim issues. It is important to mention that not all the community is involved in this land claim process (but the majority is).

Demography

There are 31 households: most of them nuclear families, husband wife and children (from 4 to 5 in average). Some have other relatives (cousins, uncles...) living with them.

The village started in 1993 and there is still more migrants coming to the area. It grew fast from 1993 to 2001. Since then it has grow but in a slower rate.

The approximate relation females/males is 40/60 in percentage.

There are four defined age groups: (1) the oldest inhabitants (55-80 years); (2) the adults considered as married and with children (24-54 years); (3) the youngsters considered as non married and dependent on their parents (14-27 years); and (4) the children (1 month-13 years). Around 70% of the population is in the adults and youngsters group.

The two dominant religions are catholic and evangelical.

The main ethnic group is Ifugao but there are some of them married to Ybanag. The dominant language is Ifugao dialect from Lagawe, but they can also speak Ilocano.

Incomes

The main source of income in Magamian is farming. Prices of rice vary from PhP. 7 to 14 per kg. Yellow corn varies from PhP. 7 to 11.50 per kg. White corn from PhP. 7 to 18 per kg. In average from a good harvest a farmer in Magamian can get around PhP. 45,000 without paying debts.

Another source of income is the wood even though is not common in the village. Prices can vary from PhP. 8 to 38 per board feet (narra). Handcraft made from rattan is also made in the village but no so commonly. PhP. 1,200 can be the price of a big basket made of rattan.

Health

In the village there is no medical assistance. The closest health centre used to be in Limbauan but some years ago it closed and now is further in Cabagan.

Child mortality is high, as inhabitants mentioned, even thought it was not possible to know how many children have died in the village (there are two baby graves in the burial place of the village). Most common diseases are malaria, clod, flu and diarrhea.

Family planning is known by the women in the village and they have free access to pills in Limbauan. Some of them don't use them because they don't like them or because their husbands don't allow them to do so.

Education

Most people (including adults) in the village have elementary studies. They know how to read and write. Children go to school in Limbauan from the age of 6 to 7 and sometimes they are not able to finish elementary due to financial problems.

Parents are aware of the fact that education would give their children more opportunities and they make big efforts to send them to school.

Transport

There is a main road from Limbauan to Cabagan that is in relative good state and is used by jeepneys that transport people to the main market. From Limbauan to Magamian the road is used by carabaos, some *garrosas* and pedestrians. It is in good condition during the dry season but during the rainy season it gets slippery and muddy so transport is more difficult. Another problem during the rainy season is the river that needs to be crossed several times but sometimes is impossible since it gets very deep. The road from Magamian to the forest is very steep and according to people in good condition for carabao logging.

Physical appearance

The typical household in Magamian consists of one big construction (of around 40 to 60 square meter) which has one or two big rooms elevated from the ground 1 meter approximately (to prevent flooding). They fit various things in that space (food, fertilizers, pesticides, containers...)

The most common construction materials in Magamian are wood and rattan to tie the woods that are strategically placed; the ceiling is made of cogon (type of grass that grows everywhere), but there are some houses with metal ceilings and nails instead of rattan.

The village has a volleyball court and a church where the people celebrate the mass on Sunday.

There is no electricity and oil lamps are used at night. There are 3 GSM signals enough strong to communicate from Magamian. The roads inside the village are mainly used by pedestrians and carabaos and they are of good quality even during the rainy season because the soil drains fast.

Most of the houses are located in a small plain with a slope that drains to the close rivers and creeks but there are few households further in lower parts.

The soil is a bit reddish and looks like a mix of clay and small particles.

Usually around the households there are fruit trees (guava, coconut, avocado, *suha*, mango, *santol*) of a big size. And it is common to find gmelina, acacias, ipil-ipil and other timber trees there. Some households have gardens (with jatropha and golden *duranta* as fences) and small grass next to their houses where they sit and have social activities. In the upper part of the plane there are big grasslands. The surroundings of the village are mainly filled with crops of corn, banana and upland rice. (see photo 1)



Photo 1: Magamian

Water

The main drinking water source in Magamian is a spring in one of the river banks of a close by river located less than one kilometer away from the village reachable throughout a steep road. It is transported (by *carabaos* or people) to the village in plastic containers or gallons where it is kept fresh. It is transparent with no smell or taste. It has an apparent good quality. Even though the same river is used for other activities such as carabao bathing, laundry and peoples bath upstream the source.

Some other close creeks are used as water sources for other activities such as dish washing. This water has more particles than the drinking water. Some of the upper houses use the creek as a drinking water source due to the further distance to the river. Access to drinking water is one of the main problems in Magamian (see problems and solutions section)

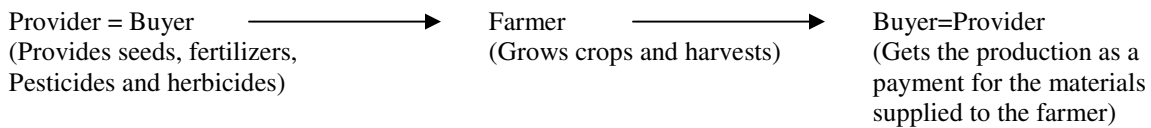
Climate

Temperatures vary during the day from 20 to 35°C approximately with the hottest peak around midday. During the night temperatures drop from 10 to 15°C. There is one rainy season from August to February and one dry season from March till July. The farming calendar depends on the rain so when the rain is expected to come they plant because there are no other irrigation methods.

Farming systems

Most of the people in Magamian are farmers and they have from 1 to 3 hectares of land in average (estimated by them). They mentioned this size is a workable size enough to harvest for the market and their own consumption. The most common crops in the area are upland rice (the native or traditional variety), yellow corn, white corn (less than the yellow) and bananas, but this last one has decrease during last years because of the *tungro* virus.

Most of the farmers get credits to obtain fertilizers, pesticides, herbicides and seeds. The system consists of a simple chain where the provider of these materials is also the buyer of the harvest.



If the production has more value than the material provided by the buyer the farmer gets money; if not the buyer will get the production and the debt will need to be covered by the next harvest. The interest depends on each transaction and the relation of the buyer and the farmer. This bargain usually takes place in Cabagan or San Pablo although sometimes the buyers have to come to the village to get their payments of past debts.

Forest resource utilization

There are several activities related to the forest resource utilization. On first place the logging activity is carried out in the closest forest that is 2 to 3 hours walk from Magamian. Some inhabitants practiced logging in the forest for obtaining wood for their houses and also for selling it in the market even though this is a very few percentage of the population. It is rare to see carabao logging going on in the road that goes through the village.

Due to the presence of several rivers and creeks on the area the fishing is also taking place in Magamian (1 time a week by youngsters and some adults more or less). They used varied methods but most of them use the net and the spear gun to fish.

Hunting is practiced more often in Magamian than other activities related to the forest resource utilization (basically every time they encounter a chance to catch a prey). Wild pig, wild chicken, monitor lizard, monkey and wild deer among others are hunted as a source of protein just for local consumption. Air-guns are the main method to hunt.

Society

The barangay captain comes and visit the village during the election period or when there are problems (mainly related to land and neighborhood), which are relatively few.

There are social activities like the Bingo on the afternoons and sometimes youngsters gather to share some drinks, sing, play cards or play volleyball on the court of the village.

There is little presence of the government on the area and usually no one goes there. It seems the community is not involved on politics nevertheless during elections politicians comes and gives material goods in exchange of votes.

The community is not too organized in terms of initiatives or communal projects and each person works for their own family. Even though they are always willing to help their neighbors.

There are also some middle men that buy products (especially bananas) in Limbauan from the people of Magamian so that they don't have to carry them up to Cabagan.

Problems and solutions

There are three main problems in Magamian that the people would like to solve with some help from the government. First, the accessibility to the village: people mentioned that they would like to have a better road at least to Limbauan because the present one is not in good condition and it takes longer to get to Cabagan. Second, the access to the water source: people mentioned as a solution the acquirement of a pump to get the drinking water up to the village with a constant flow and not by having to carry it several times a day. Finally, the cows coming from San Pablo vicinities: these animals have eaten some of their crops and they have also been forced to build up fences to keep them away. They mentioned that people in San Pablo don't care about this problem.

In addition to these inconveniences the community mentioned that due to their lack of education the communication with the government is very difficult and then understanding between these two stakeholders has huge barriers.

Other problems identified are environmental problems such as erosion and loss of fertility of the land, but this doesn't seem to worry the community, as long as they are able to keep on working some land.

Future

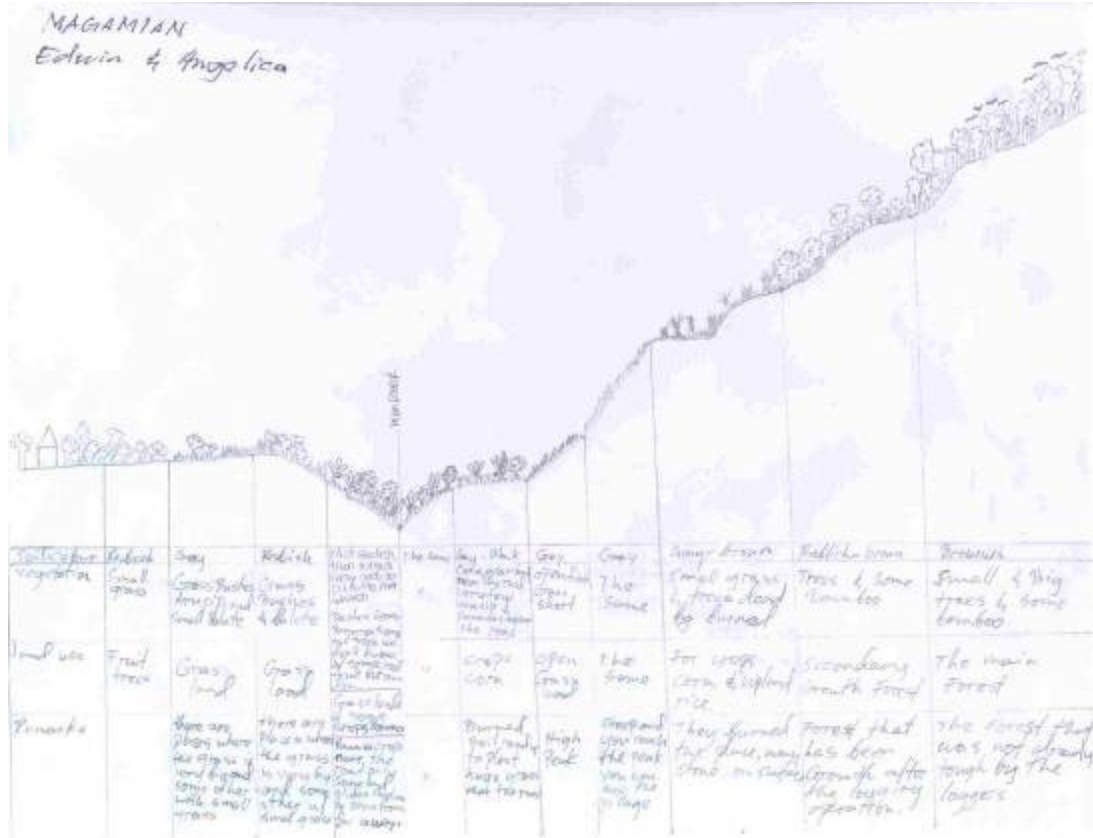
Some young people have plans to become farmers as their parents and some others would like to work overseas. It is difficult to generalize the expectations of youngsters in Magamian. However they are aware that the lack of education is a barrier for getting more opportunities and achieving their goals so they would like to improve their livelihood, specially the education in the village.

The future expectations of settlement of young people is mainly close to their parental house, so it means most of them would like to keep on living in Magamian and start cultivating their own land.

Map



Transect



2.3. Balete

Katherine Vad and Sheryl S. Balubar

Administrative Status

Balete is part of the barangay Limbauan, municipality of San Pablo. Balete is composed of three sitios: sitio Balete, Nagtipunan (half an hour walk from sitio Balete) and Minuri (one hour walk from sitio Balete). The research focused on the sitio Balete. The closest market place is at the Tumidtid River, in the barangay of Masipi, an hour and a half walk from sitio Balete. The products are transported to the market by carabaos.



Photo 1: Balete

History

The inhabitants of Balete migrated from Mayoyao and Aguinaldo, Ifugao province. The first migrants arrived approximately fifteen years ago. The immigration seems to have accelerated the past five years. The main reason put forward to explain the migration was poverty and lack of land in Ifugao province; sitio Balete was chosen as a settlement area because the roads are better than in Ifugao and there is an important cooperation among the inhabitants of the village.

When the first migrants arrived, sitio Balete was a grass land with bushes; the forest had already been logged. There were no previous inhabitants.

No logging or mining companies are present in the area of Balete. We observed carabao logging during our stay in the village, but not by the inhabitants of Balete.

Demography

Sitio Balete has forty one inhabitants, living in sixteen households. The composition of the population is as following: 11 children (4 girls aged 2 to 10, 3 boys aged 1 to 10, 4 boys aged 12 to 15), 6 women (aged 18 to approximately 60), 24 men (aged 20 to approximately 60). There are various types of households in sitio Balete: 3 nuclear families; 1 couple without children; 2 married men living alone (their wives live in Ifugao province with their children); 1 widow living alone; 1 widower living with one of his sons; 17 single men living alone or with friends.

All the inhabitants of sitio Balete are Ifugao; so the language used in the sitio is Ifugao, but all the inhabitants speak Ilocano, and some speak some English. Two main religions are present in the sitio: Espiritista and Evangelical.

Incomes

The only incomes of the inhabitants of sitio Balete come from the production of bananas and white or yellow corn. The production of yellow corn started only two years ago, because the banana trees were attacked by the bunchy top disease. Very few men search for daily work. On the other hand, only a few inhabitants have debts (either due to the farming system or to health problems).

Many inhabitants have cell phones (at least one cell phone for each household) and radios (at least one radio by household). The GSM coverage is good both from Smart and Globe.

The sitio owns a communal power generator (based on crude oil). The generator produces electricity for approximately one hour every evening (around eight o'clock). There is also a television and a DVD player in the sitio, and DVDs can be borrowed in Masipi.

Health

There are no health facilities in Balete. The closest hospital is located in Tumauni (the inhabitants of Balete do not know the name of the hospital) and Cabagan (Milagros hospital and the private hospital). The closets drug store is also located in Tumauni.

In the past five years, there have been two cases of miscarriages during pregnancy in Balete. The causes are not known. The women were transported to the hospital by the inhabitants of the sitio, with the use of a blanket.

Education

There are no education facilities in Balete. The children go to school from the age of seven in Masipi, if they have relatives they can stay with in Masipi. Then they come home every week end. Very few children actually go to school.

Transport

Sitio Balete can only be reached on foot or by carabao. The roads become very slippery and difficult to climb during the rainy season because of the mud. The village was promised a new and practicable road during the municipal campaign but the construction has not started yet.

Physical appearance

All the houses in sitio Balete are built in wood. Some have galvanized iron roofs and some have a *nipa* roof (traditional roofs made of cogon). There is no church in sitio Balete but Nagtipunan has a Lutheran Church.

Sitio Balete has two sports facilities: a volley ball court equipped with a net and a basket ball court with one basket ball ring.

Most material possessions are built in wood, like tables, chairs, benches. Each household is equipped with pots, pans and dishes. Large pots and pans used for celebrations (e.g. birthdays) were bought communally with the help of a communal fund organized by the treasurer (cf. paragraph on society).

Sitio Balete is located on a slope. The roads and the ground become very slippery and muddy during the rainy season. The vegetation in the sitio is mostly composed of trees (gmelina, *lafuy*, guava, bamboo, beetle nut, pomelo, mango, narra).

The water system is developed in sitio Balete. There is six points delivering running water in the sitio from two different sources situated upwards in the mountains. Globally, the water supply is of good quality: the water is clear and quite abundant. It can become muddy during heavy rains and the sitio has experienced water shortages during the dry season but only for short periods of time.

Farming system

Farming is the primary source of livelihood for the inhabitants of Balete. The primary crop is upland rice, cultivated for food. It is being planted once a year, usually during May, June or July, and harvested after four months. The farmers practice the old rice plantation method, the dibble method. With the use of a wooden stock, one farmer makes holes in the ground, while another puts the rice grains in the holes.

The second crop is banana for sell. Due to the bunchy top disease, this crop is being replaced by corn (mostly yellow). Corn is planted in May or June and harvested four months later. Several other crops are being cultivated, mainly for food and animals feeding: white corn, camote, papaya, peanuts, mungo, *sitao*, mango.

Mono-cropping and multiple cropping are both employed by the farmers of sitio Balete. Almost everyone is practicing agro-forestry on their farms. Usually the trees (mostly gmelina) are being planted around the farm.

Pesticides (usually Karate) and herbicides (usually Power or ClearOut) are being used. The farmers only use inorganic fertilizer (14-14-14) once a year for corn. The farmers sell directly the bananas to the buyer, without the services of a middleman, at the market in Tumidtid every Monday and Friday. The buyers come from Alongapo, Cordon,

Tumauini and Masipi. The price is PhP. 80 to 90 per 100 pieces (the price depends upon the size of the bananas).

The corn is sold in Cabagan or Tumauini. It is transported there, first by carabao, then by tricycle.

The money saved by not employing a middleman is being placed in the communal fund that paid the generator and provides micro financing for the inhabitants of the sitio.

Forest resource utilization

The closest forest is located an hour and a half walking distance from sitio Balete, on the other side of the mountain. The access is difficult due to the steep slopes. The inhabitants of Balete are only logging to build their houses and for fire wood. Carabao logging can be observed though in the sitio, but is performed by low land communities.

The collecting of non timber products takes place regularly, mostly rattan (*umo*, the soft part, used as food).

The inhabitants of Balete do not go hunting, but catch the wild animals (especially wild pigs and birds) that they find on their farms, in order to protect their crops.

Society

The inhabitants of Balete elect a chairman and a vice chairman, for a three years term, to communicate every month with the barangay captain of Limbauan and deal with the eventual problems in the village. The chairman appoints a secretary and a treasurer. The current chairman and the current secretary are from Nagtipunan; the current vice chairman and the current treasurer are from sitio Balete. There are also two police officers, both from Nagtipunan.

There have never been any peace and order problems in Balete.

The cooperation among the inhabitants of Balete is very developed. For example, the farmers help each other with the plantation of the crops and the weeding. The owner of the field will be the one to provide food for the “helpers”.

Birthdays, Christmas and New Years are important celebrations for the sitio. Usually, birthdays are celebrated with all the inhabitants of the sitio.

Problems and solutions

Ten years ago, Plan International set up a project of mango plantation in the Balete area. But due to economic problems, the project failed. Since then, no other environmental or societal projects have taken place. But most of the inhabitants of Balete are aware of the environmental problems caused by illegal logging, hunting and fishing.

Balete was promised a new road during the last municipal election campaign, but the construction has not begun yet. A new road would mean new development possibilities, and the inhabitants are hoping that the construction will start soon.

One of the major problems encountered by the inhabitants of Balete is the bunchy top disease which is affecting the banana trees. The disease started after the Harurot typhoon in 2003. There is no cure presently against it. The best solution is to burn the

affected trees and to plant new ones. But this is difficult for the farmers since they are losing a lot of incomes. The solution found by the farmers is Balete is to gradually replace the plantation of bananas with yellow corn that they can sell as well.

Future perspectives

Some inhabitants of Balete have very interesting plans. A household would like to invest in solar panels to have electricity continually. The solar panels can be bought from Manila for PhP. 28,000 each. The provider is willing to bring them to the sitio if they purchase at least three panels, and the installation will cost them PhP. 5,000 extra. The expenses can be paid over three years. This is a really interesting plan, which would mean a clean and effective development for the household if they decide to do it.

But mostly, the future is unclear for the inhabitants of sitio Balete. They are mainly hoping to have a secure source of livelihood and the young people to get a family. They mostly do not expect any important changes in the future.

Map



2.4. Puerta

Marjon Gibcus

Puerta is a sitio of barangay Masipi East in Cabagan, Isabela. The distance to the all-weather road and the market in Cabagan and also in Tumauini is about 20 km.

History

The first people who settle in the 1960 in Puerta were Ybanag, the Devalenta family. During that time Puerta was still a part of San Pablo, Isabela. The family occupied 110 ha of land on the right side of the Masipi River, downstream. They get the official papers from the government and divide the land over 10 households. The main planted crops planted that time were tobacco and white corn.

Because of the violent conflict between the armed forces of the Philippines and the National Peoples Army (NPA) in 1972, the people in Puerta were evacuated to Pilig Alto. In 1984 the war ended in that area and almost the whole Devalenta family went back to Puerta, to do new *kaingin* on their own land. In that period also the Ilocano moved into the area and in 1990 the first Tinguians came to Puerta. But because the people in the area know them as the Itneg-speaking people, they called themselves Itneg. At that time WESCA, a big logging company was still doing logging around Puerta.

The Itneg, who came in 1990 were all relatives from the now more than 80 years old brother and sister, who are still strong in Puerta. They both moved from Abra to Isabela with their spouse and 14 children, 7 each. The reason they moved away from Abra was the civil war there with the NPA. The family was not safe anymore and fled in 1964 to Banig in Isabela. Via and uncle in Tumidtid they heard that in Puerta was a lot of free land and a lot of work and so they went with some of their (grown up) children to Puerta.

In those days the land was divided around the Masipi River (downstream) as follows: The Ybanag owned the right side and did their *kaingin* there, the Ilocano have their irrigated rice fields at the left side of the river and the Itneg do their *kaingin* in Kalao. After a few years two families from the highlands settle in Siete to do their *kaingin* there.

Demography

In Puerta are 42 households and around 180 people. There are 20 Ybanag, 9 Ilocano, 7 Itneg, 2 Kalinga, 1 Agta, 1 Ifugao and 1 Tagalog households. Of course, thru all marriages and some individual migrations there are a lot of households with mixed ethnicities. This is the same if you talk about language. People use all different kind of languages and mixed them up, depending on the people they are talking with. However, the most commonly used language is Ilocano.

Not all the people live the whole year in Puerta; quite a few spend a lot of their time in Masipi, with their relatives or in their second house. But all of them still have their fields in Puerta. That they live in Masipi is mainly because the children going to

elementary school in Masipi. This is way you don't see that much children from 7 till 12 years old during the weeks in Puerta.

The gender distribution is quite equal; except at the age from the college generation. From this age group you see more boys than girls, because more boys than girls don't want to study but working on their own or their parents' field.

Most of the people are Roman Catholic, but this is more in name than in practice. Normally they don't go to church and don't believe in afterlife. Even though, almost all the children are baptized. This happened in general on the May 15th, the day of fiesta in barangay Masipi East.

Incomes

The average household income is unknown. Most of the people earn their money thru working on their field and selling their crops. Or they work on other people's field in busy times. A lot of men earn money in the carabao logging business and some of the people in Puerta earn money to be an *albularyu*, a village doctor. Some people, especially women, are abroad or want to go abroad and that pays off.

Even though the people they have enough food or maybe even a nice house with television in Masipi, they consider themselves to be poor. That's because they are farmers, they say.

Health

The healthcare facilities in Puerta are several kinds of medicinal plants and at least two *albularyu*. In Masipi (3 km away) is a small health centre with one midwife and a little amount of medicine. In Cabagan (20 km away) is a hospital and in Tuguegarao (40 km away) is the regional hospital. People don't go there that often, because it is far away and expensive. Only a few of them have a Phil Health card. Also an important role is that the people are quit healthy, they are not often ill and reach an old age. The last child who died was more than 20 years ago, and people don't remember the cause.

Education

The elementary school is in Masipi, most children go there. There are two old buildings, but they are still good. There are, beside the principal, 6 teachers and two for the kindergarten. Books they use are old and written in English and Tagalog. High school is in Magasi, College is in Cabagan or in Tuguegarao. But only two people finished college the last few years. The people in Puerta don't make use of private schools.

Transport

From Puerta you can go to Tumidtid and further to Masipi, to Balete or to Siete. Within Puerta the only transport is by feet or by carabao. Sometimes they use cows for transport products. If it is not raining, a truck comes to Puerta to pick up the crops after harvest time.

Physical appearance

Almost all houses are made from wood and bamboo. The roof is often made of bamboo. Some other houses are made of concrete. There are two sari-sari stores. Those are the only two businesses in the village.

People don't own a lot of material wealth, some of them own a sheller and a thresher for their crops, but often they do it manual or borrow one. Some people have their material wealth in Masipi, in their second house.

Because there is no electricity in Puerta, in general people don't own electrical devices. Except the mobile phone, they give it to someone who goes to Masipi to reload the battery there. In Puerta is a signal for as well the Smart as for the Globe sim-cards, although the signal sometimes is weak.

If you walk to the east, you walk slowly up to the mountains. In the beginning you see the corn and rice fields. And they also grow a lot of fruit trees, specially banana, but also mango and coconut. Next to that there is a lot of grass and secondary forest, with trees like, Mango, Nara, Tibik and Bamboo. A big area of this land is private owned by Bar Zambala. After a while (half hour walking) you reach the *kaingin* area. Here they grow upland rice, sweet and yellow corn and bananas. Here you see for example ipil-ipil, gmelina, bamboo and some rain-trees (Acacia). Far away (3-5 hours walking) you see the high mountains with forest with white and red lauan trees. If you go west, you slowly go down, till you reach Masipi (1 hour walking) in the plain.

There is a river running thru Puerta, the Masipi River. Close to Masipi they build a bridge across this river.

The soil in the centre of the village is quit bad. Only at a few places people grow crops, like yellow corn and vegetables. The soil needs a lot of fertilizer there. The rest of the soil in the village is too poor and contains too much stones. At the edge of the village are the irrigated rice fields. These fields get their water from the intake from the National Irrigation Administration. The intake is in the Masipi River, at the beginning of the village (downstream). Every week the water is checked on pollution by the NIA. The irrigated rice fields also lose their fertility and the farmers need to use fertilizer more often these days. The only place where the soil is good and the farmers don't use fertilizer is at their *kaingin* at Siete en Kalao.

The wet season in the area is from May till January and the dry season is from February till April, this is also the hottest period of the year. The heavy rains and the typhoons are from September till December

Farming systems

In Puerta are three main crops growing areas: Kalao, Siete and the irrigated rice fields. Kalao and Siete are *kaingin* areas and only for Kalao and the irrigated fields are landownership papers. The main grown crops are irrigated and upland rice, yellow corn and bananas. Beside that, people grow sweet corn, small amounts of vegetables (mainly beans), mango, coconut, jackfruit, cotton, and sweet potato. A lot of people want to plant more fruit trees, but didn't do it until now, because they don't find time to plant them. Most crops are for own supply, but they also sell their crops, especially bananas. The banana farmers harvest around 2,000 banana's a week and sells their bananas on Monday

or Friday at Tumidtid at the small market. At the market are three banana buyers, one is Ilocano, two are Ifugao. The Ilocano men give PhP. 90 for 100 big bananas and PhP. 45 for 100 small ones. He sells the bananas in Manila. The Ifugao give PhP. 85 for 100 big bananas and PhP. 40 for 100 small ones. They sell it in Santiago and in Cabagan.

The people from Puerta sell their yellow corn and their irrigated rice in Cabagan or in Tumauni. The highest price they get for their corn is PhP. 10.80 per kilo. For their rice they get PhP. 11.50 at most.

Forest resource utilization

At the east side of Puerta is Maragadik, the logging area, where around 15 logging groups from the area are active and they all have to pass Puerta. A central collecting and sawing place is Tumidtid. A lot of men are involved in the illegal logging, known as carabao logging. In Puerta are three main logging groups and the other groups are mainly from Masipi. The group consists of a chainsaw operator and other men for transport and other activities. Most men are grown up with logging, because WESCA was still there when they were young. Also their own children grow up with logging and sometimes join their fathers to the forest to transport the logs. The loggers say that they sell the soft wood for PhP. 14 and the hard wood for PhP. 18 per board feet. They cut 3,000 board feet on a good trip.

Some people hunt and some more people do fishing, but only small-scale and for their own use. They don't think it is prohibited to hunt on specific species. Most of them do know that it is prohibited to catch fish by electro-, chemical- and dynamite fishing.

Problems and solutions

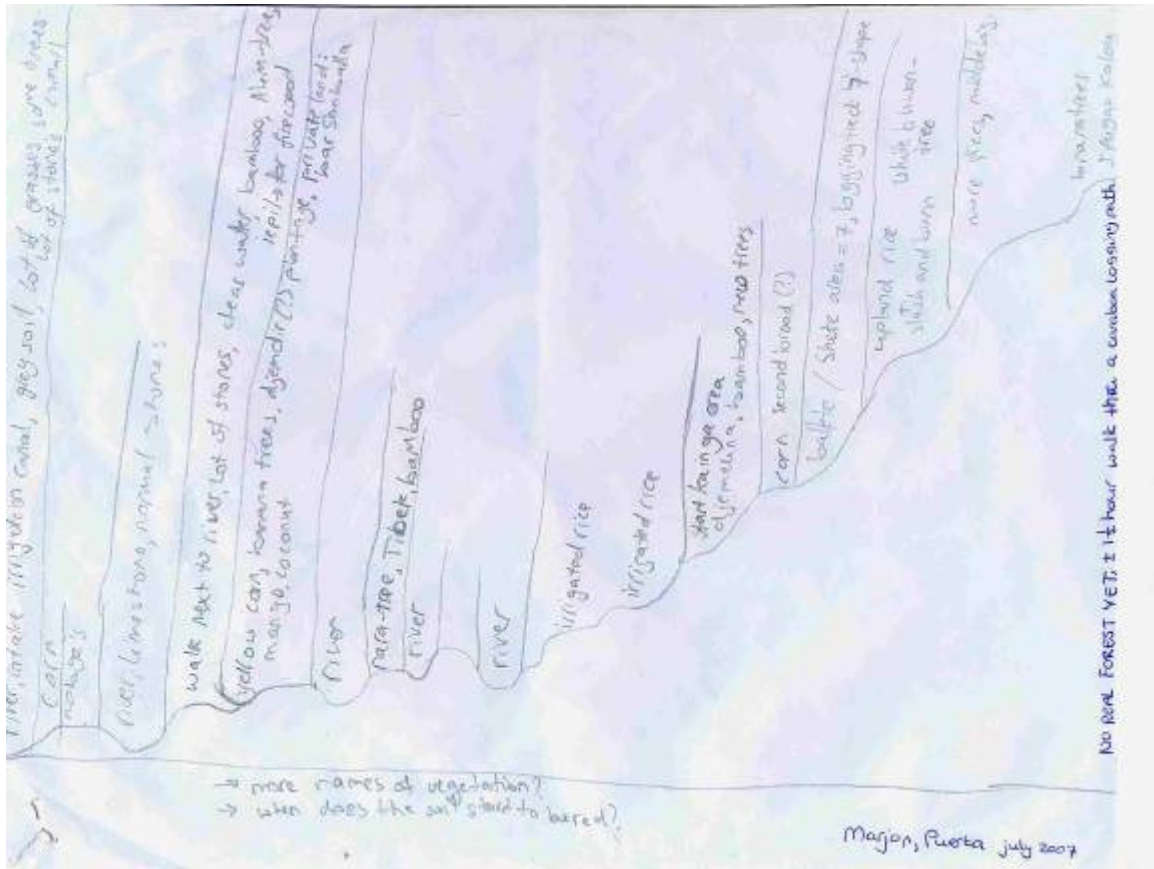
The biggest problem in Puerta seems to be logging and *kaingin*, but an even bigger problem is the unawareness from the people about the importance of the forest for the people and the animals. There are no visits from (governmental) agencies and beside that, the people want to learn more about sustainable land use, but they don't know where to get the knowledge. The only project from the government what is known is the promises of a road from Puerta to Masipi, but they don't believe the road is still coming.

The Northern Sierra Madre Natural Park is unknown, just as the Indigenous Peoples Rights Act, so they don't know about their rights and duties at that point. If there are micro financing possibilities in the area, the people don't know about it. They know where they can borrow money for their farming inputs, in Masipi at 7% interest.

From 1998 till 2000 Plan International came each summer to identify trees and plant new trees in a plot near Puerta, close to Kalao, together with the citizens. After those years the funds stopped and also the project stopped. Only a few people, who were involved in this project, do remember the project and the goal of the project.

People really want that their children go to school and are willing to do all what's in their possibilities to send them to school. Also most of the teenagers want to go to school. They don't want to be a farmer, like their parents, but they want to learn, or are already learning for becoming a teacher, a restaurant worker, a mechanical worker, or soldier.

Transect



2.5. Mamaga

Novie U. Buguina and Bess Doornbos

Mamaga is part of the barangay of Masipi East (Cabagan, Isabela). It's the name of a small valley which ranges from the most eastern irrigated rice fields of Masipi East (right after the bridge) till the top of the first Sierra Madre mountains. Mamaga is enclosed by Magansimid on the one side and Puerta on the other.

Mamaga is an Ybanag name. Its Ilocano equivalent is Namaga which literally means dry fields. The first settlers (Ybanag) in Masipi East were emphasizing the contrast of this specific location with the irrigated rice fields of their own village.

A small sandy (and during the rainy season: muddy) pathway connects Masipi East with Mamaga. From the irrigated rice-fields of Masipi East, the first part of the road leads through grasslands. Where the road gets steeper, you reach the first *umas* of Mamaga. The road is only accessible by carabao or by foot. It takes approximately two hours to reach the (few) houses of Mamaga. There's no electricity here.

In the 1970s Mamaga was inhabited by a small group of Itneg migrants who eventually left the area to move back to their place of origin (Abra). The following decennium the area was logged by a commercial company called Western Cagayan Lumber (WESCA). At this moment Mamaga consists of 4 permanent houses, scattered throughout the upper part of the valley. Due to the limited size of Mamaga, its inhabitants rely on Masipi East (or villages like Cabagan situated even further away) for healthcare facilities, religious and educational needs.

Three of the houses in Mamaga are occupied by Ifugao families, the other one by an Igorot man. The Ifugao migrants, all closely related to each other, settled here in the 1990's. In search of agricultural lands they migrated from their place of origin (Ifugao province). They first reached the sitio of Masipi East. From here they were sent to Mamaga where, according to the barangay captain, there was enough land available to be cultivated.

The Ifugao in Mamaga are all self-subsistence farmers, cultivating foods for their own consumption. Only bananas are grown for commercial purposes. The farmers are able to satisfy most of their nutritional needs by planting upland rice (often on the steep slopes), vegetables, fruits and corn. In the near surroundings of their houses there are hardly any opportunities to fish or hunt. Most of the animal products are bought at the local market of Tumauini. The Ifugao farmers have used the same plot for many years and are not thinking of expanding their farms due to constraints in terms of labor. Especially the soil of the higher parts of Mamaga looks fertile with its dark brown color and its fine structure.

The area that these permanent migrants occupy is just a small part of the valley: roughly estimated 10 percent. The majority of the available land of Mamaga is cultivated by inhabitants of Masipi East. These farmers only travel to Mamaga to visit their fields. When the weeding, planting or harvesting needs to be done, they spent the night in their small *kubos* or stay with the permanent residents of Mamaga.

Most of these farmers originating from Masipi East also own land here. The main crop cultivated on these plots is irrigated rice. They use their fields in Mamaga on the other hand to grow bananas for commercial reasons (cash crop). On Monday and Friday these farmers pass by with their carabaos and *garosa* loaded with bananas: they are on their way to sell it at the local market in Tumidtid. Here the three main banana buyers and the local farmers meet. The price paid for the fruits depends on the variety and the quality of the harvest. A reasonable price is PhP. 90 per 100 pieces of banana. The farmers usually harvest their bananas twice a month.

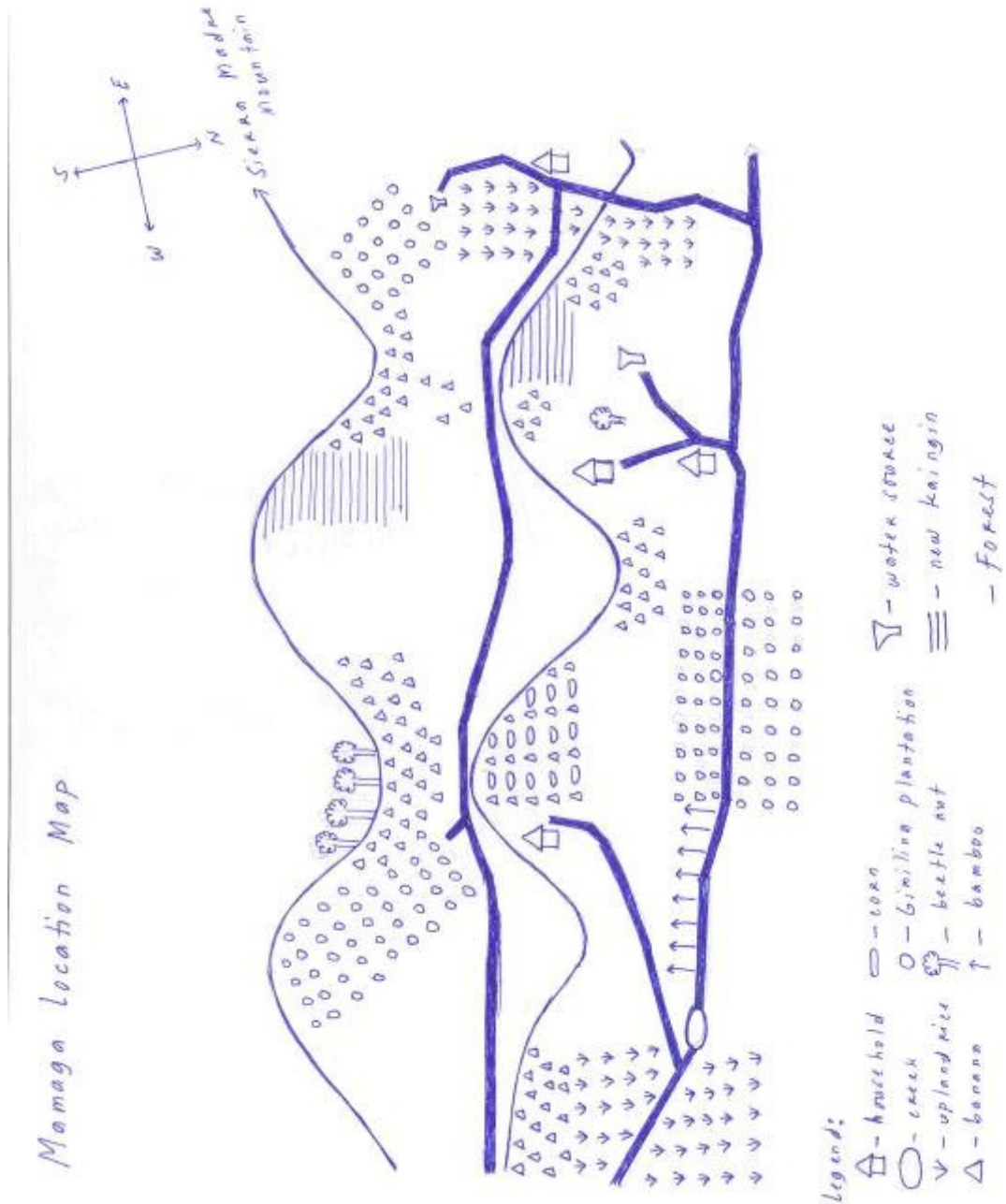
These external farmers from Masipi East have different ethnical backgrounds: Kalinga, Igorot, Ifugao, and Ilocano. Regarding the Ifugao farmers, a few interesting remarks can be made. First of all, they built their houses in a specific part of Masipi East namely the most eastern part, along the rocky road which leads to Tumidtid. This is probably because the Ifugao migrated to Masipi East quite recently (not more than 15 years ago). These newcomers weren't allowed to settle within the official borders of Masipi. Secondly, most of the Ifugao farmers (the ones living in Mamaga permanently as well as the farmers living in Masipi) are related to each other. Taking into account four generations, we were able to trace back 3 extended Ifugao families. These families assist each other in daily life. The children from Mamaga for example live apart from their parents: they live with relatives in Masipi East in order to be able to attend school.

With help from the non-governmental sector, the Department of Environment and Natural Resources (DENR) founded a cooperative for the local farmers in Masipi East. This was done in accordance with the governmental policy of the Community Based Forestry Management (CBFM) in the beginning of the 1990s. In Mamaga, the cooperative stimulated the planting of trees. These would provide fruits and wood and at the same time prevent erosion of fertile soil. The effect of this program is still visible in Mamaga were, despite the minimal amount of villagers, a considerable amount of trees has been planted. Due to a financial scandal and a general lack of interest the cooperative only existed for a few years.

After the logging operations in the 1990s most of Mamaga consisted of logged-over forest. With the settlement of the Ifugao migrants and the many Masipi East farmers most of the valley has been converted into agricultural plots. Still, compared to the village of Masipi East, Mamaga is richer in vegetation. Not only because of the reforestation program but also because of the wild parts of Mamaga were bamboo, grasses and bushes took over. There is no virgin forest left. The lack of useable trees is probably the reason that there is no small-scale logging.

The Ifugao farmers are not familiar with the Northern Sierra Madre Natural Park though they are aware that by governmental decision they are not allowed to expand their fields by doing more *kaingin*. They recognize that the area has been proclaimed as a forest zone. The farmers relate this to the fact that they cannot be official owners of their *umas*.

Map



2.6. Magansimid

Elisa Trepp

The village of Magansimid is situated in the mountains on the border of the administrative areas of Masipi and Tumauini although it is registered as part of Masipi. The population consists of 36 individuals, although only two are registered with the barangay secretary. The village is situated about 7 kilometers from an all weather road and the closest market in Masipi.

Before the first Ifugao migrated to the area, the land belonged to the Tinguian from Abra, who also named the region Magansimid. Due to fighting in the 1980s between government troops and the NPA, the Tinguian fled to Banig, which is located on a neighboring mountain. In 1995 the first group of people from Kiangan in the Ifugao province arrived in Magansimid looking for land to farm on. When the Tinguians realized that others had settled on their former land, they asked the Ifugao to pay a fee to take over the land. The transaction was in the form of one pig and PhP. 3000, after which the land informally belonged to the Ifugao migrants. There are no formal papers or certificates to prove that anyone in the village owns the land, although this is a much desired goal for the farmers living in Magansimid. Roberto Pad-Ay was the first Ifugao to come here together with his wife and six children. They started building a house after 6 years of living in an improvised shack, after which more people from the Kiangan and Lagawe areas in Ifugao decided to settle in the village. The push factors in their previous settlement are scarcity of farm land and general poverty that is a result of this phenomenon. The pull factor in Magansimid is the greater availability of land for farming which provides a higher quality of life and a stable income. There is no government intervention in the village, and not even the barangay captain pays an occasional visit. The only form of contact villagers have had with a government authority was at a meeting in Mاما organized by the DENR, where they were told about the benefits of planting trees to counter land erosion. All villagers we spoke with had never heard of the Northern Sierra Madre Natural Park or the IPRA.

There are 20 households in the Magansimid with 36 people living there permanently. 31 villagers are male, either single or married with their wives left behind in Ifugao. There are 5 females living there, 3 of which are Ibanag or Ilocano and have only recently moved to Magansimid in the spring of 2007. The males in the village are overwhelmingly Ifugao and a few are Ilocano. Married males who have their wives in Ifugao also left most of their children there, which causes a general 'macho' atmosphere in the village since the ratio of males vs. females is so unbalanced. Six of the males are between ten and eighteen years old, and a majority in the village are under thirty. All of the villagers are Roman Catholic, although none go to church regularly since it is a relatively far hike to the nearest congregation in Masipi. The two main languages spoken are Ifugao and Ilocano, and three villagers speak some basic English.

Most villagers earn between PhP. 1,000 and 3,000 per month depending on the amount of crops sold and the season. There does not seem to be a large discrepancy between incomes and individual wealth since all villagers grow the same crops. There is no micro-financing system in the village, but when people need additional money they

borrow it from family members. Life in the village is basic, with occasional alcohol, cigarettes, or the possession of a radio being a luxury. Apart from purchasing cooking oil and canned goods, villagers are self-sustaining. When they compare their financial situation now with their previous situation in Ifugao, all villagers questioned agree that it has improved, and that they are happier now.

When people in Magansimid get sick, they usually go to hospitals in Cabagan or Tumauni, which has not been a problem yet because there have not been any serious accidents or illnesses. In an emergency situation the remote location could make it very difficult to get to a hospital in time. There have been no deaths or births in the village, but if someone were to die, the body will be brought to Ifugao to be buried there.

There are no children under the age of 10 in the village, and the others who are legally underage do not go to school because they work on the fields of their parents. As a result there is no school, and the education of the entire village population is minimal-most have only completed a few years of elementary school.

The remote location of Magansimid, more than two hours hike up steep mountain slopes, makes transportation of people as well as goods very difficult. The only way to travel to the village is either by foot or on a carabao. During the rainy season the roads virtually turn into a mudslide, and the hauling of bananas or travel to Masipi is a great challenge. In regard to the village's physical appearance, the majority of the houses are made out of wood with a galvanized iron or straw roof. Most of them are on stilts with a fireplace and sitting area located under the house. None of the households have electricity or a generator, although there is good GSM network coverage. The houses are relatively spread out on the top of a mountain on a steep slope. The soil types in the village are clay and loam, and the main vegetation consists of tall grass, cogon, narra trees, ferns, *binunga* trees, savanna, lianas, wild *marungay*, and bamboo. Villagers retrieve their water from one of three creeks that run through the village, although a few households have access to water hoses that lead water from the creek to the side of their residence. The climate is hot and dry in the winter, and humid in the summer time with almost daily rain in the monsoon season from July to September.

The crops grown in Magansimid are primarily banana, upland rice and corn, although some villagers have fruit trees, *camote*, cassava, pineapple, string beans, and okra for own consumption. All villagers sell banana two times a week to different buyers that come from Tumauni to a meeting point which is shared with villagers from Puerta, Balete, and Mamaga, at the foot of the mountain. The price per 100 bananas depends on the season and the type of banana, fluctuating between PhP. 50 and 90. The villagers always sell to one of three buyers, which sometimes give different prices for their produce. Only a few people sell their rice for prices between PhP. 8 to 15 per kilo, but most only plant this for their own use. One of the villagers sells yellow corn at a variable price between PhP. 6 and 12 per kilo. Slash-and-burn farming is practiced on a large scale throughout the village, but the destructive effects of this are acknowledged by many people. Most villagers own about 1 hectare of land, and the total area of farmland in Magansimid is approximately 30 hectares. Only one villager has an off farm income, selling alcohol, cigarettes and canned food, but is planning to stop doing this because villagers do not pay off their tabs within a reasonable amount of time.

There are ongoing hunting and fishing activities in Magansimid, including the hunting of endangered species like wild boar and certain bird species. The villagers use

air guns, traps, and nets to hunt, and use the meat for personal consumption. Rattan is the only non-timber forest product collected occasionally to produce baskets and *bilaos* (for rice sifting), but this is only done on a direct need basis. None of the villagers participate in logging except for house construction, but some occasionally help loggers to earn some extra cash. There is a general awareness of the negative effects of logging, although there seems to be a consensus on the fact that it is an important source of livelihood for many people. Carabao loggers pass through the village several times a week, and in 2006 a few villagers were threatened that if they inform the authorities about the identities of the loggers, they will be killed. Most of the loggers are Ybanag and come from Tumauni.

There is no interference of government agencies or even the barangay captain in Magansimid, and only two villagers have been registered with the barangay secretary. When other villagers tried to register they were told to come back after the spring elections in 2007, so they will try to do this in the near future. There is no official leader in the village, but when there is a problem or conflict most people turn to one of the older men to be the mediator. The first Ifugao settler in Magansimid is also a respected man who has more authority than the younger villagers. The farmers have organized labor groups, so that they help each other out on the land during weeding and harvesting. The lifestyle in the village is primarily shaped by the farming calendar, and the fact that there are almost no women or children around. People work hard in the fields during planting, weeding and harvesting season, and relax and hunt on their time off. The traditional Ifugao beliefs are not relevant anymore to the villagers, and none of them practice any form of traditional rituals. The main pastimes when not working are small-scale gambling, playing basketball, drinking, playing guitar, or eating together. The pace in the village is slow, and many men indicate that they are lonely and miss their families in Ifugao. The only special occasions celebrated are Christmas on December 25th and occasional birthdays if there is enough money for a celebration.

A meeting organized in the neighboring village of Mamaga by the DENR was the only time when villagers came in contact with government projects in the form of agroforestry education. They were told about the prohibition on logging and hunting certain wild species on this occasion as well. People in the village would value education about farming practices and alternative ways of managing crops in the future, although they do not know where to get this information from. There is awareness about the environmentally harmful effects of slash-and-burn farming and logging, but the positive effect of generating income outweighs these negative consequences. Waste management is a problem since everyone throws garbage on the ground randomly, and only collects bottles or batteries in one area occasionally. Almost no containers are reused, and people are not aware of the harmful effects of burning plastic or throwing used bottles of pesticide on the ground. On a social level there are no apparent problems within the village or with neighboring villages, although in the first years that Ifugao migrated to Magansimid, people in Masipi wanted them to leave. Now the friction seems to be over and the relationship has become neutral.

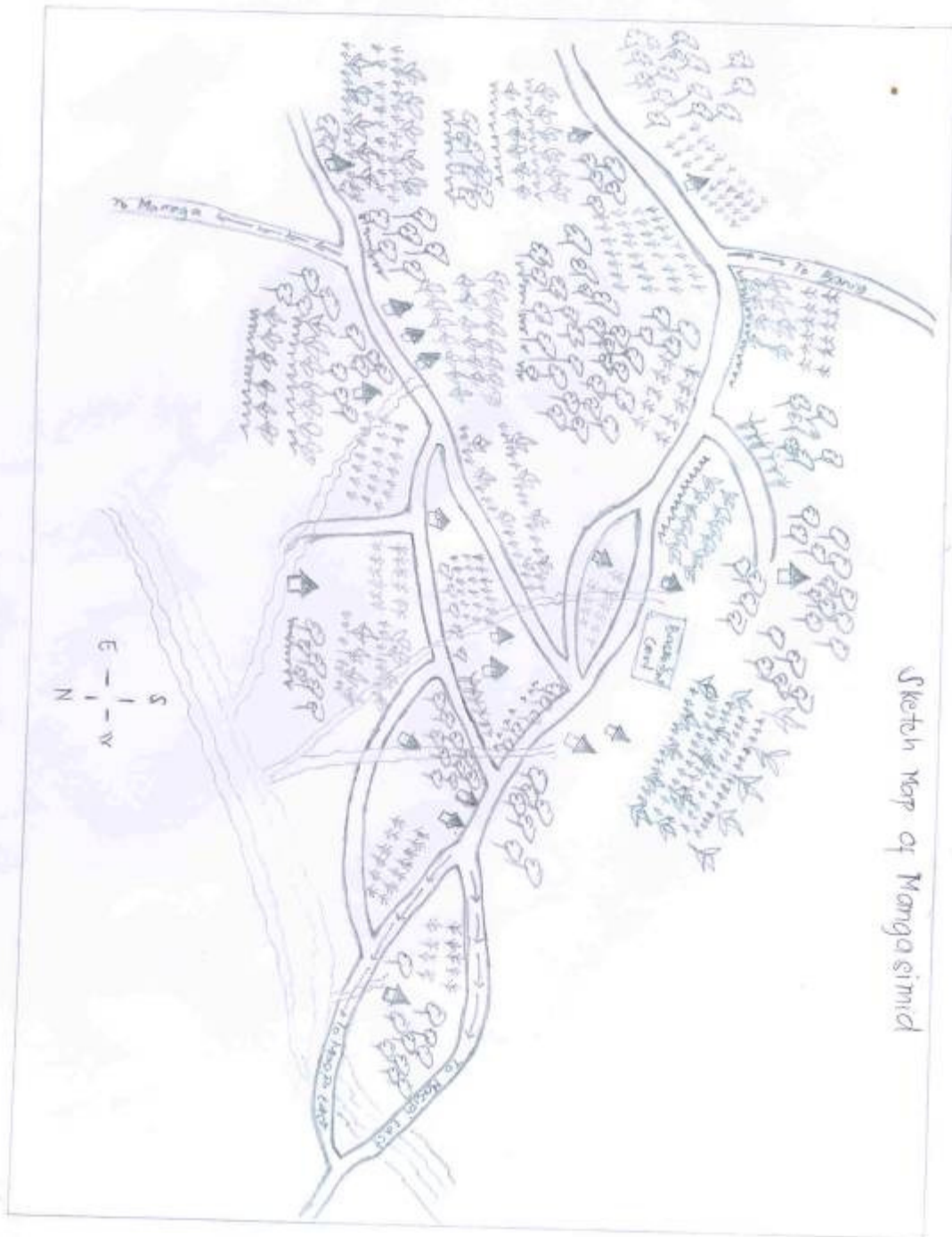
Villagers predict many more people to migrate to Magansimid in the future, especially family members of men that are already living there. Villagers return a few times a year to their former homes and the people there hear the stories of a better life in Magansimid, which is causing and will continue to cause the population to increase. Some people would like to expand their farm land in the future, although most are

content with their farming area for the time being. Everyone in the village wants a better road down to Masipi to facilitate transportation of their produce down the mountain. A new water hose is also a wanted item, so that some of the villagers can build a house further down the mountain without having to walk far to fetch water. Villagers do not want to return to Ifugao because life is better in Magansimid, but future improvements in infrastructure and social life would increase the general sense of wellbeing in the village.



Photo 1: House in Magansimid

Map



2.7. Dy Abra (Banig)

Jesse Bruins and Lemuel D. Dao-ayan

History

The history of the barangay Dy Abra starts with the migration of Tinguians from the province of Abra to Banig, (Tumauini, Isabela) in the late 1950s. The reason for migrating out of Abra was often the lack of available lands, which were still available in Isabela. After the first Tinguians settled in Banig, their kinsman followed them. Aside from the Tinguians some other groups, such as Ilocano, migrated to the area. Due to the NPA insurgency and the fighting in and around Banig the people were resettled to the lowlands at the edge of the Sierra Madre mountain range in 1989. The new settlement was named Dy Abra, after the governor Dy and the home province of the Tinguians; Abra. The administrative name in some instances however remains Banig. The people of Dy Abra reported that they officially own some of the land, but outsiders own most of the land. As a result they experience some insecurity over their land rights, even though they were resettled by the governor. This does not seem to have an effect on sustainable farming practices. There are no people actually living at the old site, but claims to the land and fruit trees remain. People occasionally return to maintain their kaingin fields. After 2001 a lack of good lands in Dy Abra caused some to settle in Balesi, a sitio three hours hiking from Dy Abra. The people of Balesi frequently visit Dy Abra for family ties and to make use of the town's facilities such as the road and the elementary school. The closest market, hospital and high school from Dy Abra lie in Tumauini.

We found no signs that the people of Dy Abra were conducting illegal logging. The town was however next to the last crossing of the Malaping River, where the carabao logging road ended and the logs are turned into square logs and transported by truck to another destination. When hiking up to Balesi we found many carabao logging trails going in virtually all directions.

The LGU, the municipality of Tumauini and the province had a road concreting project. This greatly improved the lives of the people of Dy Abra, because the town is now also accessible by car during the wet season. Currently the only NGO having a project in Dy Abra is Plan International Philippines. This is the spring development project, which is currently phasing out.

Demography

The official number of households in the entire Barangay is 174 of which 9 are situated in Balesi. In Balesi we counted more than 9 houses, which were used by people from Dy Abra who move back and forth between the two localities. There are in total 857 people in the barangay of which 405 male and 352 females. The natural population growth of the last few years is close to 0, due to 4 to 5 deaths a year and 5 births a year. Most people had the feeling though that Dy Abra was growing quickly because of the high birth rates everywhere in the Philippines. The in-migration this year consists of 2 families. Pull factors are more chances for land due to poverty in the home province, and family

politics. The out-migration consists of 3 families, with the lack of land in Dy Abra as the main pushing factor. The main religions in Dy Abra are Catholic, Jehova Witnesses, Methodist and Born-Again. Due to in-migration and inter-marriage of different groups there are many dialects spoken in Dy Abra. The main dialect is Tinguian, but there are also Ilocano, Ybanag, Tagalog, Ifugao and Kalinga speakers found in Dy Abra.

Incomes

When asked almost nobody had a steady income, except for the payment the barangay officials receive for their work. Most families in Dy Abra live from subsistence farming. The money that is needed for schooling, health care and other basic needs is most often provided by either selling crops or by working on somebody else's farm. Only very few people get a loan, the main reason for a loan being an emergency (i.e. typhoon, dog bites). The loan is most often given from a family member or a friendly neighbor. A popular source of income amongst the people is working abroad. This requires an investment at first, but is often rewarded by a high salary and the ability to send consumption goods back the Dy Abra.

Healthcare

The barangay has a healthcare center. It is visited by a mid-wife every other Wednesday. If there is the need to visit a doctor or a hospital Tumauni is visited. Especially in Balesi we found many medicinal plants present. Nevertheless if there was either an emergency or enough money people prefer a doctor and regular medicines.

Education

The people we interviewed in Dy Abra mostly finished at least high school. The children born in Dy Abra, usually go to the barangay elementary school. The first two classes of high school are in Cumabao. The higher classes are in Tumauni. Those who went to college either went to ISU Cabagan or Ilagan.

Physical appearance

The sitio Dy Abra mostly has housing made of concrete and wood with corrugated roofs, and some bamboo houses. The houses are often built depending on family connections, children often build their house near that of their parents. The material wealth differs greatly between families. Some have television and narra wood furniture, while some maintain the bamboo and wooden furniture. The consumption goods are most often bought abroad and sent in by Dy Abra's OFW. There is not yet a church in Dy Abra, though plans for one exist. The main road is concrete as is mentioned before, the main side roads are made of gravel and the other roads are unpaved. Dy Abra is about 100 meters above sea level, and is characterized by rolling hills. The height however means that with too little rainfall the crops around the town and on the hill sides fall dry. The river running about 500 meters from Dy Abra provides some water, but during our stay, the water level was too low to provide the corn on the river side two meters higher with

water. Some fields are watered by the use of water tubing, which was provided by Plan International a few years ago. Dy Abra is also connected to the electricity grid, which is mainly used for lighting the houses after dark and for listening to the radio or watching television. Another feature of Dy Abra is the constant sound of chainsaws that go on for seven days a week. Though we did not check out all sources, outside town there was the converting of trees into square logs, and inside town the chainsaw was mainly used for the construction of new houses.

The area around Banig contains only one house, which has been uninhabited since 1989. The place where houses used to be has partly been overgrown by bushes and trees. Further outside Banig and along the stream of the Malaping many large upland rice fields, corn fields and kaingin making can be found. Scattered around the entire area are fruit trees, of which some are frequently used, while others are left unattended.

Balesi consists of mainly two parts. One lies lower with a concentration of about 6 houses next to the river. While the center of the second part lies about 30 minutes hiking uphill, with about 9 houses scattered around the area due to the steep slopes. All houses are made of forest products such as bamboo, wood and cogon roofs. The general impression is that there are more fruit trees planted in Balesi than in Dy Abra. The main crops are upland rice and corn. The crops are watered with water coming from the mountain creeks, which also provide for drinking water through a river well (*bubon*). We suspect there was more rainfall in Balesi than in Dy Abra due to the position in the mountains and close to the forest, though we have no data on that. There are no carabaos present in Balesi. The roads are maintained by the men in the sitio in the form of duties they have to perform for the Barangay. The lower part of Balesi, was about 30 minutes hiking from the forest while in the upper part there were some patches of primary forest already present. Balesi was however not the furthest inhabited place to the east, there were some Ifugao further uphill to the north (who were actually closer to Masipi than Tumauni) and to the east from the upper part of Balesi we could see some houses and kaingin making in the valley. There is no electricity in Balesi though some people had radio's running on batteries.

Farming systems

The planted crops in the area differ per sitio. In Dy Abra the main crops are lowland rice and corn. In Balesi the main crops are upland rice and corn. The *kaingin* fields near Banig consist of upland rice and corn. In all sites the crops are supplemented with fruit trees and vegetables. In Banig and Balesi the lands are fertile enough to plant without fertilizers; the fields in Dy Abra however are older and more permanent and need fertilizers. The crops that are harvested and not used for personal consumption are taken to Tumauni. From Balesi and Banig this is a 3 or 1.5 hour hike to Dy Abra, from where the jeepney to Tumauni leaves daily. The crops are sold to traders who all work with the same fixed prices, which are based on supply and demand. There are very few off-farm incomes we only saw three Sari Sari's in Dy Abra.

Changes since 1994

In 1994 Dorien Ypma conducted research in Dy Abra. Since then many changes have occurred. The most important perhaps is the concreting of the road and building of the bridge. Furthermore a health clinic is constructed, not at the school site as was intended, but more in the center of town alongside the road. The number of inhabitants then was about 350, thus the town has more than doubled in thirteen years. The main focus of her research was about interventions done by NGOs. All of them have either already pulled out or are phasing out (no physical presence is made). The results are a water system of tubes. Some facilities are constructed and still standing. The FAO agroforestry project is not really talked about, but agroforestry in some instances is used as a practice, because the people are aware of the dangers of soil erosion.

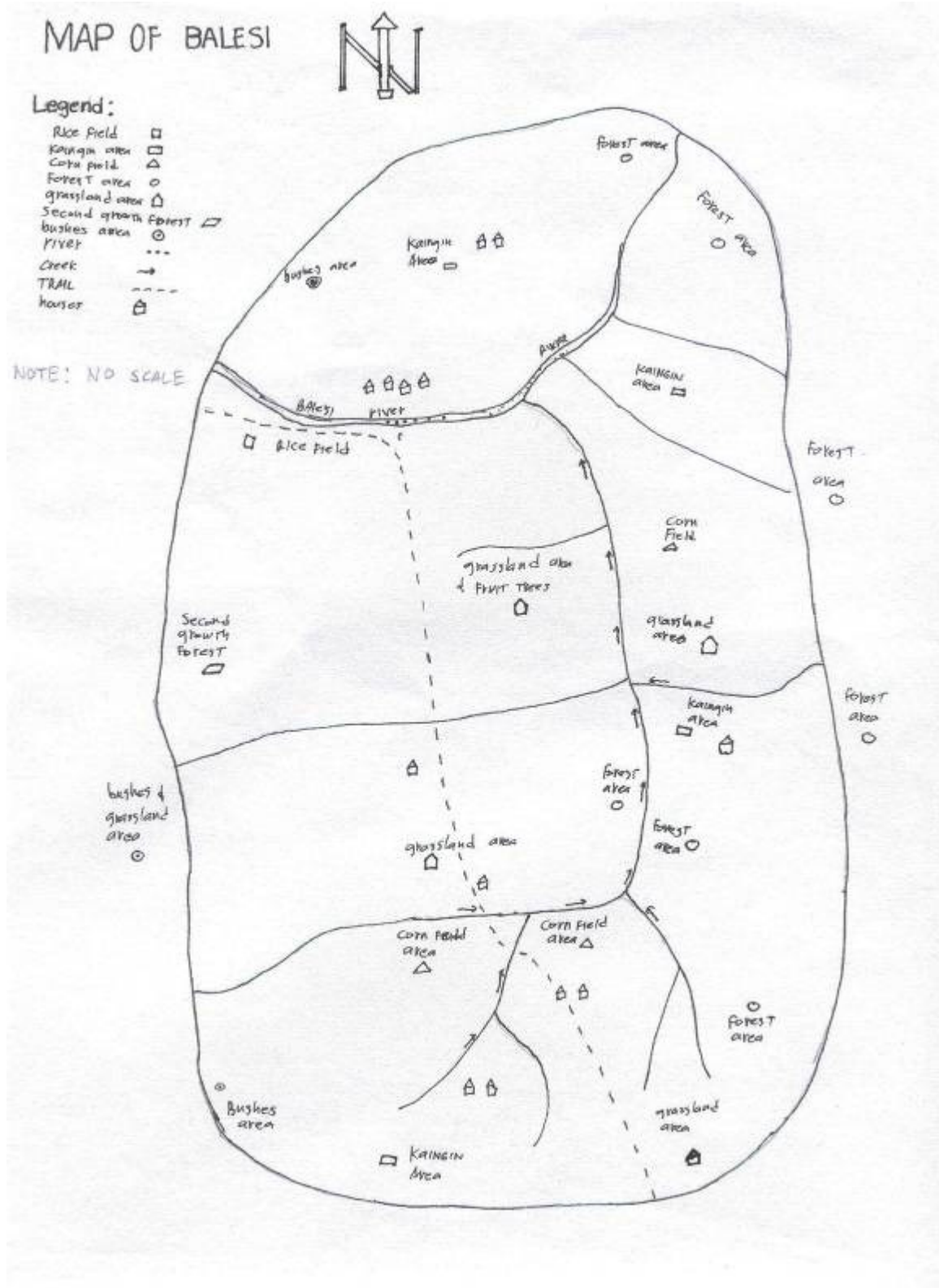
Looking to the future

Concerning the logging, some voices in the barangay were raised to prohibit chainsaws to stop, or at least slow down the logging. The barangay already has a prohibition on electric fishing which was working quite well: we did not find any signs of this activity. People are constructing houses and there are plans for more facilities such as the church and better roads. A lot of young people though want to go abroad or to the cities for a while and return to Dy Abra after having made some money. The reports of people moving in and out of Dy Abra because they hope to find land, or because they have too little, make it hard to guess whether the town has reached a maximum, or is going to grow somehow in the future.

References

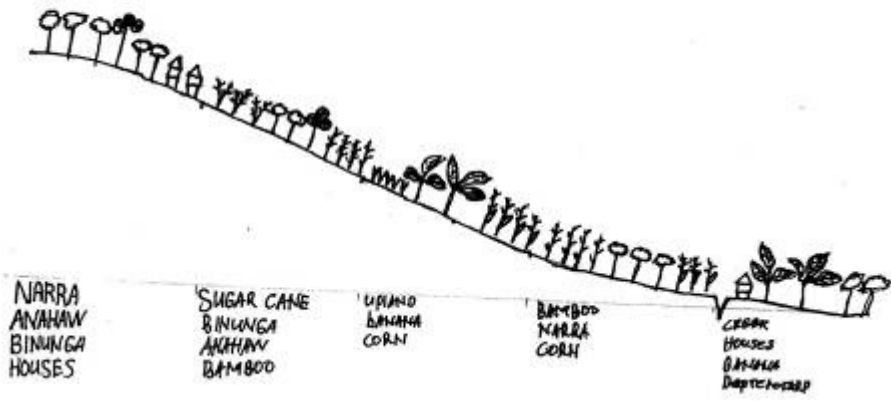
Ypma, D. 1994. *Dy's people of Abra; and the story of a project in context*. CVPED Student Report. Leiden.

Map



Transect

TRANSECT MAP OF BALESI



2.8. Capellan

Jasper Wester and Christopher M. Telan

We were assigned to go to the barangay Capellan, where Mr. A Macadangdang went before and made an arrangement with the Barangay Captain about our stay in Capellan. The Captain told Mr. Macadangdang that there are some Ifugao-families living on the slopes of the Sierra Madre mountain range east of Capellan. Since there has never been a researcher to Capellan that our supervisors know of, we were sent to Capellan with the task of exploring the area and try to find out if there are any settlers living on the slopes of the Sierra-Madre mountain range, preferably Ifugao since this summer course was focusing on migrants coming from Ifugao. The day of our arrival we met the barangay captain who would be our host for the first few days. When we started talking about our research we asked him if he knew about the existence of any sitios east of Capellan where there might live some Ifugao. Soon we found out that there was probably a very small chance that there would be any Ifugao migrants living east of Capellan. Two local counselors and the *kapitan* told that there were only some Ifugao households in the barangay. "Some Ifugao people that live here in the barangay do have some land or maybe a small hut in the field, but they only go there to work and they will return in the night."

We started walking around the barangay and met Mario, a man who came from the Cordillera Mountain Range and calls himself an Igorot. We introduced ourselves and explained our purpose for being here and he offered us to show us around the barangay. He first brought us to one of his good friends who is an Ifugao woodcarver who is living on the edge of Capellan with his wife and two of his three children. The family migrated from a village close to Banaue to Capellan. With the help of this family we found out that there are only 5 Ifugao households in this barangay and 2 of them are not around for a while. Still we wanted to explore the area so we kept on asking if there were no people living in or close to the mountains east of Capellan. They now started telling that there actually might live some Ifugao near Paltas. Paltas is supposed to be a small sitio in the mountain around 5 hours walking eastwards.

Three days later we hiked with Mario and another guide who knew the forest really well, to Paltas to see what was going on there. Paltas turned out not to be a sitio but a creek where only some loggers go to get their wood. The sitio that the people in the barangay talked about before was actually an Agta village. What really grasped our attention was the fact that some Agta had blocked the logging path that had been the path to go into the forest. Behind the fence it was about 500 meters further to reach the village where around 25 Agtas are living. One old lady told that they were living there already for 5 years. When we asked them about the fence they told us that they built that to keep the loggers out of their living area. People in the barangay told us later that only hunters entered that area but the loggers were being kept out. In the distance you could hear chainsaws so the area without loggers is probably not that big. The small Agta village is called Sulliou and not many visitors had ever been to this place. The Agtas were planting upland rice on *kaingin* fields and also other crops like for example cassava were planted around the village. In our one-day stay in this village three people came to us asking for

medicines because they suffered severe stomachache and two of them also suffered diarrhea. Although the experience with the Agta was great it was a pity that we couldn't find any migrant sitios east of Capellan.

Because there are only 3 Ifugao families living in Capellan at the moment of our stay we decided to focus on migrants coming from the Cordillera as a whole and not only on the Ifugao. For the general description of the village this is a difficulty because of the size of the area. The few migrants from the Cordillera who had a house east of Capellan had a strong connection with the barangay and there were no places that could be named or described as a sitio. Consequently we will do our best to describe the current situation in Capellan with a focus on 'small' farmers that migrated from the Cordillera.

Capellan houses around 3,000 people and a lot of different tribes are living together. The counselor of Capellan told us that there are Tagalog, Ybanag, Igorot, Ilocano, Ifugao, Kalinga, Kalinga, Visaya, Pangasinan, Gaddang and Bago people living in the barangay. The barangay consists of 7 different neighborhoods, or *puroks*, all with their own counselor in charge of that area (some people say that the cemetery is *purok* eight of which God is the counselor). The road from Capellan going to the highway is in a bad condition, consequently this was one of the bigger concerns of the barangay captain and also 3 out of our 8 respondents in the barangay mentioned this lack of a good farm-to-market road as a big problem for the people in Capellan. The market of Ilagan will take 2 to 3 hours by jeepney coming from Capellan, if there is no heavy rain. In our short stay in Capellan the captain went to Manila with 5 of his counselors to ask money for the improvement of the road. When they got back he told us that they would get 300 bags of cement from the mayor of Ilagan. This equals around 500 meters of road.

There is a school in the center of Capellan where 340 children are getting education from grade 1 to 6. The school has 12 teachers and when we spoke to some of them they told us that they experienced a lack of staff. There are 6 different churches in Capellan. All the people we spoke to considered themselves to be a Christian. Because of the size of the barangay it is difficult to say anything about the households but the people we spoke to most of the time lived with their nuclear family. Although often some other family members were living close by.

All the people we interviewed considered themselves to be poor and they also considered Capellan to be a poor barangay. But then again we were focusing on the migrants and they all practiced small scale farming. So we are not claiming that all the people in the barangay consider themselves to be poor. The people we interviewed are often working for subsistence needs or to pay back the 30 percent interest they need to pay to the businessmen. The biggest source of income for Capellan is the selling of yellow corn; most of the rice that is cultivated is for local consumption.



Photo 1: Rice fields east of Capellan with in the back the Sierra Madre Mountain Range

We asked some people what percentage of the income of the barangay was produced by the logging and they thought it would be around 25 percent of the total. We only asked this to three people so there is a doubtful validity in this percentage. At least two logging trucks filled with logs are leaving Capellan each day.

The logging is, according to 6 of our 8 respondents, connected to one of the biggest problems in the barangay, namely the water system. “In the last 20 years the water level in our closest river has gone down with a meter” one of our respondents said. And many mentioned the erosion that is caused by the intensive logging. The irrigation system for some of the fields is problematic and while we were in Capellan a lot of people were praying for the rain to come.

In Capellan there is no doctor, if people need medical health care, they go to the healthcare center in Ilagan which is about 2.5 hour driving with the jeepney.

There are only four houses east of Capellan where migrants from the Cordillera Mountain Range settled. They are all far away from each other and cannot be seen as a sitio. The furthest is 1.5 hours walking from Capellan. The people who live in these houses have moved there quit recently and they have a strong connection with the barangay.

The farming system regarding the small farmers who migrated here is based on making money through the selling of yellow corn and producing food with the cultivation of rice (mostly C18). There are a couple of hand tractors in Capellan and people borrow them to friends and sometimes get a little bit of money for it. Others are using a carabao

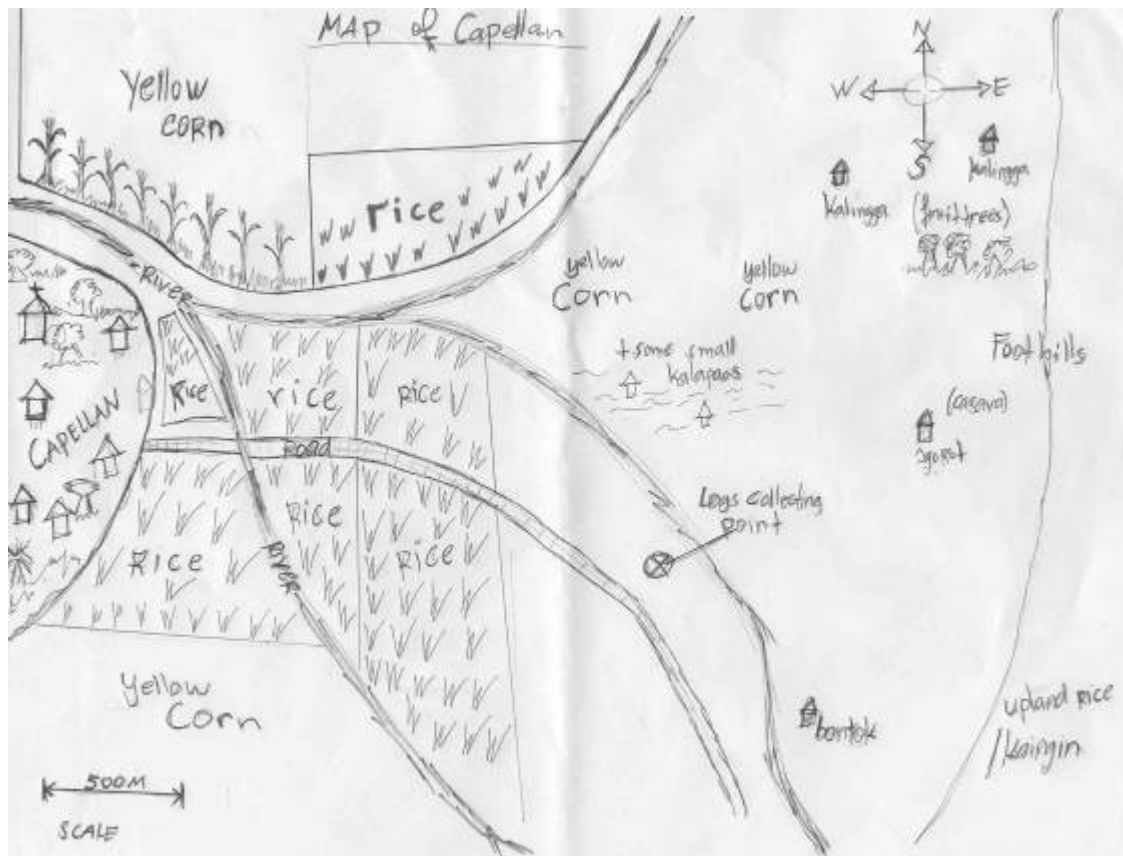
in the field. Many groups in Capellan are working together with their family in times of extra work during for example the planting season.

Because Capellan is a relatively big barangay there are also a lot of other occupations in which the migrants from the Cordillera participate. There was a rice-miller who was also a pastor; we met a woodcarver, a chainsaw operator, a field laborer, a counselor, a carabao owner who used his carabao to transport logs for some extra earnings, these were mostly side jobs next to there agricultural incomes.]

A lot of people in the barangay mentioned the problems regarding the water system caused by the logging. In the past there had been a proposal for a tree plantation site but this was not approved by the officials. Because poverty is an issue in Capellan it is not easy to stop the logging, according to the captain this will only stimulate other criminal activities.

There are many people who mentioned the problems, if they work together and will be supported by their officials this can be a more fruitful way of dealing with the future than the 'go-with-the-current' attitude that is supported by some officials.

Map



2.9. Tapwakan

Enrico M. Cabaccan and Victor de Brabander

Tapwakan village owns its name to the Ilocano word *tapwak* which means jumping. The original settlers of the village were Ilocanos and Ifugao who gave it this name because the area where the village was situated, in the middle of mountain ranges, reminded them of a jumping ground. The Ilocano people and the Ifugao people left the area at some point because some of them were infected by malaria. Afterwards only the Ifugao returned to the area. At some point an old man visited the village and wanted to rename it Maragsamaha which means 'a happy village' in Ifugao language, but the inhabitants of the village decided to stick to its original name Tapwakan.

There is some confusion about the barangay to which this village belongs. Officials in Batong Labang consider the village to be part of their barangay, but at the same time officials in Rang Ayan consider it to be part of their barangay. Some of the villagers of Tapwakan own plots in Rang Ayan and are therefore registered there.

The village is about two hours away by foot from nearest town which is considered to be Rang Ayan. Rang Ayan itself is situated about 30 minutes away, by car, from the highway. The track that leads to the village is in very bad condition and to reach the village, especially when traveling with luggage, is a true physical test.

The village is situated next to the Bintacan River which flows from the Sierra Madre Range into the lowlands where it is connected to the Pinacanauan River which drains into the Cagayan River. The village is surrounded by mountain ranges. Most houses of the village are constructed on the flat areas of one of these ranges. When reaching the village by hiking track one will approach the village from the northwestern direction. On this side of the river one house is situated. At the moment this is the only place in the village where there is a water source with constantly running water from a spring in the mountain. The water is transported through a hose that ends near this house. The other water source in the village is located in the central area of the village but this source has dried out during the current dry season. The villagers are expecting that this source will start running again during the coming rainy season. For this moment all villagers are using the water source at the other side of the river.

After passing this house one has to cross the Bintacan River to reach the main area of the village. After crossing a path leads up the mountain range in the southeastern direction. On the bottom of this range there is one house situated. Following the path uphill will lead to the main area of the village where most houses are constructed, as well as a church and a volleyball court.

The village of Tapwakan is made up out of eleven households, with nine of these on the flat area of this southeastern slope. Before 1997 the first five houses arose here with the help of a farmers' cooperative called VIBANARRA which was planting Gmelina trees on this mountain range. The last household to arrive in Tapwakan was in 2004. Between 1997 and the present day about ten households left Tapwakan. The migration that has been taken place can be described as a stepwise migration pattern. All current inhabitants come from Lagawe in Ifugao province. The main reason for them to leave Ifugao province was the lack of sources of income there. They settled here because

there is enough food for them here. Most people are related to each other and word of mouth is main cause for people to move to this specific place.

At the moment there are 34 people living in Tapwakan of which 11 are children, 11 are female adults and 12 are male adults. The types of households are very diverse. There is one household which contains two brothers, two households where a mother and a son live, one with a single male and one with an older female. Furthermore, there are several households with couples, some of which have no children, some with one child (2) and some with more than one child (3 and 5 children respectively). In the past year three children were born. Child mortality rate is zero and the health situation is ok even though there are no health care facilities. When people fall ill they usually visit the doctor or clinic in Rang Ayan or Ilagan. There are no schools in the village. Children who study do so outside the village, either in a nearby town or in Ifugao province (teachers in Ifugao are preferred over teachers elsewhere).

As been said, the people of Tapwakan are all Ifugao from Lagawe. They speak Kiangon Ifugao or Ilocano. Some of them speak Tagalog and English. Nowadays all are Christians. They are Jehovah Witnesses, Born-Again Christians and Catholics.

There is no social stratification in the village: all are considered equal (“no boss”). The average household income depends on the season. There were no indicators of extreme poverty in the village although some of the villagers consider themselves to be poor. At the moment people are eating three meals a day which for them is important indicator of their well being. There were many fruit trees to be seen in the village such as jackfruit, pomelo and pineapple, as well as many domesticated ducks and chickens.

Most houses are fairly big and constructed out of hard wood, some have galvanized roofs. The last super typhoon (Harurot) caused some damage but not severe. There is no electricity in the village and no GSM signal.

The dominant farming system used by the villagers is slash-and-burn farming on the steep slopes of the surrounding area. The biggest area cultivated by a single household was no more than 1.5 hectares. They grow mainly upland rice which they rotate with yellow corn. The rice is grown for subsistence as well as for the market, the yellow corn is only grown for the market. The market is very hard to reach, though, since the accessibility in or out of the village is very difficult. Sometimes the Bintacan River is used for the transport of goods. Transport over river is not easy either because of the shallow parts of the river and the difficulty to navigate the fast flowing parts of the river. Not many farmers were planning to expand their farming area because of lack of financial inputs or not enough labor power to do so.

Some villagers grow mongo beans and do hunting and fishing on a small scale for subsistence only. The villagers consider the land they cultivate as their own even though they do not have official papers or a tax declaration form. Some said that they wouldn't mind paying taxes and get official papers but the simple fact that no official has ever visited the village to arrange this makes that they don't have any official documents. As a matter of fact, we were the first to ever visit the village. Also, even though the people have never been educated to sustainable farming systems they are all interested and willing to be educated in these practices. Since some of them are registered in Rang Ayan and more are considering doing so in the near future they are hoping to get more help from the government.

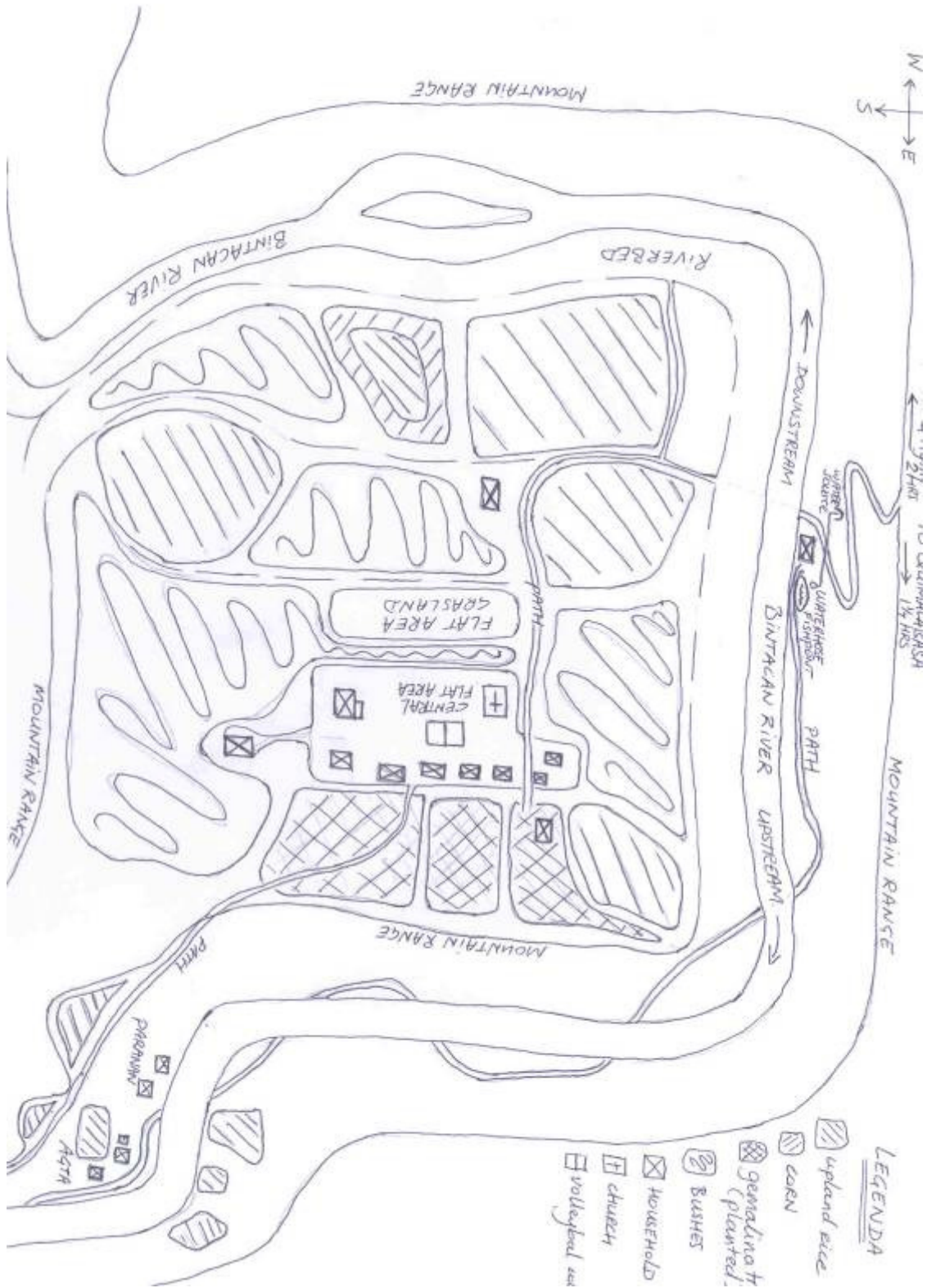
Apart from farming some villagers are also generating off farm income through logging (there are about 5 chainsaws in the village). Other forest utilization practices such as gathering non-timber forest products are also used by some but for subsistence (honey) or households utensils (rattan to make backpacks).

Although none of the villagers has ever heard of the Northern Sierra Madre Park (or the IPRA for that matter) they all feel that they too have a part to play in protecting the forest.



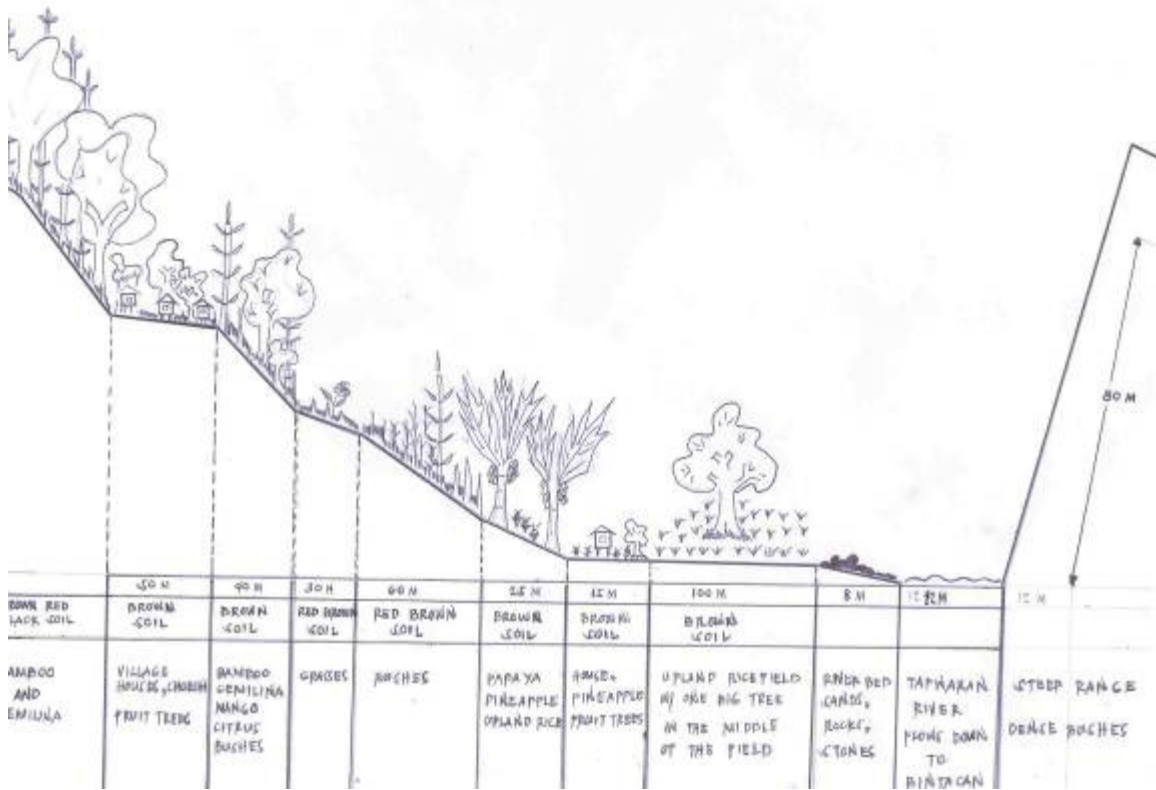
Photo 1: Tapwakan

Map



Transect

TAPIAKAN TRANSECT MAP 2007



2.10 Pulang Lupa

Sarai Alons and Jocelyn B. Pagalilauan

Name

Pulang Lupa, Batong Labang, Ilagan, Isabela. Distance to all weather road: ½ an hour by jeepney, three hours walking during rainy season. Distance to Bintacan (barangay Batong Labang): 2 hours walking, 10 minutes by jeepney or mining truck.

History

The first migrants came to Pulang Lupa in 1978 and the last family to settle arrived in November 2006. All of the inhabitants come from Ifugao province, some of them migrated before within Ifugao though. The people living in Pulang Lupa are farmers. Their reason for coming to this area and leave Ifugao is because of land. They find enough land here to provide for their livelihood. The area used to live in the forest (big trees and shrubs). Due to logging, farming and mining there is no more virgin forest left. Most of the land surrounding the village of Pulang Lupa is now used for farming. The people do not have any legal claims to their land.

Six months ago a mining project started on top of the hill, more or less 150 meters from the last house in the village. The mining company is extracting iron ore and has a permit for mining from the barangay and the municipality, but they do not have a permit for mining at provincial level for the land on which they are operating. For the purpose of the mine a dirt road was constructed, going from Bintacan, past Pulang Lupa. Most of the houses are next to or very close to the road because the same track was used for transporting logs by a logging company that was operating in the area in the 1980's. There are no government interventions or plans in Pulang Lupa.

Demography

There are 11 households in Pulang Lupa and the total number of people is 58. Most households consist of a nuclear family with young children. There are two single households, two older couples with only grown up children, one young couple with their mother living with them and one couple who have young children but also one older daughter and her husband and children living with them. The gender distribution is equal and there are people of all ages, from 1 year up to 70 years.

Pulang Lupa has a little Born-Again church, the Green Pasture Church, in which both people from Pulang Lupa and Ampoy attend. However, there are different religions next to Born-Again: Catholic, Evangelical and Pentecostal. Most of the people do attend to the Green Pasture church though, even when they are not Born-Again, because it is close to their homes.

With the exception of two persons (one Ybanag and the other Ilocano), all people living in Pulang Lupa are Ifugao. Their first language is Ifugao, but most of them speak Ilocano very well and there are some who can speak English.

Incomes

Our informants kept telling us that they are poor. Indeed, they don't have a lot of money and they are depending on their crops, but they have more than enough food. There is no electricity but most households have a radio that is running on batteries and a cell phone which they charge in Bintacan. Each household is able to provide in their basic needs, including schooling for their children and basic healthcare.

Although the mining project is very close, it does not provide work for many people from the village because they only hire people who are strong and healthy enough, and most of the people from Pulang Lupa are very busy working their land. There are only four villagers working for the mining company. The average earning is PhP. 200 a day and PhP. 25 an hour when working extra. People with special skills earn PhP. 250 a day.

Health

The health centre of the barangay is in Bintacan, which is easy to reach in 15 minutes by jeepney or mining truck or two hours walking on Sunday and with heavy rainfall. In the past years one child has died, of diarrhea. The general health of the people is good. However, most houses are very close to the mining road and when there is no rain, the dust of the mining road is causing a cough, especially to the small children. This is an issue that is not yet addressed by the mining company and the people are complaining. The Department of Social Welfare and Development does visit Pulang Lupa two or three times a year and hands out questionnaires about personal development and family planning.

Education

The building of the Green Pasture Church is also used as a school. There are 14 children from Pulang Lupa and Ampoy that are between four and seven years old and go to school here in the morning from Monday to Thursday. The interior of the building is very basic and they don't have a lot of teaching material. One of the mothers from Pulang Lupa teaches the children and mostly there are three or four other mothers who help out and take care of the younger children and babies who come with their brothers and sisters. The children have a snack and bring a packed lunch to school, and sometimes the school provides a meal for them. When the children are seven years or older they go to primary school (boarding) in Bintacan. All the children of Pulang Lupa go to school and they are often supported by their older brothers and sisters who pay for their school fees.

Transport

Pulang Lupa used to be accessible only by foot from Bintacan, which is two hours hiking. But since the mining company started operating six months ago and constructed a dirt road, you can get to the village in 10 minutes from Bintacan by jeepney or mining truck (except on Sunday). There is a rough road going from Marana to Bintacan and in Marana

the all weather road starts. The mining road goes from Bintacan past Pulang Lupa all the way up to Ampoy. During rainy season however, the village is very difficult to reach because the dirt road is not accessible for trucks or jeepneys.

Physical appearance

The houses in Pulang Lupa are made of wood or bamboo, with roofs of galvanized iron. Most houses have two rooms and the interior is very basic. As mentioned before the school and the church are in the same building, which is also made of wood with a roof of galvanized iron. There is a drum made of jerry cans and an old guitar. There is a good water supply in the village because there are several springs. The people do sometimes experience water shortage during summertime though. There is no electricity in Pulang Lupa, but there is good GSM coverage.

Farming systems

The main crops that are planted on the fields of Pulang Lupa are: rice, corn, camote, vegetables (eggplant, string beans, pechay, etc.) and fruit trees (banana, papaya, pineapple, jackfruit, etc.). Most products are for own consumption, but the banana and sometimes rice and corn are also for the market. The people mostly bring their own products to the market and there is no middleman or trader. A couple of years ago the banana trees were suffering from the banana bunchy top virus and this was a big loss for the villagers, but now they are planting new banana trees again. Most of the farmers are practicing kaingin, where they plant there rice, corn and fruit trees and there are two farmers who have an irrigated rice field.

Forest resource utilization

There is a lot of illegal carabao logging in the area, but most loggers come from the lowlands. There are three households in Pulang Lupa who have a chainsaw. The price of the logs is PhP. 10 per board feet and on one logging trip an average of 500 to 1,000 board feet of logs is collected. All the households have an air gun that is used for hunting in the forest, mainly wild pig and wild chicken. The villagers live from the land and the forest, non timber forest products like animals and fruits are very important for their subsistence because, as they say: "it is for free". When the first migrants arrived Pulang Lupa was the forest, but now the virgin forest is about two hours hiking. There are three fishponds and the villagers are actively growing and harvesting fishes for their food supply.

Society

Renato Binbinon is the Kagawad Barangay and he is also the only official who is actively involved in the village. The barangay captain visits maybe once a year, there is no involvement of government agencies and politicians only come during election times. When it is time for elections the people do go down to Bintacan to vote but because there

is no political involvement they are not very eager. There is an initiative of the local farmers to start a farmer's cooperation, but up till now this has not yet been realized.

Pulang Lupa is a very peaceful village and if there is a conflict this is solved by discussion. The villagers are all Christians and even though they all come from Ifugao, it seems as if little attention is given to traditional values because they are easily associated with 'superstition'.

Since the mining company has been active in the area, it has become a very important actor in the village. It provides work for many people in the area, the village has become much more accessible, the physical appearance of the village is changing and the company also provides funds for the school for example.

Problems and solutions

There has been a project of Plan for ten years, which phased out last July 2007. The activities of Plan were mainly focused in Bintacan, they organized different activities like making a water reservoir and providing livestock to the people there. In Pulang Lupa the focus was on daycare for children.

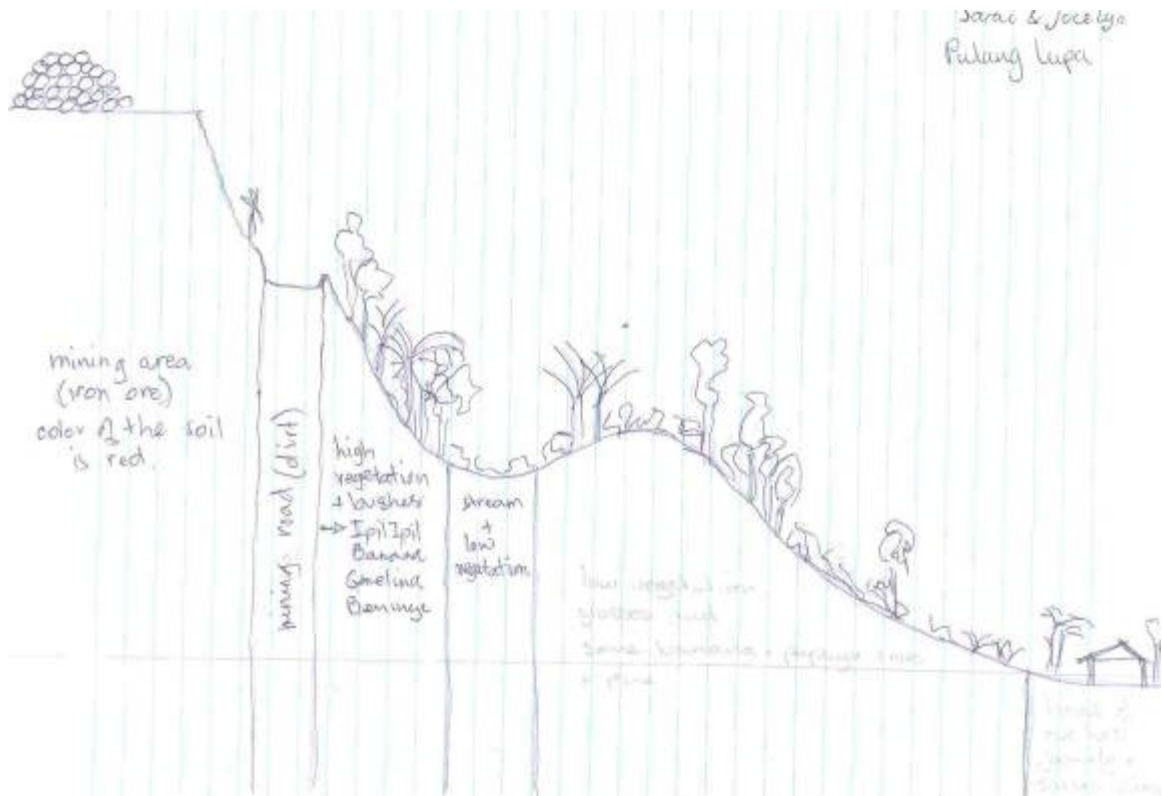
The main problem identified by the people of Pulang Lupa is that they are poor. They are all farmers and they experience this as a hard life, which they don't want for their children, so they attach a lot of value to good education. They are also aware of the fact that the forest is disappearing, but most people don't feel that they can do anything to stop this. Most of the villagers are using contour bunds on their *kaingin* and there are also trees planted on the top of the mountains to prevent erosion.

Future

The people of Pulang Lupa like to talk about the future. They have dreams and plans that are mainly related to making more money, a good education for their children and having a concrete house. Most households have one or more family members working abroad, and this is seen as an opportunity especially for the youngsters to earn money and save so they can provide in a better future for their family.

The mining project is now also playing an important role in the expectations that people have of the future. On the one hand they are aware of the fact that the mining is not contributing to the fertility of the land and that it has a huge impact on the forest, but they also hope that it will provide more work for the people and that it will have positive implications for Pulang Lupa as a village.

Transect



2.11. Ampoy

Marco van Beest and Allan G. Panao

The name of the village of Ampoy is inherited by the first settler, whose name was Ampoy Go, from Chinese origin that came to this particular place to practice logging. He came here during the Marco regime in the seventies. It is unknown when it was exactly.

Ampoy is an administrative part of the barangay Batong Labang, municipality of Ilagan, province of Isabela. Ampoy is accessible by mining road, which is newly created in 2007. It is not an all-weather road: it is not accessible by car during rainy season and continuous rain. The distance to the all-weather road is 10 km, in Rang-Ayan, where the concrete road starts. The villagers of Ampoy sell their crops in Ilagan on the market, which is 25 km from Ampoy.

The majority of the inhabitants of Ampoy came from the barangay of Hungduan, Ifugao province. From all the households, at least the wife or the husband came from this region in Ifugao province. The villagers are all “full blood” Ifugao, and see their neighbors as brothers, Uncles, Sisters, and aunts. Some of the villagers knew each other before arrival, but they were not yet relatives in Hungduan.

The first Ifugao settlers in this village came to Ampoy in 1989 (two men from Hungduan: Norton Binuag and Sabino Gumad-Ang). They told their family that this place was a better place to sustain their needs than Hungduan. The push-factors to leave Hungduan were mostly a lack of land and a lack of money. Their land was not big enough there to sell their crops, they needed it for their own consumption. They only planted irrigated rice in Hungduan, no cash crops. The pull-factors to come to Ampoy was a lot of land, a preferable place to plant cash crops, like bananas, beans and corn. The migration pattern to Ampoy was stepwise migration, the villagers came in between 1989 and 2000, some of the households came at once, some people were invited by their nuclear family member, or friend from Hungduan, to migrate to Ampoy. Most of them came directly from Ifugao province to Isabela province, a couple households migrated first to Quirino, and from Quirino to Isabela province. There are no households that migrated out of Ampoy after the first Ifugao settlers.

The boundaries of Ampoy did not change since 1989 when the Ifugao came. The boundaries are the river, which goes around Ampoy in half a circle, and the mining road, which was before a carabao trail. There are now more people living in Ampoy than before, so land becomes scarce, and the villagers have to find *kaingin* spots outside of the village, in nearby villages, which are also Ifugao settlements.

The government is inactive in this village. There have been no government interventions during their stay in Ampoy. There have been no NGOs active in Ampoy. Since 2007 there is a mining company active in this area. This is called small-scale mining, which needs a permit on provincial level, not on national level. The mining company has improved the road in the mining area, and is active in giving employment to the people and provides transportation to the market, health care and other needs for free. This is a great change in the accessibility of this area and the employment in this area, provided by the Altera mining company.

At the time that the villagers arrived, the forest still had big trees, and more wildlife, like monkeys, deer, birds, pigs and chickens, were more common in this area, also the river was filled with more fishes and more fish species. Nowadays big trees, wildlife and big fish are rare and hard to find. The forest is logged-over and many sites are former *kaingin* areas, where nowadays grows newly grown forest.

There are 9 households in Ampoy. This is composed of 6 nuclear families (with one grandmother living with a nuclear family, one brother of the wife is living with one nuclear family) and three houses are possessed by only one man, their family does not live in Ampoy. There was population growth through migration till 2000, afterwards only natural population growth. In Ampoy there live 23 men above 18 years old, 14 women and 13 children under the age of 18. Most common age in Ampoy is in between 40 and 55 years old, and most of the children are between 3 and 7 years old. The people in Ampoy are Born-Again Christians. The spoken languages are Ifugao (everybody is able to speak this language), Ilocano (most of the people are able to speak Ilocano, only a few are illiterate and can only speak Ifugao) and the younger and educated people can speak a little Tagalog.

The hospital and also the nearest first-aid centre are in Ilagan, 25 km from Ampoy. The most common diseases are stomach problems and malaria. There are several health problems in Ampoy. Family planning in this village is unknown and not practiced.

The incomes of the households are varying. Some households are with 11 people and some with only 1. The incomes are varying between at least PhP. 10,000 per year for the selling of crops and the maximum is PhP. 100,000 a year, when there is a very good harvest and the men of the household works in the mines. The mining earns PhP. 250 a day for 8 hours working (for one month that is PhP. 6,000).

They also practice logging. There are 8 men from Ampoy involved in logging and 4 of them have a chainsaw. The logging area is very far from the village and is not a daily business for the people in Ampoy. Now there is mining in the village and they can earn money by employment and the employees have no time to go logging. The *kaingin* fields are the most important, but the wives and the children have to take care of the *kaingin* now, because Sunday is the only free day of the people that work in the mines.

Hunting is not a big issue in Ampoy. Some villagers have an air-gun, but it's hard to find wild animals. They prefer to buy wild animals from lowlanders who are professional hunters and have better methods and more time for hunting.

Fishing is practiced a lot in the river. People eat a lot of fish and use goggles and a spear-gun for catching *agadiw*, *susay* and (if they are very lucky) tilapia.

The most important possessions of the people are their *kaingin* (on average about 2 hectares a household), their domesticated animals, most commonly chicken and ducks, also a few pigs and carabaos. Their house, some have a radio and some a chainsaw. Also their *bolo*, their pans and firewood are important in Ampoy. The work on the land is all human about, done with a *bolo*. There is no *sari-sari* store (half an hour to 45 minutes walking), no electricity, no signal for mobile phone and a very few signals for radio. There are no more important possessions than named here.

The people in Ampoy all practice *kaingin*. Every household produces upland rice, and the most common crops besides in their *kaingin* area are yellow corn, white corn, bananas and potatoes. In the area of the village there is about 10 to 15 hectares *kaingin*, but 5 households have also *kaingin* field outside Ampoy in nearby villages, mostly in

Kagutungan. The people also plant fruit trees, paper trees and some other crops that is grown by single households, for example beans, peanuts and pineapple. The rice and sweet potatoes they grow is meant for consumption, for human and the chickens and ducks and they make use of hybrid seeds. The villagers are not making use of herbicides and pesticides and only organic fertilizers like animal dung or leaves. The soil is brownish clay and is fertile, so for them it is not necessary to make use of herbicides, pesticides or chemical fertilizers. The rice is native, or Palawan rice, and they sell the rice for PhP. 1,400 per sack. The price is now better than before, but they only sell their rice if they really need money. The yellow corn is sold for PhP. 250 per sack, and the bananas (*lakatan*) are PhP. 1 a piece. The *kaingin* per household in Ampoy is in between 1 and 3 hectares.

The houses in the village are made of white lauan, all covered by GI sheets. The houses are close to each other, surround by grass and on the flattest point in the area of Ampoy. The river is one kilometer away from the 7 houses in that flat area, but there are also two houses nearer to the river, about 300 meters on a trail. There are no other buildings in the village than living houses. Most of the houses are in between 20 and 30 square meters, a little higher than the ground itself. In the area of the houses there were fruit trees, bamboo, some paper trees and narra trees. The mining road ends in Ampoy at a small mine, close to the two houses near the river. The water-spring is two hundred meters from the 7 houses up on a mountain covered by forest. The area is very mountainous, with steep sloped covered by logged-over forest, mostly bamboo forest, some semi-big trees left, like white lauan, but very few. There are three *kaingin* areas in Ampoy, near the river, near the bigger mine and near the houses, but also the forested areas are owned by individual villagers to make *kaingin*, or to leave the soil resting for a couple of years. During heavy rain there is a lot of erosion, which makes the road inaccessible for cars and the water source becomes dirty because of erosion and mud flows into the water pipe, which goes to the houses and ends in the garden of one of the households in a hose, and the CR is also around the houses, outside in the lawn. There is no school and no church in Ampoy, the church is 1.5 kilometer away in Pulang Lupa.

Pulang Lupa has also a kindergarten, but this is only for 4 and 5 year old children. The elementary school is 7 kilometers away in Bintacan. It is very far for the children to go here every day, so the children are often going to a boarding school, mostly in Quirino and Ifugao Province. The high school is situated in Rang-Ayan, which is 10 km away from Ampoy, also for high school most of the children prefer to go to a school in Ifugao Province or to Quirino, which is, according to them, cheaper, better quality and the teacher treat the Ifugao better there than in Isabela province. On elementary school and high school they do not make use of any electronic materials, they make use of pens, papers, books and the blackboard.

The road from Bintacan to Ampoy is a mining road, accessible by mining truck and 4 by 4 vehicles. It's very difficult for jeepneys to come to Ampoy, but it is possible during dry periods.

The crops are sometimes brought directly to the market, sometimes the mining company brings it for free to the market. After the mining road was finished, there are no middlemen involved in selling the crops in Ilagan.

The mayor of Ilagan is Jose Marie Diaz. The barangay captain of Bintacan is El Pidio and the *kagawad* of Ampoy is Renato Binbinon. Only this last man is visiting the

village. Our respondent said that the barangay captain and the mayor had never been in Ampoy. The people in Ampoy do not have land rights on paper, but they have a clear idea informally divided the land among themselves and have boundaries, which are already a long time ago established. The villagers are very equal and take decisions together, and conflict are not common in this village. The mining company has power in this region, and Ampoy is depending on the company for employment and the community-based help, which they give to the people, like improving the water source and the road. This mining is controlled by government on municipal and provincial level. During election time politics is an issue in the village, and politicians are promising things to the barangay of Bintacan, but after election time they don't see any of the promises.

The problems in this village are mostly that they don't receive help from any institution, and have to survive and struggle so that they can send their children to school for a better future. The distance to facilities is also a major problem and this is causing education problems, health problems and infrastructural problems. Erosion is also a major problem, especially at this time, because almost all the big trees are gone and where the mining road is and the mining of iron ore, there is no vegetation that covers the soil. The climate is also very risky, which makes the crops and houses vulnerable to be damaged. Another problem is a disease that affected the banana trees. Banana were the major source of income in Ampoy till 5 years ago, but the people don't take the risk anymore to plant many banana trees. Also the resources in the area become scarce, like wildlife, big trees, fishes and non timber products. The mostly named problems in this village are a lack of money and lack of needs.

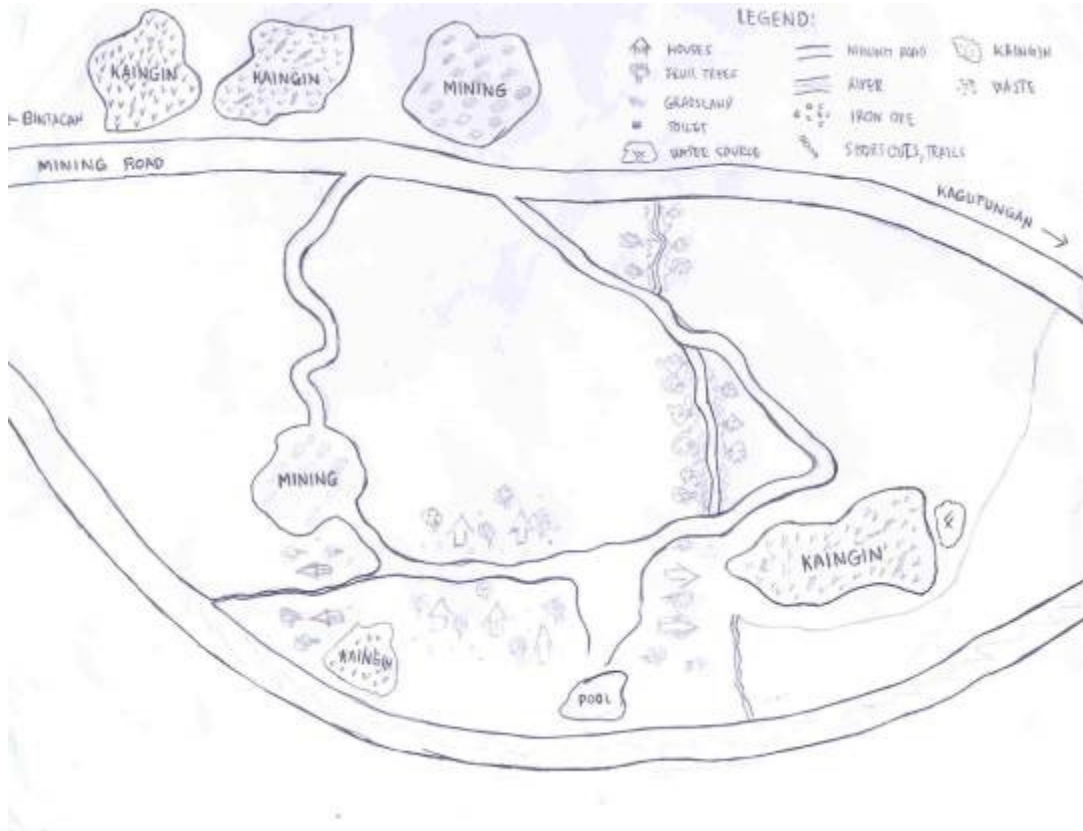
For the future they see land scarcity as a big problem. The land for making new Land is becoming scarcer and the respondents were afraid that all the area will be a mining area in the future. Although the mining company is promising a lot and at this moment they are giving the people help, the villagers are not sure of the honesty of the mining company mainly because of all the promises in the past that proved only to be promises. They are also scared for the future water supply, that the water will be not sufficient anymore, because of erosion and the loss of forest. Also typhoons will affect the area more if the trees are cut, and also the landscape will be degraded because of mining.

The positive future perspectives are also connected to mining, because it gives them easier access to the market and to facilities like health care and education. It provides them money, so that the children can have education and a professional job when they are grown up. They hope that the promises the mining company gives, like planting fruit trees, paper trees, narra and other slow growing trees. They are also promising to resettle the people from the area which will be affected by the mining of iron ore into a bigger village, so that basic facilities like a school and health care will be available within the village.

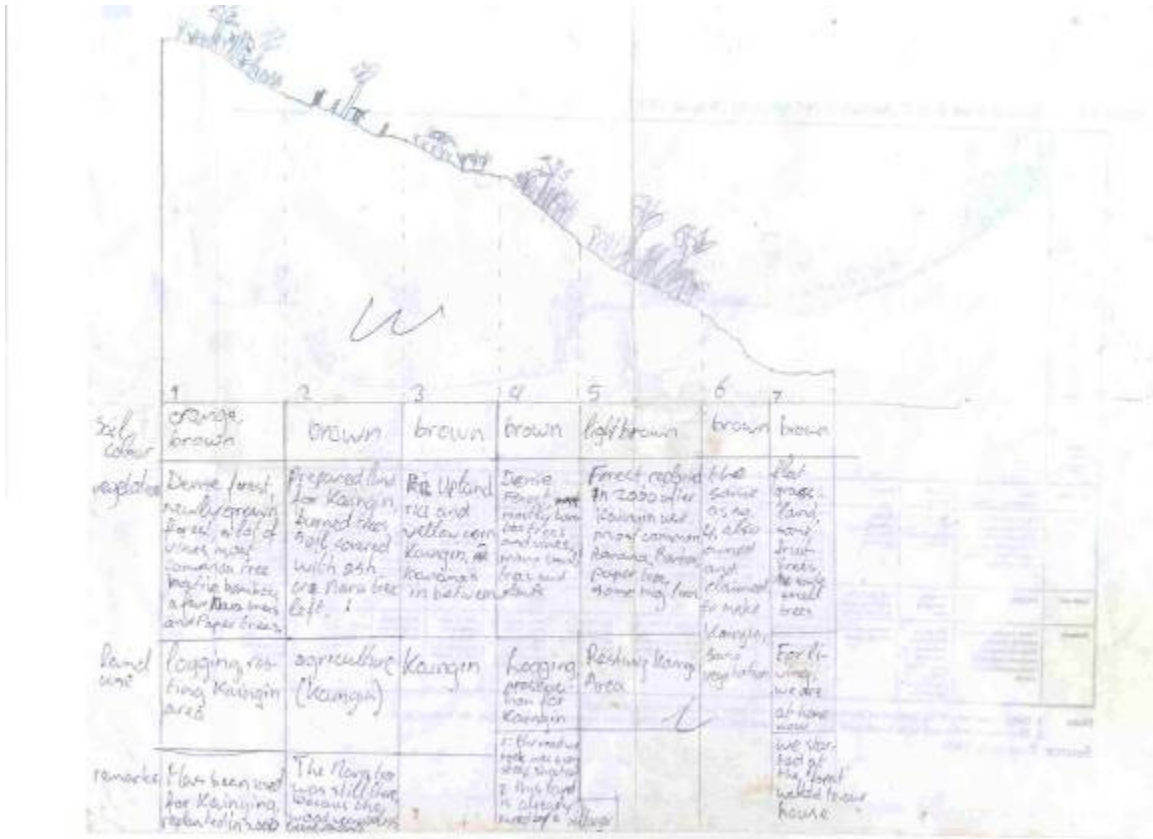
Overall the future is highly unsure and it is hard to say what the balance is. At least the people have more income and better infrastructure now, which is helping a lot for development. But the sustainability is highly unsure for the people, and also the disappearance of the iron ore, with great value, in their lands is worrying them. The money goes mostly to the company and they are the one who really become rich because of this mining, according to the respondents. Also the government is earning money on

this mining, but they are using this to develop this area. It is very difficult to predict the consequences, negative and positive, but time will tell...

Map



Transect



2.12. Quimalabasa

Mark-Anthony C. Tuliao and Christiaan Oostdijk

The village of Quimalabasa owes its name to the founder of the village who was reminded of the shape of a squash or *kalabasa* after seeing the area where the village would later be located from afar. It is nowadays a part of Barangay Rang Ayan in Isabela province. Of the people living in the village, most came there directly from Ifugao Province. There is one person who settled elsewhere before moving to Quimalabasa and two who do not come from Ifugao Province but from Quirino Province. The founder of the village no longer lives in the village, and of the people who live there now, only one was there before the new millennium began. The person who has been there the shortest only arrived in April 2007. The reasons for leaving their areas of origin mostly included the fact that there was no available land there or no way to make a living in another way. Their motivations for making their way to Quimalabasa consist of the readily available land for farming and to make *kaingin* on, the possibility of getting work in other areas and the ability to provide themselves and their family with food.

The village is divided into a lower and an upper area. Upper Quimalabasa consists of nine houses and the lower area is made up of five and these are occupied by fifteen males and six females. The upper area is surrounded by mountains on all sides and is thus situated in a small valley higher up in the mountains than the lower area. There are two married couples with children in the house and two couples of whom the children have already moved out. Then there is one married couple who never had any children in the lower area and one woman without the ability to speak, living on her own. The rest is male and single, either living alone or with one of the other single men. The children still living in the village are a girl aged one and a boy aged four.

The people do not seem to spend their full time in Quimalabasa. Of the fourteen houses in the area, five were unoccupied at the time of our research as there appeared to be quite a bit of temporary out migration. One man for example was not there as he went to Ifugao Province to be with his sick mother and he had apparently been away for a month already. Another man living on his own was not there, but we got conflicting answers when we asked about his whereabouts. An older couple left for Ifugao Province for two months to visit family and another older couple go back to Ifugao regularly to visit their children. Some of the temporary absence was also because of other sources of income. Three of the younger inhabitants regularly go to Rang Ayan to do work in construction to earn some extra income. In addition, the husband of one of our interviewees went to the forest for a month to earn money with logging.

The houses are all made of bamboo, wood and some pieces of metal here and there and the roof is generally made of materials like bamboo, rattan and leaves. The houses are somewhat clustered together in little groups. There is only one house that is rather secluded from the rest, which is occupied by the mute woman. The upper area gets their water from a creek running through the village and from a small mountain spring that joins that creek halfway through the village. The water is transported from the creek to the collecting area through bamboo pipes with small holes in the top. The lower area gets their water through a hose.

There are no schools present in the village, nor are there any health care facilities available. In fact, all the buildings in the village have a residential purpose. When people do require health care they need to travel to Ilagan to reach the nearest hospital, health clinic or pharmacy. The transport possibilities are very limited and are made up of the road going through the mountains leading to Rang Ayan and a short cut path leading to the neighbouring village of Tapwakan. These roads are mostly travelled on by foot, but during harvest time, if people have crops to sell, they sometimes make use of a carabao to transport their goods to the market in Ilagan. Since there is no one in the village that can afford a carabao for themselves, the people have to rent one from the lower lying areas whenever they wish to sell crops too heavy for them to carry. These additional costs make it less appealing for the population of Quimalabasa to sell their crops at the market as their profit will significantly be reduced. Whenever people do sell their crops, they sell them to a buyer who will then sell it on the market. All trips out of the village are somewhat dependent on the weather conditions as the roads become very difficult to walk on once it starts raining.

Another reason to travel the roads is to go to church on Sunday. Since there is no church in the village, people go to Tapwakan to attend Sunday morning services. Most of the villagers consider themselves Catholics or Born-Again Christians, but there were also two respondents who do not consider themselves to have any religion whatsoever.

People do not have many possessions and the things they do own are mostly related to their farming practices. Other than farming tools, there are two radios and one person owns a mobile phone. Kerosene lamps are used at night to light the houses. Since nobody owns a torch, when moving around in the village in the dark some use lighters with a light in it to see where they are going.

Most of the fields are further up on the mountains, about an hour walking distance, with one exception being a field in the centre of the upper area. All the people in the village make *kaingin* on their land and use it as a way of making their land more fertile before planting crops. Their way of farming is rather simple and completely non-mechanical. There are no ploughs and all the labour is done by hand. The crop most grown on the fields is upland rice, which is intended mainly for their own consumption. Other crops being grown are white and yellow corn, ginger, banana, pineapple, string beans and to a smaller extent some mungo-beans and citrus fruits. People do not actually own the land, but are mostly either unaware of ownership certificates or they do not believe they need any to make use of the available land in the area. Amongst each other, it is very clear who cultivates which area and the people always respect these land claims.

The people in the village are displeased about the fact no one has shown any interest in them up to this point. Never has anyone related to the government visited their village, nor have there ever been any government projects or NGO activities in the area and people feel some resentment towards these organizations because of this. There has never been a researcher of any kind in the area, nor has the barangay captain ever set foot in Quimalabasa. So overall, the people of Quimalabasa feel that they are on their own and that if they do not fend for themselves, no one will look out for them.

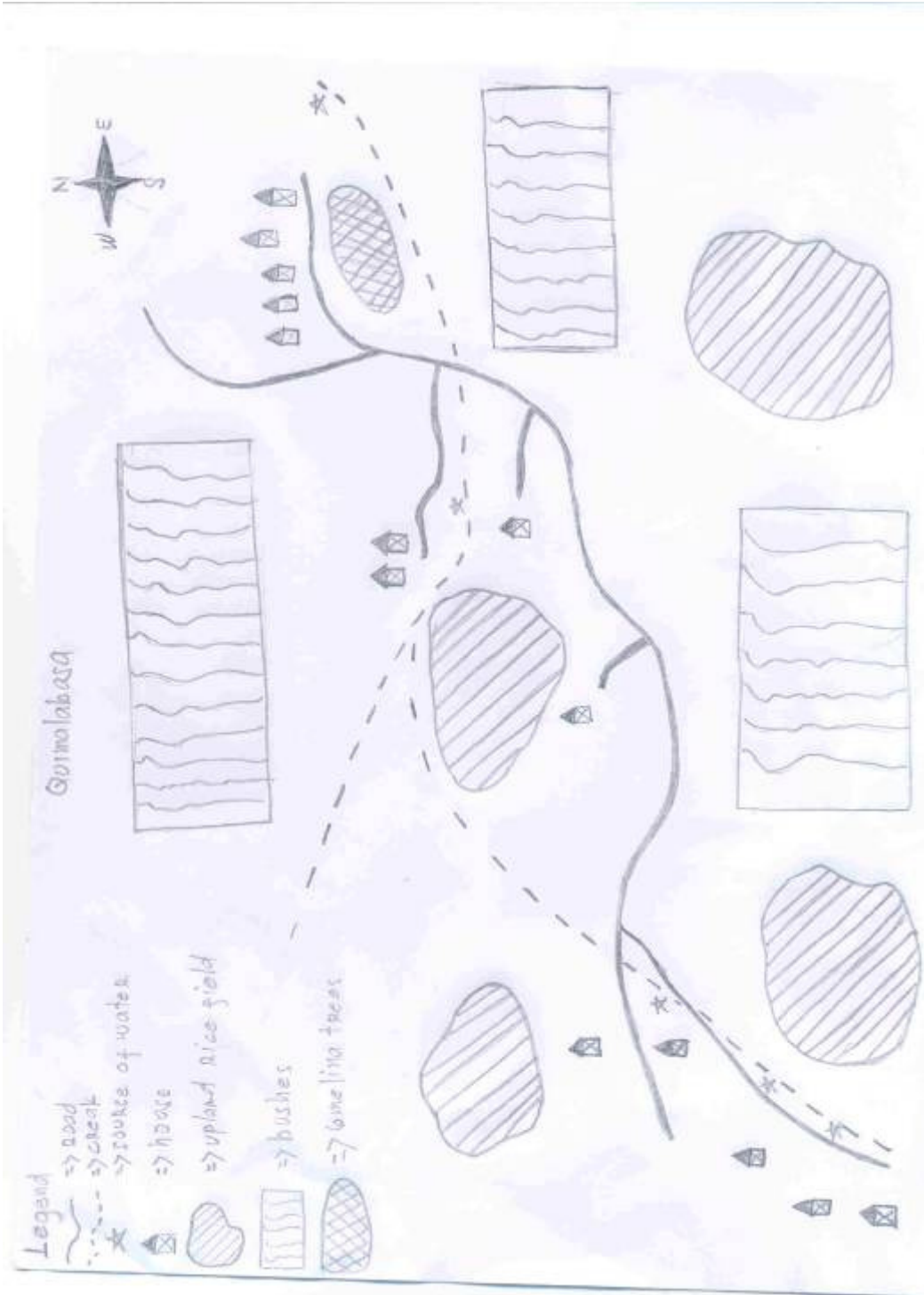
Looking towards the future, of the respondents we have interviewed only one mentioned that they would consider moving back to their area of origin, but only if there was a genuine possibility to get employment there. Besides that, all have expressed their

desire to stay in the area because there is land readily available for them to cultivate and sustain their immediate needs, which is their most important objective for the future.



Photo 1: Two houses in Upper Quimalabasa

Map



Transect

Transect Map of Gununglabasa, near Rang-ayan, Ilogan, Iloilo
 Prepared by: Mark and Jackson



2.13. Coop

Jenifer M. Gatan and Noortje van Geenen-Schrauwen

Coop is a small village in barangay Batong Labang (which means big stones). The black rocks are specific for this part of Ilagan and are a real eye-catcher in the landscape. Coop stands for cooperation. The story goes that a group of old people cooperated by working on their fields together and run their common shop to sustain in their livelihood. After a while they got chased away, and all of them fled.



Photo 1: Two houses in Coop: a shop and a resting place where loggers on their way to Minuma gratefully take their rests.

The village is settled on a mountain ridge, which means a nice view from Coop over the area. People tell that when they first arrived, it was ‘like a desert’ and ‘useless land’ and that the government thought the same of the area. In the village there is no forest left indeed. Lots of grassland and agriculture lands mark Coop. People started planting Gmelina trees (paper trees) right away to have more shade in the dry and dusty landscape. Some of the trees were provided by the government, but nowadays people plant the seeds of the already existing trees, or don’t plant the trees at all because they are besides bringing shade not very useful. Banana trees are getting more popular again after a banana virus years ago. The Gmelina planting is the only project of the government (or any other organization) in Coop we heard of. They haven’t visited Coop though, and

some people are not even aware of the project. Most people know they should not slash-and-burn, or should at least replant the *Gmelina* trees in and around Coop. Just few of them do so.

The climate of Coop differs from the lower parts of the area. At night and especially in the morning it can get chilly; around 20° C. During the day the temperature can reach above 30° C. In the rain season, which takes place in August and September, lots of rain can fall in Coop. In September and November typhoons strike the area. In the dry season, which takes place in from March till May, almost no rain falls down in Coop. During the rest of the year it rains now and then in the afternoon.

Most people moved to Coop between 1985 and 2003 from several areas, mostly Ifugao province, Cauayan, Ilagan and Vizcaya. Their reasons to move to Coop were the recommendation of friends and family; there would be free land and work available for them. Some women moved to Coop because their husband lived there.

Most of the inhabitants moved first to other villages in their former area or to neighbor villages like Villa Imelda and Pulang Lupa before moving to Coop. Their reasons to move away from their former area were the lack of work and livelihood there.

None of the villagers has a certificate or land claim, but all of them 'possess' land, varying between 1 and 5 hectares and a single one owns about 20 hectares. Slash-and-burn is very popular, although people know it destroys the little forest that is left. The common crops are rice, white and yellow corn, bananas, citrus, *camote*, *gabi* and cassava. Most of it is just used as food for the family, but in good seasons they sell it on the market of Ilagan. Most people use herbicides, pesticides and/or fertilizer to protect their crops. None of them had any education about how to tenure their lands, but they were taught how to do so by other farmers in the area.

Most of the farmers plant fruit trees and small crops like cassava and *gabi* around their agriculture fields for protection and as supplementary food.

Almost none of the inhabitants of Coop lends money or knows about micro-credits. Only at the time of emergency some people lend money from friends and family, and pay back through work or money.

Some years ago a banana virus called *tungro* struck the area. Many trees died or failed to bear fruit and several families left Coop to find a new place to start over again, four of them moved to Dendro. This migration left about one third of the houses in Coop empty. So the population was shrinking instead of growing.

There are about thirteen inhabited houses and six deserted ones. They are made of bamboo, wooden planks with a roof made of cogon grass or galvanized iron plates. The recently build houses are almost completely made of big wooden planks. The houses differ in size and some households have an extra open house for resting or washing. There is no electricity, but some people do own a cell phone that they recharge when they go to the market or to Bintacan. There is a good signal for cell phones in Coop.

There is one little church that only is used on Sunday morning. The total population is about 35 persons, consisting of about 14 men, 11 women, and around 10 children. It's hard to estimate the exact number of people because there is a lot of movement in Coop. Not only the children who are send to school in other areas that come back now and then and husbands that leave Coop for weeks to do logging trips make it difficult to count the total population. Also the constant flow of people of other villages in the area to Coop make the village look a lot more inhabited then it actually is.

Especially at the houses that contain the shops are constantly more people than there actually live. Many of the water loggers are friends of the families and they easily stay a week, sleeping in and around the houses and eating together with the villagers. Many of the youngsters that roam around in Coop are actually not living there, but it does change the impression of the village. Of the people hanging around in the evening together, at least half of them are not from Coop. This group of people certainly has a big influence on how Coop appears.

Most of the actual inhabitants of Coop speak Tagalog and many of them also speak Ifugao or Ilocano. They all know each other by name and even a big part of Coop is related. People hang around at each others houses and there are rarely problems. Only some people keep distance of 'the hunter', a man living alone with some sons, known for his hunting and his solitary life.

There is one little half-open church in Coop, made of bamboo, wood and a roof of grass. The religion of the villagers is Spiritist, some see themselves as Catholic and Evangelical. Every Sunday Carlos Ananayo and Felipe Pogung prepared a service, and most people attend it. Religion plays a big role in the lives of people. Most of the villagers pray and go to church when they or their children fall ill and hope for recover. When it doesn't work they go to a hospital or the medical centre in Marana 1st.

The old Ifugao beliefs are almost completely gone. People still remember what their forefathers did and believed, but it's certainly not in practice anymore. Their current religion seems to have replaced them. Sometimes it occurs that people are afraid for ghosts or bad luck, but they don't perform rituals anymore. Instead they pray to God that the spirits go away, and because these spirits are afraid of God they are not present anymore.

Once the building was not only used as a church, but also as a school and daycare for children, but some years ago the teacher left the village. Nowadays there is no option for children to get education in Coop. Some of them don't get education at all, some others live permanently at their grandparents' house to get education in that town or village, and some children get home from Friday till Sunday and spend the rest of the week at their school.

Most of the adults and youngsters have elementary school, but no higher education. They are not planning to get more education and their future plans mostly lay in agriculture work and logging. Some children of the people in Coop did manage to finish high school and even college but all of them live in bigger towns in other parts of Isabela.

Since one year Coop can be reached by car, because the mining company in the area made a wide road all the way into Coop. Although this road made the travel towards Bintacan possible by jeepneys, tricycles and cars, people barely use them and walk instead down the road, sometimes joined by their carabaos. The walk down to the main road where jeepneys drive back and forth to Bintacan is about 45 minutes. The villagers from Coop do their groceries mostly in Ilagan, the biggest town in the area. It takes a one hour drive from Bintacan to Ilagan by jeepney. Most people go once or twice a month, but the owners of the two little *sari-sari* stores in the village go every week a whole day to do their bigger groceries, and bring it up to Coop by carabao and sometimes by jeepney, which costs them PhP. 200 extra. These stores supply the (unexpected) needs of villagers and the needs of the water loggers that pass trough Coop in order to get to the

logging area named Minuma. Almost every morning groups of young men, mostly from San Mariano and San Antonio, stop by to have a rest and a drink before continuing their far walk towards the forest which takes five to seven hours depending on where they have build their tents. Now and then a jeepney drives up to Coop jammed with water loggers who decided to start their hike in Coop. Some loggers made an estimation of how many people are active in the area, which would be around 60 men. There is also some carabao logging apparent, but on a much smaller scale. This takes places not all the way in Minuma like the water logging, but in the area closer to the village. The roads towards Minuma are nevertheless shaped by the carabao logging.

Also inhabitants of Coop join the water logging trips into the forest of Minuma. Some youngsters and men join together with men of other villages to leave Coop for mostly 10 days, twice a month. They earn about PhP. 2,000 to 3,000 every logging trip, which is way more then what they can earn by farming. They all know that it destroys the forest, and most of them would like to get an equal income in a different way, but that's not possible now. The people from Coop are not at all involved in the mining activities in the area and are also not planning to do that.



Photo 2: Water logging in Minuma. A young man drops his logs down the waterfall after detaching the planks from each other.

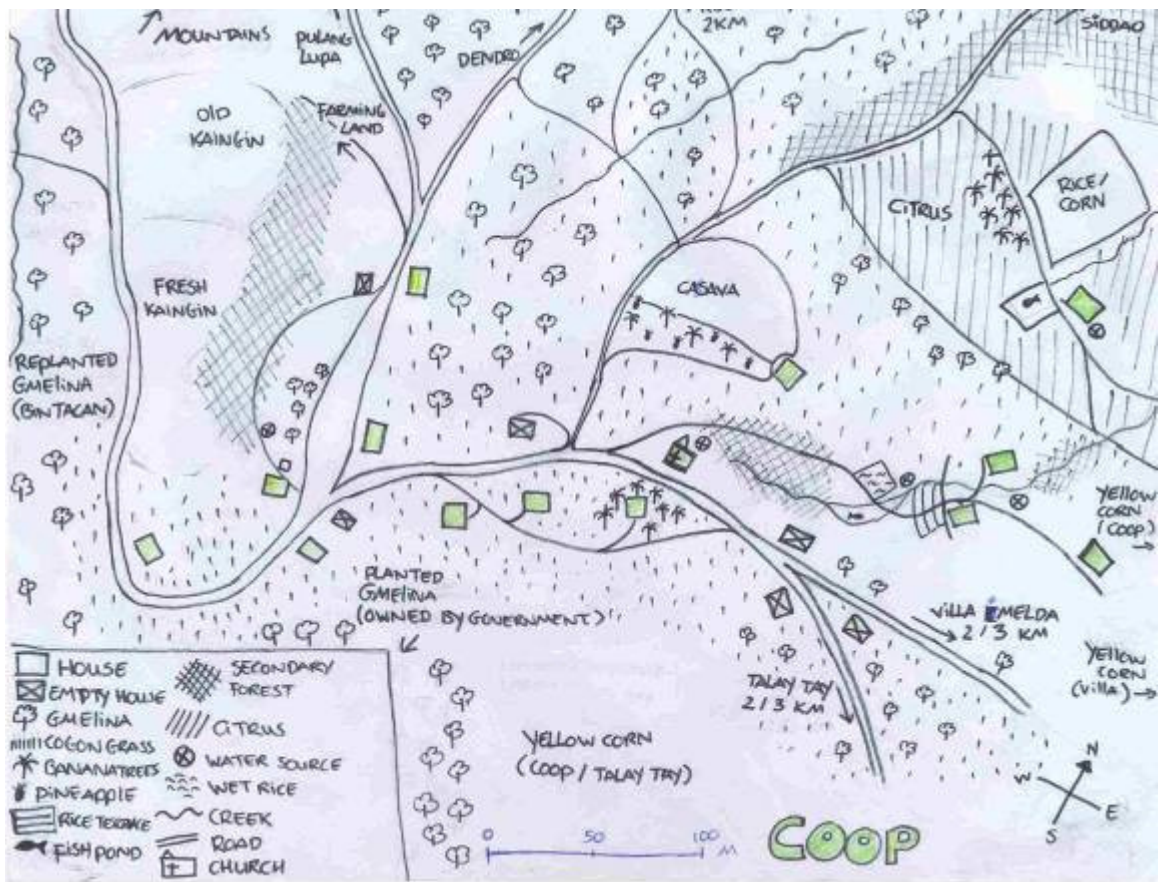
There are big differences between people when it comes to fishing and hunting. Most people don't fish or hunt at all. A smaller part either fishes or hunts, and few do both. When they hunt they leave Coop towards Minuma and they go sometimes all the way up there. They mostly catch wild pig, wild chicken and other birds and the two different kinds of monkey present in that area. They mostly use an air gun and sometimes a *silo*: a

net were the animals run or fly into and get stuck. They also dig explosives in the ground so wild pigs blow their head off when they dig and eat it. Most people believe there are no restraints on hunting.

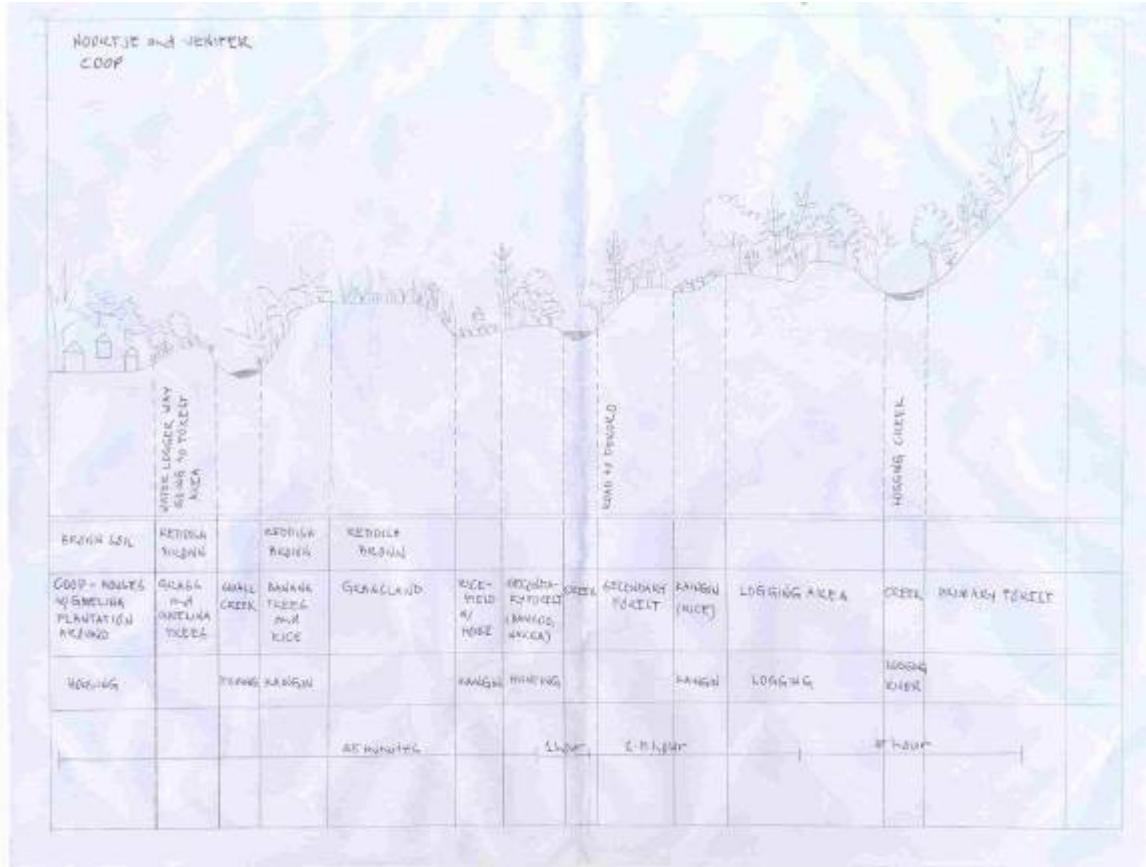
One of the villagers has a fishing pond where he breeds tilapia. Some of the other villagers fish, but they have to go to Dendro or even further away to find a good river to fish. The common materials to fish are the electrolyte sticks with the big battery and a net to catch the paralyzed fish with. A single villager uses a fishing net to catch the fish. They all know that dynamite and electrolyte fishing is illegal, but they use the last method without any problems.

Non-timber forest products (NTFPs) are not very often collected by the inhabitants of Coop. The only fruits they get are rattan and rambutan when they see ripe ones during their trips to the mountains for firewood, logging, fishing or hunting. They don't make specific trips to collect NTFPs. We noticed that almost every house also had a rack with orchids and other plants from the forest. People collect it because these plants are only found in the forests and are therefore very valuable. Nevertheless people don't sell them on the market but give them away to friends, family and guests.

Map



Transect



2.14. Casala

Sanne van der Hout and Celestino T Reyes Jr.

History and demography

The barangay of Casala consists of three sitios: an upper and a lower part and the sitio of Namakalan. Altogether, the barangay counts 275 households, with a total population of 1092 people. Upper Casala alone, the sitio on which our research was focused, already consists of more than 90 households. Around 50 of these households are people who are from Ifugao Province. The other inhabitants of Upper Casala are Ilocanos and Ybanags. At last, there are also two Agta families that have built a house on the margins of the sitio. Most people in Upper Casala are Catholics. Besides, there is a church for the Born-Again as well as for the Evangelicals.

Around 1950, the barangay of Casala did not yet exist: the whole area was covered with virgin forest. The parents of our host family were the first who left Ifugao province to settle in Lower Casala. Our host father, *manung* Ligmayo, settled in Lower Casala in 1960. His wife, *manang* Rosa, followed him after their marriage in 1968. Most Ifugao families that choose to migrate to Casala, are from Lagawe. Some others were born in Banaue, Lamut and Kyangan. The Ifugao were not the only ones who settled in Casala during the 1960s: there were also Ilocanos and Ybanag that left their native land, hoping to create a better life in the barangay. The main reason why all those different groups decided to settle in Casala, was the ‘stomach problem’, as our hostess *manang* Rosa used to say. In their own territories, the Ifugao, Ilocanos and Ybanag had no land to cultivate. Walking around in the barangay of Casala today, shows that the migrants have been very successful in treating the land: the closest virgin forest is in Diudip, half a day hiking from Casala. Our respondents told us that a Chinese logging company used to be very active in cutting trees. Some of our respondents have worked for this company. Today, there are only small-scale logging practices.

Most people that live in Casala today were born in the barangay. There is still a migration stream of Ifugao, Ilocano’s and Ybanag that leave their native land to settle in one of the sitios of Casala. Most people have settled in Casala with their families. Others came all alone and got married here. Some of the Ifugao that settled in the barangay have returned to their indigenous lands. The main reason of leaving Casala, was the absence of schools during the first years of its existence. Nowadays, there are three primary school buildings in the barangay.

Governmental and NGO projects

A few years ago, the government has constructed a road that both passes through Upper and Lower Casala. Every two days, a truck leaves from Upper Casala to arrive a few hours later in the centre of San Mariano. In Lower Casala, there are not only trucks that go in the direction of San Mariano, but also some that are headed for Del Pilar. During rainy season, the roads are very muddy. After very heavy rain, the roads are not even accessible, because the water level of the river is too high. With respect to constructing

practices in general, most of the villagers of Upper Casala are more positive about the projects of Plan International than about the projects organised by the government. Thanks to Plan International, the villagers from Upper Casala are in the possession of a good water system: Plan has not only created a water source, but has also constructed pumps and hoses. The sitio struggles nevertheless still with water shortages, especially during dry season. According to many of the respondents, this lack of water is the main problem the villagers are confronted with. They really don't know how to solve it. Besides taking care of the water system, Plan International has organised tree-planting projects and has put up different buildings, like a school and a health centre.

The government has organised some projects to improve the livelihood of the inhabitants of Upper Casala as well: two of the three elementary school buildings are constructed by the government. Other projects of the government are the creation of a barangay hall and the construction of a pavement to dry the harvest.

Health

A great part of the inhabitants of Upper Casala is very young: every year, a lot of children are born. Before, many children died as a consequence of diarrhea, measles and malaria. Fortunately, the government has started a couple of years ago with the provision of medicines and vaccinations to prevent the children of becoming ill. There are still shortages, but parents also have their own responsibility, according to the villagers. The inhabitants are aware of family planning and use contraceptives such as condoms and the pill. Plan International has built a health centre in Upper Casala, but there are no doctors and midwives who are present permanently. The midwife is working in the sitio for two days a month; the doctor brings a visit only once a year.

Incomes

Most people in Upper Casala can fulfil their basic needs. They are nevertheless relatively poor. The villagers used to have electricity, but they are no longer able to pay for it. Some households have an antenna, but since there is no electricity anymore, it has become useless. Most villagers spend PhP. 2,000 a month on food. Since they are not able to make a living by farming only, many families are still involved in logging practices. There used to be collection points for logging. Today, they do not exist anymore, since logging is prohibited. Another source of income is the soldier camp close to the sitio: many of the men of Upper Casala work there as a guard. They try to protect the villagers against the NPA. Our host father, who has been barangay captain for five years, has been threatened by the NPA a couple of years ago: the NPA has tried to kidnap and to kill him in the period that he was still barangay captain.

Since a few years, the villagers can borrow money at the farmers association. They can become members of this association by paying a deposit. Some farmers also borrow money from their neighbors. Many villagers own cell-phones. The sitio has a good coverage, especially in the higher parts.

Physical appearance

Most houses in Upper Casala are made of wood, bamboo, rattan and cogon. During the last couple of years, more and more roofs, especially those of churches, are built with sheets of corrugated material, because this gives a better protection against typhoons. The barangay hall and the health centre are made of concrete. Upper Casala has a variety of trees (e.g. acacia, *hauili*, gmelina, citrus, mango, banana, star apple) and crops (e.g. *gabi*, string-beans, eggplant, *calabasa*). Our host family owns a canteen, where the villagers can buy candies, cookies, peanuts, soft drinks and beers. At the same time, the canteen acts as a meeting place: during the night, the villagers like to meet each other there to have a nice chat with each another.

Farming, hunting and fishing

Most villagers grow irrigated rice and corn. In addition, some grow upland rice, banana, pineapple and peanuts. The most important product that is sold on the market is corn: of each harvest, only two sacks are reserved for the animals. With respect to upland and irrigated rice, the main part of the harvest is used as food for the villagers. The sacks that are left are sold on the market. Most rice- and cornfields are in Lower Casala. In Upper Casala, there are only a few fields. The best month to harvest the rice is December, because there is no heavy rain during this month. Corn needs to be harvested in April or May.

Most of the villagers are neither involved in hunting practices, nor in the collection of non-timber forest products. According to the villagers, NTFPs are only collected by the Agta's. Sometimes, the villagers of Upper Casala buy the products, collected by them. Most inhabitants only catch fishes if they are in need of food, for example when the harvest is ruined (again) by a typhoon.

Barangay captain

The barangay captain is chosen by election every three years. Since the present barangay captain is from Ifugao province and lives in Upper Casala, this part of the barangay is nowadays much more influential than Lower Casala and Namakalan. Together with the *kagawad*, his assistant, and the *tanod*, a sort of police officer, the barangay captain is responsible for problems and conflicts that arise in the village: they have to protect the peace and order. The barangay captain regularly follows lectures about farming, using fertilizers and tree planting. He for his part educates the villagers about it.

Conflicts

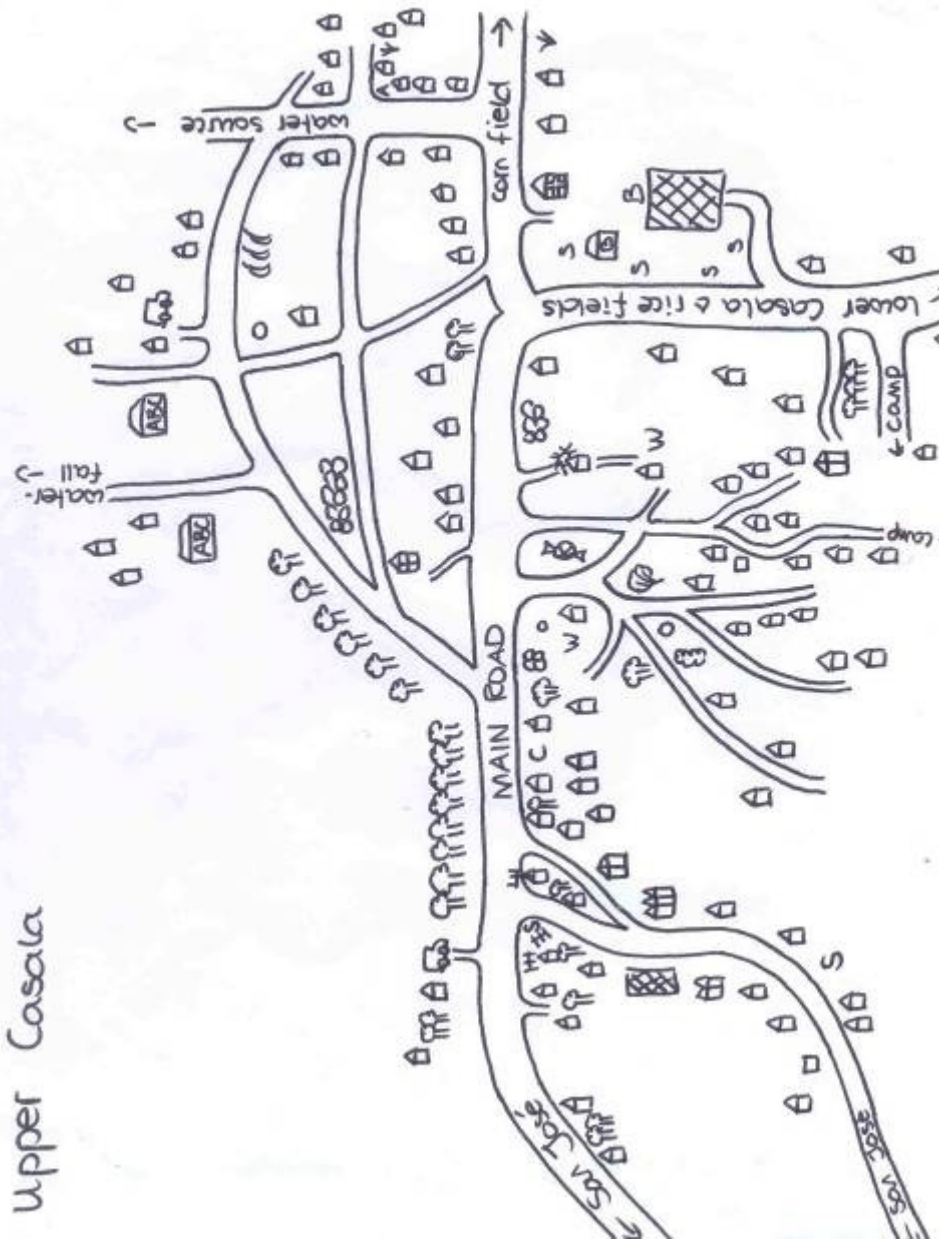
The relation between the inhabitants of Upper and Lower Casala is problematic. In the sixties, all villagers lived in Lower Casala: Upper Casala did not yet exist. There were rivalries between the Ifugao, Ilocano's and Ybanag, because all of them wanted to own the flat land of Lower Casala. The problems were solved by communication: the different groups lived peacefully together. Nowadays, the flat land has become agricultural land, both possessed by people from Upper and Lower Casala. At present, there are some

conflicts between the inhabitants of Upper and Lower Casala. The water source of the people from Upper Casala is damaged by those of Lower Casala out of jealousy. The trees that surrounded the source were cut and the tree plantation was burned. In order to protect the source against pollution, the villagers of Upper Casala have buried the source. Another example that shows the difficult relationship between the villagers of Upper and Lower Casala, is that the oldest son of our host family was killed in Lower Casala.

Future

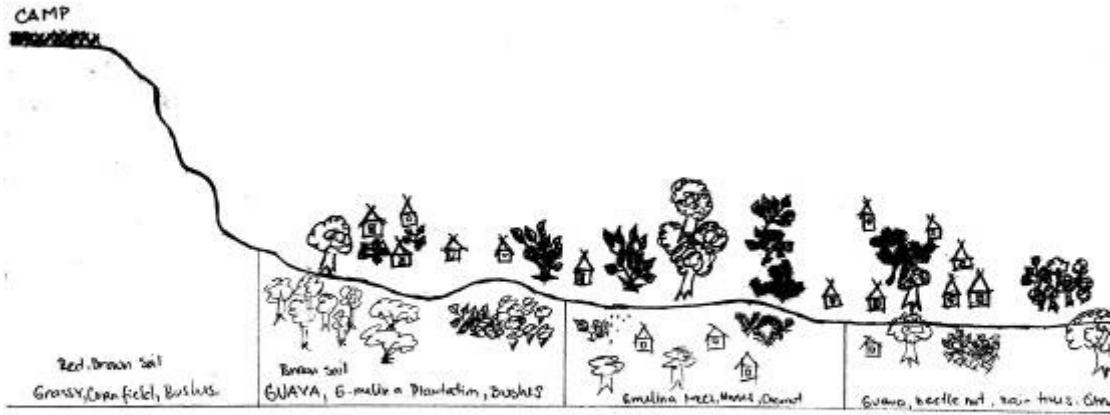
The population of Upper Casala is growing. Besides the large number of children, there are still some young couples that are migrating to Upper Casala from the Ifugao province. In Upper Casala, the possibilities of making a living are much better than in Ifugao province. There are nevertheless also people who leave the sitio. Almost without exception, the educated young ones leave Upper Casala: the possibilities in the barangay do not correspond with their own skills. The educated youngsters prefer to settle in the cities. However, the majority of the younger generation stays in Upper Casala: most families are too poor to send their children to reputable schools. As a consequence of this lack of education, the youngsters do not even have the choice to leave.

Map



- Legend
- | | |
|----------------------------|---------------|
| △ house | ▨ crops field |
| □ house under construction | ▽ corn field |
| ⊕ church | ⊙ tree |
| ⊞ school | A acacia |
| ⊞ barangay hall | C citrus |
| ⊞ clinic | ⊙ narra |
| ⊞ solar system | ⊞ banana |
| ⊞ antenna | ⊞ G. Melina |
| ⊞ car | ⊞ Barara |
| ⊞ pavement | |
| ⊞ fence | |
| ○ water pump | |

Transect



CASALA: CELER & CANIB

2.15. Cinamnama (Dipugpug)

Cynthia Malayao and Linde Linthorst

Cinamnama was formerly known as Dipugpug, but since 1990, the year that Jose Wanol became the new barangay captain, the name of the sitio was changed and named after Jose's native Ifugao name. Dipugpug was the name the Agta, the original inhabitants of the village, gave to the place, but since all the Agta moved out, it felt more appropriate to rename it in an Ifugao name, especially now that it is only Ifugao living there.



Photo 1: Susong Dalaga, typical view from the village Cinamnama

The Ifugao in Cinamnama have their roots in different places in Ifugao province, but the majority of the people are Ayangan (specific clan from Kiangan region). Most of them migrated directly with family, friends and neighbors from Ifugao, but some migrated first to neighboring barangays like Casala. Reasons for their migration were almost always the search for new livelihoods since there wasn't enough space anymore in the place they came from (push factors). Reasons to come to Cinamnama were always the abundance of space and the fact that relatives or friends were already living there (pull factors). The first Ifugao came to Cinamnama (in that time still Dipugpug) around 1960 (in those days

logging companies were still very active, that is why many villagers were loggers once) since then there has been a steady increase in inhabitants. The ratio of men and women is more or less 50/50. They all speak Ifugao and Ilocano and some even speak Tagalog and English. They are all Christians, but the church they join differs.

In Cinamnama there are 54 households and 257 people. Since only April this year the sitio has an all-weather road (a government funded project), which solved a lot of infrastructure problems (for example transport of harvested crops). The barangay captain requested the people to build their houses all quite close together for practical reasons, so for almost all of the people their house is only a few meters from the road (only around 10 households are further, because they are situated in the forest zone). Cinamnama is 27 kilometers away from the center of San Mariano. This is where the people go to on Sunday to buy and sell products.

Concerning landownership the people of Cinamnama were rewarded with a SIFMA contract 5 years ago. The SIFMA contract is valid for 25 years and then again for renewable for another 25 years. In exchange the people have to plant trees, fruit trees and certain crops. However due to a perceived lack of monitoring by the DENR, the people do not always feel obliged to follow these rules anymore. For example some people do not plant trees anymore, because they feel the trees will only get damaged due to typhoons or cause damage problems to the house or crops during typhoons when they fall over.

The average income of the people in Cinamnama is very low. It shows in the way that they often can't send their children to college. It is possible for all children to go to elementary and high school, because there is almost no fee. Both elementary and high school are not present in Cinamnama, so the children usually walk each day to Del Pilar, the barangay the sitio Cinamnama is a part from (there is no daily transport facility to Del Pilar, only sometimes on request). A daycare center used to be present in Cinamnama, but since there are too few children, the daycare center had to be closed. That is why the smallest children usually stay all week in Del Pilar going to the daycare center there, only to go home to Cinamnama during the weekends.

Of the 54 houses only 5 are made of concrete, the rest is made of wood, or a mix of wood and bamboo. The roofs are usually made of wood or galvanized iron, since the old roofs made of cogon were too prone to damage from typhoons.

Almost every family in Cinamnama gets their main income from farming, with irrigated rice as their main crop (planted since 6 or 7 years ago). Some have an income on the side, for example from logging or a small store. Although you constantly hear the noise of chainsaws coming from the forest, there are only few loggers living in Cinamnama. Most loggers, whom are working in the nearby forest, come from Del Pilar Centro or the center of San Mariano. People also fish, hunt and sometimes collect non-timber forest products (NTFPs), but only for personal use and only when they have the time.

There are still some problems that are being worked on this moment. For example there is the drinking water problem. At the moment many people have to fetch their drinking water or get it through a constantly running water tube, unfortunately this water is not always safe, that is why the goal for this year is to provide every house with safe drinking water through metal tubes directly from the source (without open places where dirt can enter the water). At the moment there is also work in progress to get a drug store

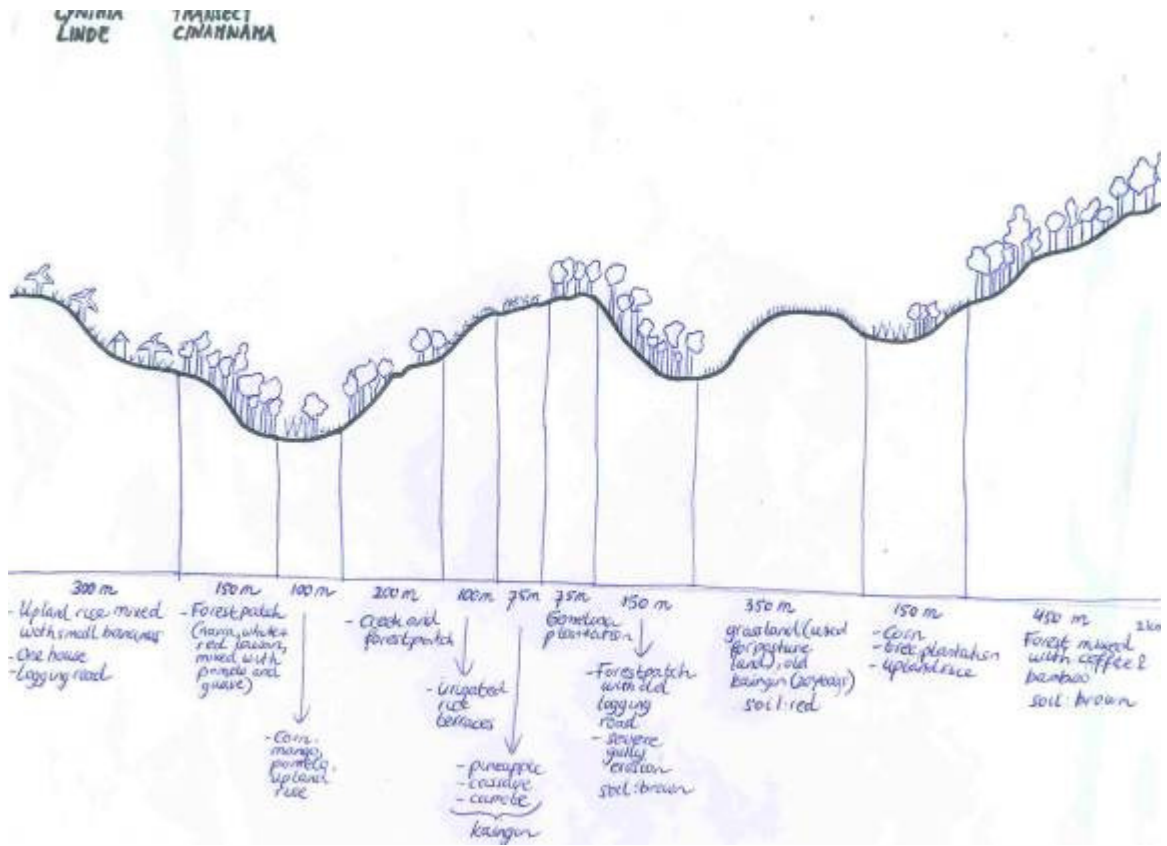
in Cinamnama for the necessary medicines and health support. In Cinamnama there is no electricity, but apparently the need for electricity is not very high still, because it's not something that is being worked on this moment. In Cinamnama there is GSM coverage.

Concerning future plans for the development of the environment there is one plan in the running (unfortunately it is not known by the majority of the people in Cinamnama). Barangay Del Pilar has reserved 497 hectares of Cinamnama for reforestation. All trees are going to be placed around the watershed, because their main concern is for irrigation water for the rice.

Map



Transect



Chapter 3: Capita selecta

3.1. Migration history

Jesse Bruins

Nine years ago, in 1998, Gerhard van den Top wrote on several topics in the Sierra Madre. One of his topics was the migration of Cordilleran people into the Sierra Madre. He named them forest migrants, because at the time most of the area they were migrating to was forestlands. The migrants have several similarities, such as their way of getting a livelihood. On the other hand the migrant communities are heterogeneous internally as well as from one to another (1998: 98). Van den Top made a typology of three kinds of migrants, based on time of arrival, motives for migration and the present sources of income. This was the basis for the research on the migration history in this project.

The first type he described was that of the pioneer. The pioneer came to the Sierra Madre in the 1950s and 1960s. The area was considered to be open for exploitation, and the prospects of good agricultural land, and the ability to make the first choice made it attractive for the pioneer to migrate. They came mostly from the Cordillera and the lowlands of Region 02. With the start of the logging in the 1960s some pioneers found a way to profit from their position in the Sierra Madre, either by utilizing company equipment or indirectly by providing workers with food through *sari sari* shops. The wealth that they were able to obtain from these practices, and the fact that they arrived first in the area, had as a consequence that these migrants can today be found in either elective or leadership positions in the migrant towns (1998: 100).

The second type is that of the follower. Lured by the stories of the pioneers, the follower was drawn into the area in search for a better livelihood. The main place of origin of these migrants, were the lowlands of Region 02, Ifugao and other logging regions. This started around 1965, and continued until 1990. They were mainly involved in logging, and slash-and-burn farming (*kaingin*). The *kaingin* was mainly taking place in the seasons that logging could not provide for a good source of income. After logging could no longer provide enough income, *kaingin* making became a more important source for livelihood. The best fields already being occupied by the pioneers, the followers obtained the second-best fields (1998: 101-2).

The third profile is that of the newcomer. The newcomer is the most diverse group in terms of social and cultural background. They mostly came from Ifugao and the lowlands of Region 02. Just as the follower they were lured by a better livelihood, but also forced to leave because of the growing population, and decreasing amount of available land in the home province. Due to their late arrival, the newcomers moved deeper into the forest in search for good land.

Migration into the Sierra Madre

Most of the picture taken by van den Top corresponds with the data gathered today. Following van den Top's typology, the people that were interviewed belong to the following groups and we came to the following percentages:

Time	Typology	Percentage	Frequency n=135
1950-1965	Pioneers	3 %	4
1966-1990	Followers	23 %	30
1991-2001	Newcomers	39 %	54
Post 2002	Late newcomers	28,5 %	38
-	Born in the Sierra Madre	5%	7

Table 1: Year of arrival

In this table it can be seen that after van den Top's research was done, the newcomer wave is actually increasing. Take note that the newcomer category is a period of ten years, while the late newcomers category is only five years. The percentage of late comers is however already $\frac{3}{4}$ in the last five years of the percentage of people migrating in the 10 years before 2002. It must be made explicit that this is not a new characteristic group, but the post 2002 slot is made to show the increase in newcomers during the last five years. Concerning the fact that migrations within the Sierra Madre are not taken into account, the categories of van der Top can still be used because they concern the claims on land and land use patterns. These percentages reflect the time of arrival in the current location, migration patterns within the Sierra Madre are not taken into account. When asked if the people had migrated before they went to their current location the following answers were given:

Did you migrate elsewhere before coming here?	Percentage	Frequency n=135
Yes, inside Isabela	19 %	26
Yes, outside Isabela	32 %	42
No, I came here directly	49 %	67

Table 2: Migration patterns

This needs to be related to the birthplace of the respondents to put things into perspective.

Place of birth	Percentage	Frequency n=133
Isabela state	14 %	18
Outside Isabela State	86 %	115

Table 3: Place of birth

Though I did not get the exact percentage, a common migration pattern for people from Isabela is to move from a larger town, to a small village where there is more land for a livelihood. Thus even inside Isabela people are migrating towards the mountains in search of land. The people coming from outside Isabela were mostly Ifugao due to the

focus of this study. But other main groups were Tinguians, Ybanag, Ilocano and people from Nueva Vizcaya. Looking at van den Top's categories again, he stated that mainly the pioneers came from the Cordillera and the later groups from the lowlands of Region 02. But our data suggests that there are still people moving from different parts of the Cordillera to the NSMNP. Because the focus of this study on Ifugao and the selection of villages derived from that, I cannot say anything about the extent to which the migration from other Cordillera regions is taking place.

Migration motives

Two questions that were asked to the respondents are: (1) why did you leave where you came from? And (2) why did you come to this specific spot (in the Sierra Madre)? The answer to the first question is as follows:

Why did you leave?	Percentage	Frequency n= 134
Land shortage in home province	46 %	62
No job in home province	22 %	30
Following family members	10 %	14
Government resettlement	9 %	12
Not applicable	6,7 %	9
Living was too expensive	4 %	6
Natural disasters	0,7 %	1

Table 4: Push factors

The most common reason for leaving, or the main pushing factor, is land shortage in the home province. The land shortage has three main causes. The most named in the research was the natural population growth in the Philippines, which often leads to land shortage in a certain location. Second, more mouths have to be fed from the same amount of land, and this can cause friction if the harvests do not increase also. A third reason, which was mentioned amongst Ifugao, was that when their children get married, the parents their land is passed on to the children. If the parents do not have enough land left, they are the ones actually migrating to the Sierra Madre.

A second push factor is the lack of a job. People came looking in the Sierra Madre for a job as for example a teacher, nurse or priest, and others changed their profession to farming after migrating.

A third smaller, but maybe exceptional reason was the government resettlement which took place either because of the construction of a dam or because of NPA insurgency in 1989 in Banig which made governor Dy move the people to a safer place: Dy Abra.

Why did you go here?	Percentage	Frequency n=134
Enough open land in the Sierra Madre	51,9 %	70
Followed their family	19,3 %	26
To obtain a job	11,1 %	15
There is enough fertile land	6,7 %	9
Born in the Sierra Madre	4,4 %	6
Distance to facilities (market, schools, etc.)	4,4 %	6
Resettled by the government	1,5 %	2

Table 5: Pull factors

As van den Top mentioned, the main reason for coming to the Sierra Madre were land issues. Almost 60 % of the respondents went to the Sierra Madre for either free land, or more fertile land. The difference being that poor people in general migrate to places where there is no need to buy fertilizer, while people with money to buy fertilizer can settle in less fertile areas. Due to the population growth, new centers are emerging in the area, which draw in people with certain professions such as nurses and teachers. Few people consider the distance to facilities decisive in their migration destination choice. Though there is no data gathered on what people think of as a good distance, many people lived in a very remote area from certain facilities as a market or hospital. In my research area Balesi for example it was three hours hiking and a one hour jeepney drive to the nearest hospital.

Another important aspect of the migration into the Sierra Madre is the composition of the group in which one migrates. The answers to the question ‘with whom did you migrate?’ gave the following answers:

Relation	Percentage	Frequency n=172
With spouse	25,8 %	47
With children	16,5 %	30
With other family members	16,5 %	30
With parents	14,3 %	26
With friends	11,5 %	21
Migrated alone	7,1 %	13
With neighbors	4,9 %	9
Not applicable	3,3 %	6

Table 6: Migrant group composition (multiple answers possible)

With this table it is easy to identify certain migrants. A quarter takes their spouse to the place of migration. The ‘with children’ and ‘with parents’ headings are related in the sense that it is the same group ‘with the family’, seen from two different perspectives in social relations and perhaps time. The groups of people that migrated alone or with

friends and neighbors are often migrants that move to a new area, without their family. They will try to find a source of livelihood, mostly by making kaingin, and once they succeed they go back to get the rest of their family.

Livelihoods

The following table will give an illustration of the way migrants earned a living before they migrated to Isabela.

Livelihood pre-migration	Percentage	Frequency n=135
Farming	76,3 %	103
Job	10,3 %	14
Unemployed	5,9 %	8
Logging	1,5 %	2
Church allowance	0,7 %	1
Not applicable (born in Isabela)	5,2 %	7

Table 7: Livelihoods before migration

From this table we can derive that most migrants are still engaged in the same line of work as before migration. Most of our respondents were also farmers before migration. A lack or loss of skills can however occur due to the fact that the terrain, soil and crops might be different from the migrants their home province. Basic farming skills however, can be assumed to be present.

Intermarriage

A second issue related to the previous section is intermarriage. Intermarriage with local groups can help to solve a lack of farming skills. By marrying another group, there is in a way, a knowledge transfer taking place. The following table represents the marriage patterns our respondents have.

Spouse was born in:	Percentage	Frequency n=134
Both are born outside Isabela	52 %	70
Only spouse is born outside Isabela	19 %	25
Single	16 %	21
Only spouse is born inside Isabela	7 %	10
Both are born inside Isabela	6 %	8

Table 8: Place of birth of spouse

Though from this we cannot learn much about the actual skill transfers, it does illustrate that more than half is married with people not from Isabela. The most common pattern is

that people find a spouse that is coming from the same home province. Further research needs to be done to find out on what basis (i.e. clan, village, church, etc.) this is taking place. A little more than one quarter actually intermarries with people from outside Isabela. This can be seen as one of the indicators concerning integration of migrant communities amongst themselves and with the people of Isabela.

Sketch of a migrant community

During our research period I was in Dy Abra. All the above situations actually occurred in Dy Abra. The first migrants moved into Banig, a sitio 1.5 hours hiking from Dy Abra in the 1950s. Stories about the first migrants who came looking for new land to clear around Banig and their followers, who are mostly relatives, are still known amongst the people. Some were involved in logging in the 1960s. They lived there until 1989 when they were resettled to Dy Abra by the government. The reason for this resettlement was the fact that it became too dangerous in Banig due to the NPA insurgency. A more detailed report can be found in either Ypma (1994) or van der Top (1998) about Banig and Dy Abra. During our stay we found many reports of people marrying into the mostly Tinguian community from Ybanag, Ilocano and other descendants.

Conclusion

This research used the categories defined by van der Top. Most of the observations by van der Top are still correct. Interestingly the migration seems to be taking up pace in the most recent years. About half of the migrants roamed around before settling in their current location, and the other half migrated directly. The main push and pull factors amongst these migrants are issues related to land shortage and availability, and the following of family members who migrated earlier. The composition of the group in which people migrate is very diverse although most people migrate with some kind of relative or relation.

The lack or loss of skill amongst migrants might be present, but most migrants who came to Isabela still have the same profession as they had before migration. Intermarriage is happening amongst the migrants, and is very common in some villages.

References

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3.2. The relationship between ancestral land in Ifugao and the Ifugao in Isabela

Marco van Beest

Introduction

The villages in Isabela where we did our research were mostly villages with migrants from the Cordillera, and the very majority of these migrants were Ifugao. The subject I will go more in depth is their relationship with their ancestral land: Ifugao province.

People are changing and adapting to their environment, but also are very much committed to their roots. I want to know what their connection with their ancestral land is and how they are adapted to this environment in Isabela. I will focus more on the first interest, but also their adaptation to their new lands here in Isabela.

Methods

I used questions as my research method:

- Where is your spouse born? (question 11)
- Where are your children born? (question 10)
- Where is your Spouse living? (question 7)
- Do you own land in the place you come from? (19)
- How often do you go back to Ifugao province? (20)
- Do you want to go back to your ancestral land? (21)

The results of these questions can give a basic idea of what the respondents see as their ancestral lands, their ties with their place of origin and how this will be in the coming future.

I will only focus on the Ifugao respondents, who are born in Ifugao province (98 in total) and migrated to Isabela. The other respondents are not included, so that I can say more about the first generation migrants and their ties with their place of origin.

I think this is a relevant topic for the main subject indigenous people and protected area management, because these migrants are mostly living in the buffer zone of the NSMNP, which is affecting the management of this protected area.

Background: motives of the migrants

The very majority of the respondent gave as the most important reason to leave their homeland that they had a lack of land, a lack of income and a lack of food, namely 85.3 %. They were not able to sustain the needs of their family in Ifugao province, which is the main push factor to leave the province.

The main reasons mentioned by our respondents to come to the uplands of Isabela is the amount of land that is still open for cultivation, the opportunity to have better incomes than in Ifugao province. About 85% of the respondents came to province to Isabela province in search for land, better incomes or following their family (mostly a

combination between these factors). The very majority of our respondents are farmers, also before they came to Isabela province. The problem of most of them was that they had not enough land available to sustain the needs of their family, or no land at all. That makes clear that only the people who are not able to sustain in their needs are leaving the province. There are still quite much people living in the uplands in Isabela that own land at their ancestral land (see table). Considering a few exceptions the land they own in Ifugao is taken care by their parents, brothers, sisters or children. The area they are cultivating there is too small to make a living for the whole family.

In the villages these migrants went to, most of them, already new friends or relatives from Ifugao province who migrated to that village and told them it was a good place to stay, which is causing chain migration, and the number of migrants from Ifugao is increasing, because of the enormous amount of land that is vacant for making *kaingin*.

My own experiences about their motives where that the villagers from Ampoy not only wanted to live sufficient, but also have enough money to send their children to school, for a better future for them.

Education

17.4 % of the daughters and 13.2 % of the sons of our respondent send their children to school in Ifugao province. The parents of the scholars in Ampoy preferred to send their children to school in Ifugao or Quirino, because the quality of education is better and the teacher are better, according to them. In the other villages this seemed also to be the case, although most of the respondents send also their children to school in Isabela, closer to them. It seemed in Ampoy the case that there are relatives still living in Ifugao province, who take care of the children.

Healthcare

34% of our respondents that prefers to go to hospital in Ifugao province. The most mentioned reasons were that the doctors are taking care of them, the doctors are more professional and that they were familiar with the doctors their. My personal experiences on this case are that my own village was not satisfied with the hospitals in Isabela. According to them the doctors did not take care of the Ifugao as much as they take care of the richer people in Isabela, most mentioned the Ilocano. The Ifugao in Isabela don't have a lot of money and therefore they said to be discriminated in hospitals. They had to pay before they could consult the doctor and they did not trust the doctors here. This was also what some of my fellow students told me, also their respondents were telling these experiences to them.

Landownership in Ifugao province

The majority of the Ifugao in Isabela had land shortage or no land at all in Ifugao province. They were already tenant farmers or they sold their land, although there were also some people that were not a farmer in the place they came from.

There are still a lot of Ifugao that own land in their place of origin. The most mentioned reason was inherited land from their parents. This land was never sufficient

enough to make a living, especially to plant cash crops, because the land they owned was not big enough to plant more crops than irrigated rice. Nobody mentioned that they had a good livelihood in their place of origin. Except a few exceptions there were relatives in Ifugao province that took care of the land. This could be a sign of strong ties between the Ifugao in Isabela and their place of origin: These people did not sell the land and the land is not for rent. Mostly these were the parents, the brothers and the sisters or the children that take care of the land.

Identity and language

What I observed is that the Ifugao people from the different municipalities in Ifugao province, clustered here in Isabela. For example in my village from every household there was at least one parent came from Hungduan, Ifugao province. Almost all the villagers knew already somebody who settled in the village before they migrated there.

The identity of the Ifugao in Ampoy was “full blood Ifugao” and they felt 100% Ifugao. Although they are not living in Ifugao province anymore, they did not feel Isabeliño. This was also not the case for the earliest Ifugao settlers in Ampoy, who were living here already for 18 years. They live mostly separated from mainstream society and speak Ifugao dialect with each other and with their children.

Visiting Ifugao province

Most of the respondent went once or twice a year back to Ifugao province. The majority mentioned the following reasons: Visiting relatives, emergency and special occasions, mostly mentioned Christmas, fiestas, burials and weddings. A constraint to go back is the costs of transportation, which makes it not possible for them to go back more often. It is obvious that most of them can only go back for very special occasions. The people can manage here in Isabela to have a sufficient income, at least to survive and some children can go to school. But there is not a lot of money available for them to spend on transportation and other secondary goods.

Willingness to go back

What I can say about the Ifugao in Isabela is that there are very few people that would like to go back. It is very clear that almost all the households are here united with their spouse, only Magansimid is an exception on this rule, but from the rest of the villages at least 70 % of the spouses live here in Isabela (of the Ifugao respondents that were born in Ifugao). In none of the villages the percentage of respondents that are born in Ifugao, is higher than 33 % that would like to return permanently. The percentage of children born in Isabela is still low, but in Casala it is 100 %, which is the oldest Ifugao village and where the second generation of the respondents was all born in Casala. There were four respondents born in Ifugao in Casala, the other 6 are born here in Casala. The respondents didn't want to go back permanently to Ifugao. The percentages of the youngest villages (Tapwakan, Quimalabasa, Pulang Lupa and Coop) are showing that they are also planning to stay here. The landownership in Ifugao province seems to be not really affecting the willingness to go back. The land most people own in Ifugao is not

enough to make a living, what explains the weak correlation between these two indicators.

Village	% of spouses born in Ifugao (*married respondents)	% of children born in Isabela	% of spouses living in Isabela	% of respondents that owns land in Ifugao	% of respondents that would like to go back permanently to Ifugao
Nagbaracalan (n = 10)	80 (n = 10)	40	100	70	20
Magamian (n = 10)	90 (n = 10)	41	88	20	25
Balete (n = 10)	100 (n = 7)	35	72	70	30
Puerta (n = 2)	100 (n = 1)	44	100	0	0
Mamaga (n = 6)	100 (n = 6)	27	100	17	0
Magansimid (n = 9)	67 (n = 6)	0	17	40	11
Balesi (n = 2)	100 (n = 1)	0	100	100	0
Capellan (n=3)	33 (n=1)	44	100	33	0
Tapwakan (n = 8)	100 (n = 6)	30	83	13	17
Pulang Lupa (n = 6)	80 (n = 5)	20	100	0	33
Ampoy (n = 6)	100 (n = 6)	30	100	67	14
Quimalabasa (n = 8)	50 (n = 5)	15	100	0	13
Coop (n = 7)	71 (n = 7)	26	78	40	14
Casala (n = 4)	100 (n = 3)	100	100	25	0
Cinamnama (n = 7)	50 (n = 6)	55	100	25	14

Table 1: Ties with ancestral land

Conclusion

The most important source of livelihood in Ifugao province is farming (De Groot, 1996). Since these people still feel very much Ifugao, but because of a scarcity of land they

created new Ifugao areas outside Ifugao province. Most of the respondents are married with Ifugao and live separated from the mainstream Isabeliños in the uplands. Their identity and their language are very much Ifugao, there are still Ifugao people that send their children to school and go to hospital in Ifugao province. Land ownership is quite common under the respondents, but not sufficient to sustain their needs. My data and my observations show me that the tie is still strong, but there are many constraints that they are forced to make a living somewhere else. Here they are still very much connected, through family ties, marriage with Ifugao, isolated villages from mainstream society in Isabela and their spoken language is still the Ifugao dialect.

Personal experiences

On Saturday the 21st of July I went to a wedding of 2 Ifugao people. This was telling me much about the connection with their ancestral land. They did not go there to marry, but there was an Ifugao wedding in Isabela, with traditional Ifugao music and dance, with the gong. It was surprising me how settled the community here already is. There were people coming from Ifugao province to attend this wedding. There were not only Ifugao, but the very majority of visitors were from Ifugao origin. When we went dancing the Ifugao dancing they were surprised that there were some *Americanos* joining their dance, but they really enjoyed it and we too. I think the connection to their ancestral land is especially strong in their hearts, but these marginal people are not able to make a living there.



Photo 1 and 2: Ifugao dance

References

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3.3. Farming Productivity

Enrico M. Cabaccan

Introduction

Farming is the most important activity for most of the people living in the lowland as well as for the people living in the upland areas of Isabel. It is their main source of livelihood in order to obtain food or cash income through the market. For farmers it is important to increase or maintain the productivity of the farmland.

Different techniques can be applied for this purpose, for example the use of fertilizer, herbicides and pesticides to respectively increase the fertility of the soil, controlling weed and preventing diseases to the crops. Another important issue to farmers is choosing the appropriate seed variety, for example hybrid seeds or traditional ones. These are the some practices that the farmers use to maintain or increase the productivity of the land.

Objective

The purpose of this research topic was to find out which techniques are being employed by the Ifugao immigrants in the Northern Sierra Madre, how large is the area being cultivated by this farming immigrants and how high their farming productivity is.

Methodology

During the interviews with the respondents they were asked the following questions using a questionnaire. (see annex question 27)

- what crops do you grow?
- which variety of these crops do you grow?
- do you own the land you're cultivating?
- how large is the area under cultivation?
- how is your output?
- do you use fertilizer, pesticide and herbicide?
- how many harvests do you have per year?
- what is the purpose of growing these crops? (Food, market, both)
- how large is the area 5 years ago?
- are you planning to expand your farm?

The data gathered is presented in tables per crop. With the data we can make a comparison between the different villages as well as an overall picture of the cultivated crops and area of the villages under research.

Upland rice

Villages	Average land area planted / individual in ha.	(Range in ha)	Average yield per harvest in sacks/ha	(Range in sacks)
Magamian	1.089	(0.25-1.5)	28.15	(18-40)
Balete	0.75	(0.5-1)	20.0	(6-20)
Puerta	0.92	(0.5-1.5)	36.92	(10-100)
Mamaga	0.25	(0-0.25)	18.0	(0-20)
Magansimid	0.44	(0.25-1)	28.5	(2-30)
Banig	1.28	(1-3)	52.22	(20-130)
Capellan	1.0	(0-1)	70	(0-70)
Tapwakan	0.53	(0.25-1)	54.6	(10-80)
Pulang Lupa	0.5	(0-0.5)	55.0	(5-70)
Ampoy	1.5	(1-2)	53.3	(30-50)
Quimalabasa	0.56	(0.25-1)	35.5	(10-30)
Casala	1.0	(0-1)	125	(0-125)
Dipugpug	0.41	(0.25-0.5)	96.0	(20-70)
TOTAL (n=72)	0.79		56.55	

Table 1: upland rice

People in Tapwakan do not use fertilizer. Nobody uses pesticides or herbicides. There is only one harvest per year for upland rice. In general all people say that the area under cultivation is the same as the area cultivated five years ago. Only one person in Casala is engaged in planting rice, he's not using fertilizer, pesticides and herbicides. The area of the farm also cultivated for today is the same with the area five years ago. In Capellan they used fertilizer like *urea*, they also used pesticides and herbicides. Most of them use the crop for market and subsistence. The other villages also follow the same scheme or practices.

Yellow corn

Villages	Average land area planted/individual in ha.	(Range in ha)	Average yield per harvest in sacks/ha	(Range in sacks)
Nagbaracalan	1.52	(0.5-3)	61.09	(10-290)
Magamian	1.0	(0.25-2)	74.44	(10-120)
Balete	0.5	(0-0.5)	40.0	(0-20)
Puerta	0.62	(0.5-1)	80.0	(0-50)
Mamaga	0.75	(0.5-1)	12.0	(8-10)
Magansimid	0.46	(0.25-1)	47.38	(2-60)
Banig	0.93	(0.5-1)	47.6	(3-112)
Capellan	0.25	(0-0.25)	100.0	(0-25)

Tapwakan	0.68	(0.25-1)	36.0	(4-80)
Pulang Lupa	1.0	(0-1)	1.0	(0-1)
Quimalabasa	1.0	(0-1)	50.0	(0-50)
Coop	0.8	(0-0.8)	87.5	(0-70)
Casala	0.58	(0.25-1)	93.71	(30-80)
Dipugpug	0.9	(0.5-1)	64.44	(10-100)
TOTAL (n=60)	0.785		56.80	

Table 2: yellow corn

People in Tapwakan do not use fertilizer. Nobody use pesticide and herbicide. There is only one harvest per year. In general all of the people say that the area in cultivation today is the same with the area cultivated five years ago. People in Ampoy, Pulang Lupa and Magansimid don't use fertilizer either. Nobody of them also uses pesticides and herbicides in the farm. They usually harvest twice a year. The area of cultivation from now is the same with area cultivated five years ago. The crop is usually grown for sale which they use for their other needs. In all the other villages fertilizer, pesticides and herbicides are being used. They harvest twice a year for yellow corn. All of them also say that the area of cultivation right now is the same with the area cultivated five years ago.

Banana

All of the people belongs to twelve villages which is in the table above says that they don't use fertilizer for banana. Nobody of them also use pesticides and herbicides. Most of them have the weekly basis of harvesting (52 times a year). In general all people say that the area under cultivation is the same as the area five years ago. Almost all of the people also use banana for market and that is their purpose of growing it.

Villages	Average land area planted/individual in ha.	(Range in ha)	Average yield per harvest in pieces/ha	(Range in pcs.)
Nagbaracalan	0.8125	(0.5-1.5)	861.5	(100-2,000)
Magamian	0.56	(0.25-1)	1,288.8	(400-1,000)
Balete	0.66	(0.5-1)	1,650	(300-2,000)
Puerta	1.1	(1-1.5)	1,909	(1,000-3,000)
Mamaga	0.75	(0.5-1)	2,000	(1,000-2,000)
Magansimid	0.6875	(0.25-2)	1,927.2	(500-2,000)
Banig	1.25	(0.5-2)	866.6	(500-2,000)
Capellan	0.5	(0-0.5)	2,000	(0-2,000)
Pulang Lupa	0.33	(0.25-0.5)	1,000	(0-1,000)
Ampoy	1.4	(0.5-2.5)	1,826	(2,000-4,000)
Quimalabasa	1.0	(0-1)	1,500	(1,000-2,000)
Dipugpug	1.0	(0-1)	2,000	(0-2,000)
TOTAL (n=55)	0.83		1,569.09	

Table 3: banana

White corn

All of the respondents that belong to the six villages: Tapwakan, Quimalabasa, Pulang Lupa, Balete, Mamaga and Magansimid say that they never used fertilizer as well as pesticides and herbicides on growing their white corn. Some of them harvest once a year and some also harvest twice a year. All of them used white corn for both market and for food as it says. They also say that the area of land is not change as of now comparing to its area 5 years ago. All other villages that includes in the table uses fertilizer like that of the urea, they also use pesticides like Cymbus, Karate and Magnum. Most of the people also use power, clear-out and 2-4D for controlling the weeds. All of the remaining respondents also say that they harvest twice a year for white corn.

Villages	Average land area planted/individual in ha.	(Range in ha)	Average yield per harvest in sacks/ha	(Range in sacks)
Nagbaracalan	1.04	(0.5-2)	25.6	(10-40)
Magamian	0.91	(0.25-2)	50.9	(10-80)
Balete	0.75	(0-0.25)	80.0	(0-20)
Mamaga	0.5	(0-0.5)	60.0	(0-30)
Magansimid	0.5	(0.25-0.5)	13.7	(1-15)
Banig	1.0	(0.5-2)	25.0	(5-60)
Tapwakan	1.0	(0-1)	20.0	(0-20)
Pulang Lupa	0.3125	(0.125-0.5)	35.2	(1-10)
Ampoy	1.5	(1-2)	40.0	(50-70)
TOTAL (n=33)	0.83		38.93	

Table 4: white corn

Irrigated rice

The people of Nagbaracalan use fertilizers like *urea* and triple 14 in the irrigated rice.

Most of them use pesticides brands Cymbus, Magnum and Karate. Majority of the respondents also say that they used herbicides like Power, Rilof-8, 2-4D and Clear out. All of them harvest twice a year. The same area compared for area cultivated 5 years ago. Only two of the respondents of Puerta plant irrigated rice and they both use Urea fertilizer and pesticide like Cymbus and Karate but they do not use any herbicides. Both of them also harvest twice a year. People of Banig don't use fertilizer but they use pesticide like karate and magnum. None of them also uses herbicides. They harvest twice a year. They say that the area cultivation of this year is same compared to its area 5 years ago. One respondent who comes from Capellan grown irrigated rice and he uses fertilizer and pesticides in the farm but don't use any herbicide. He also harvest twice a year. The area not change compared to its area cultivated five years ago. Five respondents from Dipugpug use fertilizer, pesticides and herbicides on their irrigated rice. They harvest twice a year. The area cultivation is the same cultivated five years ago.

Villages	Average land area planted/individual in ha.	(Range in ha)	Average yield per harvest in sacks/ha	(Range in sacks)
Nagbaracalan	0.45	(0.25-1)	46.66	(12-80)
Puerta	0.875	(0.75-1)	40.0	(20-50)
Banig	0.75	(0-0.75)	21.33	(0-16)
Capellan	0.25	(0-0.25)	140	(0-35)
Dipugpug	0.775	(0.33-1.5)	61.93	(10-100)
TOTAL (n=17)	0.62		61.98	

Table 5: irrigated rice

3.4. Agricultural calendar

Glory Cañete

The agricultural calendar shows the farming schedule of the farmers among 15 villages living in the buffer zone of the Northern Sierra Madre Natural Park (NSMNP). In the calendar, we can see in which month they start clearing the forest to perform *kaingin* or *panag-uma* in their native dialect. Other activities such as land preparation, planting, weeding, harvesting, and drying schedules are also noted.

At the agricultural calendar, the different crops grown by the farmers were indicated. Hard labors such as cutting of trees and plowing are performed by men, and women can help during planting, weeding, harvesting and drying.

Methodology

15 field forms were floated by the students in 15 villages along the NSMNP and the data gathered were analyzed and organized.

Data analysis

An agricultural year calendar can be divided into a first cropping during the rainy season and a second cropping during the dry season. But based on the results of our research on the 15 villages along the Northern Sierra Madre Natural Park (NSMNP), it is observed that most of the farmers harvest once annually due to water shortage. Most of the upland farmers are depending on the rain as their water source.

The activities performed in the fields are as follows: land preparation, planting, weeding and harvesting. After the harvest they dry their harvests ready for selling.

Planting (*panagmula*) is usually done at the start of rainy seasons usually on the month of May and June. It is always performed by men and women. The farmer's plant yellow and white corn, upland rice, irrigated rice and interplant with some leguminous plants such as mongo bean, cowpea, and green peas. Bananas are also planted at the edge of the field that serves as hedgerows. Weeding (*panaglamun*) is done on the months of June and July by the aide of bolo or by spraying herbicides such as Power and Round-Up. With the use of herbicides, the weeds are burned so weeding is easier and faster. Harvest (*apit*) takes place at the month of September and October. Members of the household help each other in harvesting their crops and some from the neighborhood. Just after the harvest, they dry and sell their crops. Most of the Ifugao farmers are not selling rice they stock it for their subsistence. At some towns, (Quimalabasa, Magamian & Nagbaracalan) their first harvest are always stored for personal and emergency purposes. Yellow corn is always for market.

In irrigated rice, some farmers have different schedules because of insufficient water supply from the National Irrigation Administration (NIA). In Simanu Norte, some farmers plant during the first cropping, while others are scheduled on the second cropping to avoid water shortage.

Month	Upland rice	Yellow corn	Irrigated rice	Banana	Other crops* (e.g. string beans)
January	Cutting of trees	Weeding/fertilizer application			Weeding
February	Cutting of trees & bushes	Weeding			
March		Harvest			Harvest
April	Burning	Land preparation	Land preparation	Land preparation	Selling
May	Clearing	Land preparation/planting	Land preparation		Planting
June	Planting			Planting	
July	Weeding	Weeding	Planting		
August	Weeding, fertilizer & pesticide, application	Weeding & fertilizer application			
September	Harvest & bundling	Harvest		Harvest/clearing	
October	Drying	Land preparation			
November		Planting	Harvesting/drying		
December					

Table 1: agricultural calendar

*(string beans, mongo bean, pineapple, etc.)

3.5. Farming technology

Sheryl S. Balubar

Farming activity is the most important activity of the people both in lowland and upland villages. It is the main source for sustenance and for livelihood. To improve productivity and income, farmers resort to different technologies. These technologies could be learned through indigenous knowledge acquired after years of farming or adopted from the course of learning from agriculture technician.

Objective

To determine the types of farming technologies or practices used by the respondent in the villages.

Methods

Using a prepared interview questions from respondents were interviewed in 15 villages.

Data analysis

Villages	Hybrid rice		Traditional variety		Hybrid corn	Traditional variety	Fertilizer	Insecticide	Herbicide	Plow		Mechanical thresher	Mechanical sheller
	upland	irrigated	upland	irrigated						Mech.	AD		
Nagbaracalan	-	-	-	50%	60%	90%	90%	70%	-		100%	20%	20%
Magamian	-	-	70%	-	40%	30%	40%	20%	50%	-	80%	10%	-
Balete	-	-	75%	-	12.25%	37.5%	12.5%	37.5%	65.5%	-	12.5%	-	-
Puerta	10%	-	60%	30%	20%	40%	40%	30%	50%	-	20%	10%	-
Mamaga	-	-	42.8%	57.1%	28.57%	14.28%	42.85%	14.28%	42.85%	85.7%	-	-	-
Magansimid	-	-	37.5%	-	37.5%	50%	25%	-	25%	-	37.5%	-	-
Banig	20%	10%	80%	10%	40%	60%	10%	70%	70%	20%	30%	10%	20%
Capellan	-	-	62.5%	25%	12.5%	-	25%	12.5%	50%	-	25%	-	-
Tapwakan	-	-	-	87.5%	-	37.5%	-	12.5%	-	12.5%	-	25%	-
Pulang Lupa	-	16.6%	100%	33.3%	16.6%	-	33.3%	16.6%	16.6%	-	33.3%	16.6%	-
Ampoy	-	-	100%	-	16.6%	16.6%	-	-	-	-	-	-	-
Quimalabasa	-	87.5%	14.28%	14.28%	14.28%	14.28%	14.28%	-	-	-	-	-	-
Coop	-	83.3%	-	16.6%	-	16.6%	50%	50%	-	33.3%	-	-	-
Casala	-	37.5%	37.5%	25%	50%	12.5%	75%	75%	62.5%	50%	12.5%	87.5%	75%
Dipugpug	28.57%	42.8%	28.57%	42.28%	71.42%	-	57.14%	42.8%	57.14%	28.57%	57.14%	28.52%	28.52%
Total	4.16%	8%	54.16%	25%	33.3%	30%	41%	31.6%	36.6%	10.83%	31.6%	13.3%	12%

Results and discussion

From a total of 120 respondents, major crops are rice and corn. Varietals used appeared the very important among the farmers in the type of landscape.

For lowland rice farmers prefer traditional variety. For upland rice farmers prefer traditional variety. For corn both traditional and hybrid varieties are preferred by farmers.

Farmers tend to use complete fertilizer (14-14-14) commercial inorganic fertilizer. There were no use response regards to the use of commercial organic fertilizers.

Insecticide is relevant especially Cymbus, Karate. Herbicide use is also common such as Power and Clear-out. Others also do the manual weeding and hand picking of insects.

Animal drawn plow is preferred by the farmers due to the slope of the field but there are some farmers who uses hand tractor for cultivating irrigated rice. They also use *bolo*, *bareta* and stick (dibble method) for planting the upland rice.

Both rain fed and irrigation canal are being used.

Some of the villagers owned a mechanical thresher. Others go to the nearest village to rent a thresher for them to thresh their harvest same with the corn. Example is the people from Balete, they go to Puerta or Masipi together with their harvest to shell the corn. But most of them do the manual threshing (trampling) because they use to store their harvest. in bundle. In corn manual shelling (with the used of their hands) is being applied.

Villagers use net or a *lona* in drying their harvest with means of sunlight. Some also dries their harvest on a cemented solar drier located to the nearest village.

Conclusion

Information on the farming technology were being disseminated to the Ifugao people through the Dept. of Agriculture technicians, TV, radio, Agriculture technicians from private companies, and by imitating other people. They are now applying what they have.

3.6. Artifacts

Elisa Trepp

In the fifteen villages bordering the Northern Sierra Madre Natural Park where the research was conducted, the majority of data was produced by verbal interaction between researchers and respondents. The assignment on artifacts relied more on observation of visual proof than on the intangible answers given by the people interviewed. Every research team asked one male and one female respondent to show them the 5 farming tools that they found the most important in their daily lives. They then asked for the name, material, and size of the artifacts, as well as making a drawing on paper or taking a picture with a camera. The male respondent was also asked to show and name fishing, hunting, and logging tools. The goal of this research was to obtain an inventory of various tools used by men and women and to see what these artifacts can tell us about the Ifugao migrant's subsistence farming and environmentally destructive fishing, hunting and logging methods in the buffer zone of the Sierra Madre Natural Park.

Artifacts can be a silent proof of activities otherwise not mentioned, and the importance of various tools to certain people is an indication of the work they probably do most. Tools are tangible cultural productions that can make a myriad of activities possible that would never have been accomplished with bare hands and physical strength. The extent to which modern technology or materials are used can indicate wealth or education about alternative farming methods to more traditional ones. Asking men and women to respond separately highlights differences in division of labor or preferences in tool use.

Farming tools

All of the villages studied practice some form of farming, and use tools accordingly. Twenty-two different tools were named by fifteen male respondents, whilst eleven female respondents named twenty-seven different tools. Many of these were only mentioned by one single respondent and will not be discussed here. There were nine tools used by three or more female respondents, and seven used by five or more males. Almost all of the artifacts were made out of some form of metal, wood, and/or rattan with occasional use of plastic, rubber, or bamboo. Durable materials are a logical choice for the production of tools to make them reusable over a long period of time.

The *bolo* and *buning*, different types of large knives, were mentioned most frequently by respondents. Villagers often carry these around all day long to use for purposes ranging from food preparation to cutting weeds on their fields or slaughtering animals. The crowbar, or *baretta* in Ilocano, was noted by a majority of males and females as well. This tool is used to remove stones or weeds from the field, or to dig holes. The *tabas* and the *pala*, a large bent knife and a shovel respectively, were also in the top ten most frequently named tools by both sexes.

Females and males tend to farm the same crops, but mentioned different objects when they were asked to show the five most important ones. Specific tools almost only mentioned by women were the *alung*, which is a hollow wooden container for milling

rice, and the *bilao*, which is a woven round flat basket used to winnow rice. Tools named only by men were the *arado* (plough), *kumpay* (sickle), and the *suyud* (insecticide sprayer). This indicates a gender separation in labor tasks, since the tools named primarily by females relate to rice processing, whilst the objects named by males are connected to working in the field. Although there were differences in the objects chosen by males and females, there was still a significant amount of overlap which shows that men and women do quite similar work in most cases.

Farming tools are a crucial part of people's lives in the village, and without them farming would not be possible in the current form. The owners of the tools use many of these artifacts daily; hence they are facilitators for sustainable livelihoods. The tools named by various respondents in the villages are quite basic, and no one named high-tech appliances as most important tools to help them in their farming systems. In theory the use of more expensive and modern machines could increase yields, and decrease the amount of hard physical labor for many farmers. The problem with this is not only financial, but there could be issues concerning the expertise needed to fix a malfunctioning or broken machine. It seems logical that farmers rely primarily on objects made of materials of wood and metals, since the cost is low and the actors have knowledge about the most productive use of these. In the end, the knowledge about efficient application of tools in combination with information concerning crops planted results in the production of sufficient produce for self sustaining or selling purposes, which is the essence of many Ifugao migrants' lives.



Photo 1: Alung



Photo 2: Bilao



Photo 3: Arado



Photo 4: Suyud



Photo 5: Bolo



Photo 6: Wasay

Ilocano	English	No. of Females
<i>Buning or bolo</i>	Large knife	9
<i>Baretta</i>	Crowbar	6
	Basket	4
<i>Alung</i>	Mortar	4
<i>Bilao</i>	Winnower	3
<i>Wasay</i>	Axe	3
<i>Kumpay</i>	Sickle	3
<i>Pala</i>	Shovel	3
<i>Kaut</i>	Make pit in ground	3
<i>Tabas</i>	Bent large knife	3
<i>Arado</i>	Plough	2
<i>Al-o</i>	Pestle	2
<i>Suyud</i>	Sprayer for insecticide	2
<i>Gamblang</i>	Small knife for cut rice	2
<i>Paku</i>	Cart	2
<i>Asad</i>	Hoe	1
	Hard broom	1
	Rake	1
<i>Pangammung</i>	Spreader for rice	1
<i>Paragus</i>	Rake for carabao to draw	1
<i>Boka</i>	Iron pin to dig sweet potato	1
<i>Lata</i>	Tin can	1
<i>Utak</i>	Type of big knife	1
	Seed container	1
	Solar dryer	1
<i>Sahud</i>	Drying net	1

Table 1: most frequently mentioned farming tools by women

Ilocano	English	No. of males
<i>Buning or bolo</i>	Large knife	9
<i>Arado</i>	Plough	9
<i>Baretta</i>	Crowbar	8
<i>Kumpay</i>	Sickle	7
<i>Suyud</i>	Sprayer	7
<i>Pala</i>	Shovel	6
<i>Tabas</i>	Large bent knife	5
<i>Paku</i>	Carabou cart	3
<i>Gabbyon</i>	Hoe	2
<i>Wasay</i>	Axe	2
<i>Gamblang</i>	Small knife for cut rice	2
<i>Alung</i>	Mortar	1
	Basket	1
<i>Al-o</i>	Pestle	1
<i>Bilao</i>	Winnower	1
	Rake	1
<i>Boka</i>	Iron pin to dig out sweet potatoe	1
<i>Lata</i>	Tin can	1
<i>Kaut</i>	Tool to make pit in ground	1
	Wheel barrow	1
	Rattan backpack	1

Table 2: most frequently mentioned farming tools by men

Fishing, hunting and logging tools

In contrast to the artifacts related to farming, the tools related to hunting, fishing, and logging can give clues to additional forms of subsistence activities in the fifteen villages where research was conducted. In the Northern Sierra Madre Natural Park, hunting various species is prohibited, as well as using certain fishing methods. Additionally, there is a log ban in the Philippines, which naturally includes the buffer zone where information was collected. Observing the use of tools related to hunting, fishing or logging can give information regarding involvement in illegal activities, especially if respondents would rather not speak about this.

A variety of seven different fishing tools were named by fifteen male respondents. The most common fishing tool is a form of fishing net. Three types were named: the *sibay*, *buko*, and *batang*. They differ in size and are suitable for catching several types of fish. The *bannit*, which is a home made fishing rod made out of a hook, rope and wooden stick, is also a popular tool for respondents. The *pandal*, or spear gun, was used by 5 respondents, and 4 respondents use diving masks to be able to see under water when they use this.

Three people interviewed use an electric fishing tool, which consists of a large 12 volt battery and wires attached to a bamboo stick. The wire ends are placed in the water

and any living creatures in between the two poles is electrocuted. If the poles are held too far from each other, this can be fatal for the fisherman. In one of the villages, a respondent said that they sometimes just place a battery in the water to kill the fish. This form of fishing can be dangerous to the person engaging in the activity, but is also hazardous to the environment since it also kills many small fish and other organisms.



Photo 7: Electric fishing tool



Photo 8: Pandal

Ilocano	English	Frequency
<i>Sibay, bukol, batang</i>	Fish nets	7
<i>Bannit</i>	Hook, rope, woodstick	6
<i>Pandal</i>	Speargun	5
<i>Anchonon</i>	Diving mask	4
	Electric fishing tool	3
<i>Bubo</i>	bamboo trap	3
	Harpoon	1

Table 3: fishing tools

Hunting endangered species in the Philippines is prohibited, and there is a long list of species that belong to this category. A majority of the respondents hunt some type of wild animals, with the use of a *silo* (trap) being the most popular. The *patungkab*, or blasting bomb, is used to kill wild boar, which is prohibited to hunt under the wildlife act. A mix of gun powder or the inside of fire crackers are mixed with glass or shards, wrapped in string and then inserted into fruits or food. The fruit is laid out in the forest, and once a wild boar eats it, it will explode and kill the animal. Air guns and *palatung* (bullet guns) are often used to hunt various bird species. Bow and arrow, spears, slingshots and even dogs were named as hunting tools by some individuals.



Photo 9: Bat in silo

Ilocano	English	Frequency
<i>Silo</i>	Trap	11
<i>Palatung</i>	Gun	6
	Air gun	5
<i>patungkab</i>	Blasting bomb	5
<i>Pana</i>	Bow and arrow	2
<i>Pika</i>	Spear	2
<i>Bating</i>	Rope	2
	Slingshot	1
<i>Aso</i>	Dog	1

Table 4: hunting tools

Logging and slash-and-burn farming are activities that destroy the forest and have a serious impact on biodiversity. The main tool used for logging is the chainsaw, which was owned and used by ten of the fifteen male respondents. Five people also owned carabao drawn floating devices to transport logs down a river, made out of wood, nails and rope. These artifacts indicate that actors in the villages studied are actively taking

part in logging. Some people mentioned using axes, *bolo* knives or large saws to cut trees as well, but these are mostly used for firewood or house construction/repair purposes.

In one village a respondent showed the tools used to make kaingin, which is also widely practiced in forest areas at the border of the NSMNP. A lighter is used to make the initial fire, and then bamboo sticks are used to keep the fire burning. A sprayer is used to extinguish the fire in certain areas to stop it from spreading too far towards one direction.

Ilocano	English	Frequency
	Chainsaw	10
	carabao drawn floating device for logs	5
<i>Wasay</i>	Axe	5
<i>Bolo</i>	Large knife	4
<i>Bagadi</i>	2 man saw	2
<i>Bislak ti bulu/Suyud</i>	Lighter/bamboo sticks/sprayer	1

Table 5: logging tools

The tools for fishing, hunting and logging are used in the forest to retrieve additional food or material which is then sold to make an income. This gives villagers an alternative source of livelihood alongside common farm activities. Even though activities related to the tools presented are a positive addition to the lives of people in villages, the effects on the environment are a negative side to the issue. Using batteries to catch fish, hunting endangered wildlife, logging, and using slash-and-burn farming are all activities that contribute to the widespread problems of deforestation, pollution, and loss of biodiversity. By cultural productions in the form of the tools used in the villages, people are able to support themselves, but hurt their own environment at the same time.



Photo 10: chainsaw

3.7. Credit

Novie U. Buguina

Introduction

Credit is a system of business transaction allowing people to purchase goods/services or a system of buying and selling without immediate cash payment or security. In the villages credit programs have been implemented to the borrowers.

Sources of credit can be categorized into two: formal and informal. The formal sources of credit are the rural banks, land bank of the Philippines and commercial banks. The informal sources can be broken down into commercial and non-commercial types. Commercial lenders are individuals who advance credit primarily to earn interest. They are often the local moneylenders, rich farmer, traders and sari-sari store owners. On the other hand, non-commercial lenders are the neighbors, friends and relatives who essentially provide character credit to help the borrowers in the time of need. One characteristic of the informal non-commercial credit is that they are usually extended at zero interest rate. The extended family and kinship institutions forge strong relationship that allow for a high degree of social action and cooperation and result in a high degree of trust.

Data analysis

Villages	Number of respondent	Informal credit						Collateral		Micro-financing	
		Commercial (with interest)		Not borrow with interest		Non-commercial without interest		Carabao	Land	ASKI	FSA
1. Nagbaracalan	10	9	90%	1	10%	10	100%	0	0		
2. Magamian	10	3	30%	7	70%	10	100%	0	0		
3. Balete	8	2	25%	6	75%	8	100%	0	0		
4. Puerta	10	2	20%	8	80%	10	100%	2	0		
5. Mamaga	7	3	42.85%	4	57.15%	7	100%	0	0	@	
6. Magansimid	10	0	0	10	100%	10	100%	0	0		
7. Banig	10	3	30%	7	70%	10	100%	0	0		
8. Capellan	8	5	62.5%	3	37.5%	8	100%	1	2	@	
9. Tapwakan	8	1	12.5%	7	87.5%	8	100%	0	0		
10. Pulang Lupa	6	0	0	6	100%	6	100%	0	0		
11. Ampoy	7	1	14.3%	6	85.71%	7	100%	0	0		
12. Quimalabasa	8	0	0	8	100%	8	100%	0	0		
13. Coop	10	3	30%	7	70%	10	100%	0	0		
14. Casala	10	6	60%	4	40%	10	100%	0	0		@
15. Dipugpug	10	4	40%	6	60%	10	100%	0	0	@	@
TOTAL	132	42	31.82%	90	68.18%	132	100%	3	2		

Table 1: Credit

Discussion

The study was conducted in the fifteen villages/barangays located at Nagbaracalan, Magamian, Balete (municipality of San Pablo), Puerta (municipality of Cabagan), Mamaga, Magansimid, Banig (municipality of Tumauni), Capellan, Tapwakan, Pulang Lupa, Quimalabasa, Coop (municipality of Ilagan), Casala, and Dipugpug (municipality of San Mariano).

Out of 132 respondents, 42 (31.82 %) are borrowing money with interest. This is the proof that some Ifugao are forced to borrow money to finance their farming inputs. Informal credits exist offered by the traders, moneylenders and some rich farmer in the barangay with interest ranging from 5% to 30% per cropping. Payments are usually in cash. After harvesting their crops, borrowers are obliged to sell their produce to the trader who gives credits, but they can still sell their produce to other traders who can offer higher price as long as he will immediately repay his credit. The credits are usually used for purchase of farm inputs such as; seeds, fertilizer, pesticides and herbicide. Some creditors require collaterals like title of their land and carabao.

Out of 132 respondent 100% is borrowing money without interest. They are forced to borrow money incase of emergency happen. These credits are usually used for domestic purposes like medicine and education. Informal credit also exists but it is a non-commercial credit. They always borrow money from their relatives, friends, and neighbors, incase they need money for emergency. And the alternative sources of money incase of emergency is by selling their crops or animals. The payments of their credit is made if the have already money. The responsible in borrowing money depends on who has time in the family.

Some villages have micro-financing possibilities in their community. Some of villages that have micro-financing projects are Capellan, Mamaga (Masipi-East) and Dipugpug. The existing microfinance on the villages are ASKI (*Alalay sa Kaunlaran* Inc.) and FSA (Financial Sector Assessment/ Financial Services Authority). One of our respondents explained about ASKI in Ilagan. She said that 3% is the monthly interest and the minimum credit is PhP. 3,000. Payments are usually done weekly.

3.8. Land ownership

Christopher M. Telan

Introduction

Land is essential to the Filipino. This was understood fully by Filipino ancestors who treated land as communal property. Land was the means to provide food for the family and the community. The concept of private land ownership is focus on indigenous people. In the Philippines especially in Region 02, land ownership is very important especially for those in remote areas like in the Northern Sierra Madre Natural Park, and in the most remote areas found in the whole Region 02. Acquiring land ownership is not easy especially to the indigenous people living in upland areas. Ifugao migrants migrated to different villages without any land for them to support their livelihood. Some have land titles in different villages like in Bintacan and Tumauni. But most migrants in Cordillera especially Ifugao don't have a land of title like CLOA, IFMA, SIFMA, and CSC. Based on the data gathered in the research, some migrants came from other villages and they went to other villages to do *kaingin* and logging without asking permission to the people of community and to the government.

Methodology

This research paper was conducted to gather data and find out how the Ifugao acquire land through land ownership program of the government. The research was conducted in the different barangays in Isabela specifically at Nagbaracalan and Magamian in San Pablo; Puerta, Balete, Mamaga, and Magansimid in Cabagan; Banig in Tumauni; Capellan, Quimalabasa, Tapwakan, Ampoy, Pulang Lupa and Coop in Ilagan; and Casala and Dipugug in San Mariano.

Interviews are conducted randomly among 127 respondents in the different barangays in Isabela. During the interviews with the respondents, they were asked the following questions:

- How many hectares land do you have in total? (how big is your claim?);
- Do you have an official paper or certificate of your land? If yes, what kind of paper? (name of the program?);
- Do you have a tax declaration from the LGU? In whose name is it? (husband/wife/father/brother);
- Are there any rules set by the government that you should respect your own land? (for example: erosion control, tree plating, making the land productive).

Data

As you see in the tables, these data are collected in different villages. These tables show the average claim of land in hectare, The Certificate of title like CLOA, IFMA, SIFMA, and CSC. It also shows the rules set by the government, for example: tree planting,

planting fruits trees, and planting different agricultural crops for the productive and development of land.

Municipal	Village	YES	NO	DON'T KNOW	NO ANSWER
San Pablo	Nagbaracalan	2	8		
	Magamian		10		
Cabagan	Balete	1	4	3	
	Mamaga		6		
	Magansimid		9		
	Puerta	1	6		
Tumauini	Banig		10		
Ilagan	Capellan	5	2	1	
	Quimalabasa		3	1	4
	Tapwakan		4		4
	Ampoy		6	1	
	Pulang Lupa		6		
	Coop		10		
San Mariano	Casala	6	2		1
	Dipugpug	3	4		

Table 1: tax declaration

Most of the tax declarations are in the name of the husband and some are in the father and mothers name. But in the case now, as we observe, most of them don't pay tax because there is no certificate or title and the land is not yet registered by the government.

According to our research output especially in our area (barangay Capellan), there are rules but its not set but by the government, like planting *napi* grass besides the rice or corn field to prevent erosion and tree planting to make land productive.

There are barangays where the government sets rules to care for the land especially in preventing erosion. These barangays are: Nagbaracalan, Magamian, Balete, Mamaga, Magansimid, Banig, Tapwakan and Pulang Lupa. But not all the respondents of each barangay know the rules set by the government.

In Casala and Dipugpug most farmers said that the rules set by the government are tree planting to prevent erosion and planting fruit trees for the development of land.

In Puerta, Quimalabasa, Ampoy, and Coop there were never any rules set by the government for the development of the land.

VILLAGE	AVERAGE (ha)	RANGE
Nagbaracalan	1.77	0.25-3.5
Magamian	2.25	1.5-3
Balete	0.75	0.5-1
Mamaga	2	0.5-4
Magansimid	1.77	0.75-3
Puerta	1.5	1-2

Banig	1.72	0.5-3
Capellan	3.71	0.25-1
Quimalabasa	0.91	0.75-6
Tapwakan	2.37	2-9
Ampoy	3.41	0.5-9
Pulang Lupa	4.2	0.5-10
Coop	4.61	2-20
Casala	3.68	0.25-11
Dipugpug	5.25	0.75-10
Overall Average	2.38	

Table 2: total land claim

VILLAGE	Most Common Tenure Instrument
Nagbaracalan	None
Magamian	None
Balete	None
Mamaga	None
Magansimid	None
Puerta	CSC
Banig	CSC
Capellan	CLOA
Quimalabasa	None
Tapwakan	None
Ampoy	None
Pulang-lupa	None
Coop	None
Casala	IFMA
Dipugpug	SIFMA

Table 3: certificate of land title

Conclusion

The research findings in 15 villages, some villages do not have certificate of land titles like Nagbaracalan, Magamian, Balete, Mamaga, Magansimid, Quimalabasa, Tapwakan, Ampoy, Pulang Lupa, and Coop. In Puerta, Banig, Capellan, Casala and Dipugpug people have land of titles like CSC, CLOA and SIFMA. According to some people in the villages, if you do not have the land title or if you abandoned the land, the government will get the land and give it to other people who are landless and knows how to develop and make the land productive for the benefit of their family.

3.9. Changes in crop variety: past, present and future

Christiaan Oostdijk

To look at some of the changes in farming experienced by the migrated people, I focused on which crops they grew before migration and which ones they are growing now. Farming is their main source of income and for many their only. Since farming is not only a way of providing people with food, but technically their whole life, any changes could have had a great effect on their way of looking at life and the future. An attempt has been made to get some idea of what they would like to cultivate in the future. Asking them what they would like to grow in the future can bring out a way of thinking in certain occasions. For instance, to see if people even have hopes for the future or if they are content with the situation they are in. By asking them which crops they prefer to grow in the future and why they are not growing them now, it could become clear what hopes for the future they have and what barriers they expect to encounter, from their own perspective.

The respondents have given such a large variety of answers when asked what crops they have grown in the past and which kinds they cultivate now, that the choice has been made to group some of the crops together. Upland and irrigated rice and white corn have been grouped together as grains. Yellow corn, which is considered to be a relatively new crop, has been counted separately. All fruits have been grouped together also, as has been done with root crops like ginger, cassava, sweet potato and some others varieties. String-, mongo-, *baguio*- and black-beans have been combined with peanuts and peas under the category of beans. A separate category has been maintained for vegetables as some people had mentioned just that without further specification. Then the final category was used for anything not falling under any of these.

Before migration

The crops most mentioned by respondents were, not surprisingly, the grains. They were mentioned a total of 115 times in the results, equally divided amongst men and women. After this, fruits appeared to be the most popular, being mentioned on fifty-eight occasions. Following these were the root crops and the beans, the former being mentioned twice as much by women. Next up were the vegetables and one respondent mentioned planting trees in the past to obtain some wood to sell. Yellow corn was grown by only ten respondents in their area of origin. A total of twenty respondents, being made up of thirteen men and eight women did not do farming before migration, yet practice it now. One respondent had not migrated at all.

The present

After migration there has been an apparent diversification of cultivation. Seventy-four respondents cultivate more crops now than they did before migrating, while twenty-three cultivate the same amount of crops. Out of the respondents, there were twenty people who experienced a decrease in the amount of planted crops, but this does however not

mean that they cultivate less, as the farming area might have increased significantly or the crops being grown might have changed. Also, three people have stopped farming all together since migrating and now earn their livelihood in other ways. Initially the intention was to find out about any changes in land size also, but there were a lot of unclear responses as many were not able to make an estimation of the size of their land, either in the past or the present. There was again not a very noticeable variation between men and women, although there appears to be a slightly higher crop variety present among the women.

It becomes clear when looking at the results that there is an increase in diversity and the amount of crops grown per farmer in the area. The grain crops were mentioned 166 times when talking about the present farming activities. Where it was hard to make a clear differentiation between irrigated rice and upland rice in the past, it became clear from the results gathered on the present that upland rice is being grown to a far larger extent than irrigated rice now. What also needs to be illustrated based on the gathered data, is that the most notable presence of irrigated rice is in the villages of Casala and Cinamnama. It is interesting to note these two villages have been around longer than any of the other villages in the research. The yellow corn is nowadays being grown by sixty-nine people, which is a huge increase from the situation in the area of origin mentioned above. The fruit category also increased significantly, being referenced 108 times this time around. With the other crops there was no mentionable variation, so the increase appears to be mostly located among the yellow corn, upland rice and fruits.

The future

When looking at the future of the farming practices, it became clear very early on that it was not an easy question for the respondents to answer. People live in the moment and seem more concerned with the present. Out of the answers given, the fruit group was mentioned most as a desired crop for the future. A lot of people also mentioned the grains, but I believe some left it out because to them those crops, and especially the rice, are such a bare necessity, that it is almost too obvious to mention. Root crops and beans were mentioned an equal amount and seven respondents indicated that they would like to plant trees so they could sell some wood in the future. Twenty-one people had no desire to implement any change in their crop variety, or they just didn't know what else to plant.

Amongst the reasons given for wanting to grown certain crops in the future, the most obvious and also most mentioned was subsistence. People need to grown crops that will provide them with food, because to them there is no other way of getting it sometimes. Many of the respondents also indicated that certain crops were good to sell on the market and that those crops could generate a good income for them if they could sell these.

Many constraints were indicated by the respondents on why certain crops could not be cultivated or on why it would not be beneficial for them at this point in time. Only the four major ones will be discussed here as these were mentioned the most often.

- Not enough available land or labor. This is a major constraint and it holds people back from making certain changes in their source of livelihood. With restrictions in the size of land people are forced to choose the crops most needed and leave out others. If the land is big enough but there is no one to cultivate all of it, then

people are forced to plant on only a portion of the land for now. Another reason for planting on a smaller plot is also the time they can spend cultivating. Often people indicated they were busy enough as it is with the crops they grown now. Adding anything to it would just result in a bad harvest, because there's no time to care for all the crops the way that is needed.

- The environment. The climate and people's surroundings also plays a major role in deciding what to grow as many mentioned it was too hot for certain crops to grow in the area or that the soil is in such a condition that it is not fruitful for the crops.
- Access to the market. A major obstacle for the people in certain locations is their access to the market. Roads are often hard to travel on, especially with heavy crops that need to be carried or transported with the help of cattle. Occasionally the distance to the market puts a strain on potential selling activities even though the roads themselves are accessible.
- Money. This also comes into the equation and often prevents people from acquiring the necessary seeds to plant something new because these are just too expensive. Sometimes the seeds are not present in the area at all so then it is the supply more than anything else that holds people back. Some also indicated that there is just no buyer in the area for certain crops and so they could not grow them and make a profit at the same time even if they wanted to.

On most occasions people do indicate some desire to grow more crops or different crops in the future, so a wish to make some change in their way of livelihood is present. However, even if people would like to expand their crop variety, they often just don't see a way to be able to do it successfully. There are too many obstacles that can be encountered, coming from the situation they are in right now and most of these obstacles are impossible for them to remove with the means available to them at this time.

3.10. Soil erosion and soil fertility

Jocelyn B. Pagalilauan

Introduction

Soil is one of the fundamental resources that support life on our planet. So much so, that all earthly life is related directly to soil and depends on it. Soil has been studied for many years, and today we are well aware that certain actions can damage or threaten its existence, just as others can help to preserve it for future generations.

Erosion and loss of soil fertility are serious problems affecting ecosystems and society. A fertile soil can be defined as one that can hold all the nutrients that plants need, the amount of organic material necessary for crop growth and development, sufficient quantities of macro-organisms (worms, beneficial insects, etc.) and micro-organisms (bacteria, fungus, algae, etc.) which maintains the soils biological equilibrium, and together help to create good physical, chemical and biological soils conditions.

Many farmers have become aware of this need for their soils to have sufficient productive potential to produce food, and have resorted to various means and methods to improve and regenerate soils, through applying farmer's knowledge of agriculture production.

Methodology

The study was conducted in the 15 villages in San Pablo, Cabagan, Tumauni, Ilagan and San Mariano. In the questionnaire (see appendix 1) we included the questions on soil erosion and soil fertility (54, 55, 56 and 57). A total of 126 people gave answers to these questions.

Soil erosion

In Simanu Norte (Nagbaracalan) people are making hedgerows at the edges of the field and they planted trees and banana to avoid soil erosion. In Magamian and Pulang Lupa people said that they cannot stop soil erosion, but they planted trees to minimize erosion. Also in Ampoy they said that it is too difficult to stop erosion. On the other hand, people in Mamaga, Balete, Quimalabasa and Banig planted trees. In Magansimid and Puerta people said that they are making rice terraces and planting trees to avoid erosion. In Capellan people said that they cannot soil stop erosion if they don't stop logging. They also plant trees and grasses like *balla* and put big stones at the side of their land. They are also suffering from muddy rivers due to soil erosion especially when the heavy rains come. In Tapwakan people planted bamboo and trees in the boundary of their land to protect the land from erosion. While in Coop they cannot stop erosion. But when they notice that the land becomes eroded they move to another piece of land. They are suffering soil erosion during rainy season. In Dipugpug people said that they can improve erosion if no logging will exist, and they said that soil erosion is a part of nature. In

Casala people also told that they are planting trees and do not cut trees to minimize soil erosion.

Sitio/Barangay.	Number of respondent	YES	NO	SOMETIMES
1. Nagbaracalan	10	3 (30%)	6 (60%)	1 (10%)
2. Magamian	10	4 (40%)	6 (60%)	—
3. Balete	8	2 (25%)	5 (63%)	1 (12%)
4. Puerta	10	5 (50%)	5 (50%)	—
5. Mamaga	7	1 (14%)	6 (86%)	—
6. Magansimid	10	2 (20%)	8 (80%)	—
7. Banig	10	3 (30%)	7 (70%)	—
8. Capellan	5	4 (80%)	1 (20%)	—
9. Tapwakan	8	2 (25%)	6 (75%)	—
10. Pulang Lupa	6	2 (33%)	4 (67%)	—
11. Ampoy	6	3 (50%)	2 (33%)	1 (17%)
12. Quimalabasa	8	6 (75%)	2 (25%)	—
13. Coop	10	4 (40%)	6 (60%)	—
14. Casala	9	5 (56%)	4 (44%)	—
15. Dipugpug	9	3 (33%)	6 (67%)	—
TOTAL	126	49 (39%)	74 (59%)	3 (2%)

Table 1. Is your land suffering from soil erosion?

Soil fertility

In Simanu Norte (Nagbaracalan), Puerta, Magamian, Balete and Pulang Lupa people said that they are applying fertilizer and leave the soil for one year so that it will rest, so it will not lose its fertility (because if they continue planting they lose the fertility of their land). In Magansimid and Banig they are using inorganic and organic fertilizers. While in Tapwakan, and Casala they are also using fertilizer. In Quimalabasa people are burning the dried leaves in their field and they used also fertilizer. In Ampoy they said that they can improve the fertility of the soil by animal dung and composing the leaves of the trees for fertilizer. In Capellan they also use fertilizer, waste of pigs, carabao and leaves of banana. In Mamaga they said that they burn the rice grain, apply fertilizer and leave the removed weeds on the field and let it dry by the sun for inorganic fertilizer. In Coop they cultivate their soil and apply fertilizer. In Dipugpug they are using fertilizer too and decomposing the stalks of the rice in the rice fields.

Sitio/Barangay.	Number of respondent	YES	NO	SOMETIMES	NO ANSWER'
1. Nacbaracan	10	10 (100%)	-	-	-
2. Magamian	10	7 (70%)	3 (30%)	-	-
3. Balete	8	4 (50%)	3 (38%)	1 (12%)	-
4. Puerta	10	5 (50%)	5 (50%)	-	-
5. Mamaga	7	4 (57%)	3 (43%)	-	-
6. Magansimid	10	7 (70%)	3	-	-

			(30%0		
7. Banig	10	7 (70%)	3 (30%)	-	-
8. Capellan	5	4 (80%)	1 (20%)	-	-
9. Tapwakan	8	3 (38%)	4 (50%)	-	1 (12%)
10. Pulang Lupa	6	5 (83%)	1 (17%)	-	-
11. Ampoy	6	3 (50%)	3 (50%)	-	-
12. Quimalabasa	8	5 (63%)	2 (25%)	-	-
13. Coop	10	3 (30%)	6 (60%)	-	1 (10%)
14. Casala	9	6 (67%)	2 (22%)	-	1 (11%)
15. Dipugpug	9	7 (78%)	-	-	2 (22%)
TOTAL	126	79 (62%)	40 (32%)	1 (1%)	6 (5%)

Table 2: Is your land losing its fertility?

Conclusion

Out of 126 respondents, 59% said that their land is not suffering from soil erosion while 39% said that their land was suffering from soil erosion. 62% told that their land was losing its fertility, 32% told that was not losing its fertility.

3.11. Land investment

Linde Linthorst

Ifugao are originally upland farmers. These migrant upland farmers settled in Sierra Madre and started clearing forestlands and establish their slash-and-burn-farms. In a forest environment this is the most logical thing to do, since all the nutrients are stored in the vegetation itself and few are stored in the soil, only by burning and clearing, these nutrients can be released. *Kaingin* farms like these are initially very productive, but after about three years, a new piece of land must be cleared, because after continuous cultivation the land will lose its fertility by processes of land erosion and absorbing of nutrients by the crops. When there is enough land available this practice doesn't even have to be very destructive, because by leaving the soil to rest for some years, the ground can be reused again (swidden cultivation). The problem however is that with increasing population and pressure for land, the possibilities for clearing new land are scarce. This leads to overusing of the land, with cogon grass as climax vegetation as a consequence. Especially now that forest area is decreasing rapidly in the Sierra Madre, the possibilities for making new *kaingin* are minimized. This development usually calls for actions of land investment.

Land investment has the goal of being able to use the land sustainable; meaning to say that the land must be able to be cultivated for as long as possible, preferable indefinite. In Ifugao province, and then especially in the regions of Banaue and Batad, it is obvious that the Ifugao had to find ways of cultivating their lands for longer periods of time than only about four years. As a sustainable land use practice they started making impressive irrigated rice terraces. Rice terraces prevent soil erosion and thereby the leaking of nutrients, because the ground is levelled and the water that comes from a source up the mountain can be spread over the terraces in a controlled way.

Here we will focus on six types of land investment; contour bunds, terracing, agroforestry, tree plantation, irrigation through water tubes, and hedgerows.

Contour bunds

Contour bunds are usually made of stones or wood. When there is rainfall, contour bunds act as a barrier to the water flow and checks the velocity. This reduces chances of soil erosion. When water starts flowing along the field, the bunds become an obstruction for it. Due to the obstruction, the velocity reduces and water percolates behind the bunds. This allows infiltration of water into the soil.

Terracing

A terrace is a leveled section of a hilly cultivated area. It prevents soil erosion by slowing down or preventing the rapid surface runoff of irrigation water.



Photo 1: rice terraces in Cinamnama

Agroforestry

Agroforestry is a land-use method that allows trees to grow in crop and livestock areas. This design provides shade (reducing water loss from evaporation), ensures retention of soil moisture and prevents soil erosion, because the roots of the trees help keeping the soil.



Photo 2: Corn mixed with coconut and other trees

Tree plantation

See the function of trees in agroforestry. This is without the crops, because the trees function as a source of livelihood, for example through their use of wood in furniture.

Irrigation through water tubes

Irrigation through water tubes is more sustainable than through canals, because the water isn't able to take ground with it while being transported from one place to another for it is closed in a tube. It prevents soil erosion (especially gully erosion).

Hedgerows

Hedgerows are made of small shrubs or bushes. They are windbreaks that protect fields from wind erosion. Hedgerows control soil erosion by reducing wind speed at ground level.

Results fieldwork

The incentive for starting land investment practices depends on multiple factors. For example on land tenure security: on average people are more careful with land they own, than with open access land (tragedy of the commons). It also depends on visions for the future: if you intend to stay long in one place, you will make sure that you will work as sustainable as possible. It depends on knowledge: you can't do what you don't know. And of course on the type of land: terraces in flat areas are simply not necessary.

From the 15 villages that were selected for the research, every village had some sort of land investment, mostly in the form of agroforestry or a tree plantation. They didn't always plant trees because it is better for the soil (although they usually know that and consider it a nice benefit on the side), but more because of economical reasons; the fruits provide them with food, and money when sold on the market. The wood they use for furniture.

There seems to be a connection with the age of the village and the level of investment; many older villages already have irrigated rice fields either with or without terracing. Many younger villages have upland rice on *kaingin* plots as their main crop.

What also stands out is that people in the younger villages do often have plans for irrigated rice and other investments when they are possible in their specific land type.

Imitating neighbors seems to happen a lot when it comes to land investment. However carefulness is necessary when it comes to conclusions like this, because it could just as well be caused by the way of interviewing (different explanations for one type of land investment in different villages).

Commonly mentioned reasons why people are not practicing a type of land investment are often that they don't know the practice or just don't know how to do it. On the question if the people had ever received training in sustainable land use practices more than 80% answered with NO (n=110). Moreover almost 90% of them answered YES on the question if they would like to receive it because they need it.

Other common reasons for not investing in their land are that they do not consider it necessary (when they feel that there is enough space to make new *kaingin*, they just clear a new piece of land when they experience loss of fertility of the soil), they find it too hard work for the little time they have, or they need all the space they can get for planting their cash crops (so no tree planting, because trees need much space and put shade on the crops, which is not good for crops like rice and corn) .

Other findings are that people are usually fonder of contour bunds, than hedgerows, because it's not easy to get the seedlings for hedgerows and there are often enough stones or wood to make contour bunds. Besides they experience soil erosion more often by water, than by wind.

The reason for usually not using tubes for irrigation of the rice terraces is that they are too expensive, although they do experience gully erosion by the canals they dig for irrigation.

3.12. Fruit trees

Lemuel D. Dao-ayan

Introduction

The main source of livelihood of the farmers living at the buffer zone of Northern Sierra Madre Natural Park is farming but growing different varieties of fruit trees is also common in the area. This functions as an extra source of income to them. Unfortunately due to bad infrastructure, it is not possible for the farmers to get the whole fruit harvest to the market. Therefore, part of the harvest is rotten or spoiled.

Methodology

Field forms were floated among host villagers by the students. They asked their host family to enumerate different varieties of fruit trees growing in their area.

Data analysis

Fruit	Scientific name
Banana	<i>Mussa spp</i>
Mango	<i>Mangifera indica</i>
Papaya	<i>Carica papaya</i>
Orange	<i>Citrus sinensi</i>
Jackfruit	<i>Artocarpus heterophyllus</i>
Black plum	<i>Syzygium cumini</i>
<i>Santol</i>	<i>Sandoricum koetjape</i>
Star apple	<i>Chrysophyllum caimito</i>
Avocado	<i>Persea americana</i>
Guava	<i>Psidium guajava</i>
Coconut	<i>Cocos nucifera</i>
Soursop	<i>Annona muricata</i>
Pomelo	<i>Citrus maxima</i>
<i>Bignay</i>	<i>Antidesma bunius</i>
<i>Tiesa</i>	<i>Pouteria campechiana</i>
Sugar apple	<i>Annona squamosa</i>
Rambutan	<i>Nephelium lappaceum</i>
Calamanci	<i>Citrofortunella mitis</i>
Mandarin	<i>Citrus nobilis</i>
Cacao	<i>Theobroma cacao</i>
Tamarind	<i>Tamarindus indica</i>
Custard apple	<i>Annona reticulate</i>

Table 1: fruit tree species

Conclusions

Growing fruit trees is a great help to the farmers as well as to the environment. While they are waiting for their other crops to be harvested, they can depend on the fruit trees. Rice is the staple food of the farmers but while waiting for harvest, they can depend on fruits.

If the government can help them transport their fruit harvest by finishing farm-to-market roads, then that will be a great aid to develop the lives of the farmers along Northern Sierra Madre Natural Park.

3.13. Spiritual believes and their influence on the environment

Noortje van Geenen-Schrauwen

In the traditional Philippine belief systems landscape elements play a big role. Big trees, stones, humps, termite hills, caves and other elements were believed to be possessed by a variety of creatures. What beliefs are still alive and which are gone, in what way do people treat these elements and how does this shape the landscape? Does the current religion have an influence on their spiritual believes, and in which way?

“Mister Tadeo lives in Dy Abra and cultivates his lands there. One day he wanted to burn a piece of land with a Balete tree on it to make a new corn field. Then he heard voices of children, but there were no children around. He became afraid that he might provoke the Balete tree when he would burn it, so he made sure the tree would not be harmed by the fire. Nowadays the tree is still present on the field and the man was not harmed.”

Balete tree and acacia rain tree

The *balete* tree and the rain tree can become big and impressive trees. It was believed by many people that these trees were the house of ancestors, or of unknown bad spirits. They should be treated with respect and care because when provoking these spirits one could become ill or even die. Sometimes it is also believed that the spirits might take your soul, and a ritual would be necessary to bring it back.

While passing by, touching or talking about the tree, you must excuse yourself (*bari bari*), or even offer food to keep the spirits in a good mood. Cutting the tree was of course out of the question, but what is the current attitude of people towards these trees?

In Pulang Lupa people knew about these beliefs, but the spirits could not be seen in the Balete tree. In Magamian people heard of the story that there are little people living in the big old trees, but they didn't believe in it.

In Casala the respondent told that when you get close to the Balete tree the *kapre* that is living in there can catch you at nighttime and you turn into one of them. It is dangerous to cut the tree or trees nearby or to throw stones because the spirit might get angry.

The respondent told the story about Lolo Jose, who was caught by the spirit when he was playing hide and seek during the night. He got caught by the tree and the spirits tried to feed him certain plant extracts to turn him into a spirit. He refused to eat it and managed to escape from the tree, but he fell sick. After his family members offered food and tobacco for the spirits he became healthy again.

The rain tree can also contain spirits, but different ones, like the white lady that scares people because she doesn't want to be disturbed. The same thing was told in Coop, there people did not like to walk outside alone during the night and preferred not to sleep and live alone.

In Magamian there are lots of *balete* trees present, especially near the riverbanks. If people would cut these trees, they would get sick or they would even die. The trees

near the *balete* trees were safe to cut. In 2006 someone wanted to build a new house in Magamian, pulled a big tree down with a bulldozer therefore, and constructed the house. Some months later Manang Anita got sick, and afterwards they started believing in spirits and respecting the trees again.

In Simanu Norte (Nagbaracalan) the respondent told that spirits may reside in the tree, and if you touch it, it will touch you and you get sick then. If you don't disturb the tree, then it is not dangerous. The respondent also told that if you fall ill after a visit to the forest, you left your soul there. In order get it back, people would go into the forest with a piece of cloth tied to a stick, and call for the soul of the person so it would go into the piece of clothing. The sick person would wear it and a pig of chicken must be slaughtered.

In Dipugpug a respondent told that he was afraid of the spirits living in the *balete* tree, and did not want to cut the tree because of it. He believed something bad could happen to him or his family. He told that there are also *kapre* living in the trees, but not in all of them. Only the big and old trees could host spirits, and you could feel the presence of spirits when you pass by such a tree. There were also fireflies in some rain trees in Dipugpug, but nothing bad has happened yet to any of the villagers concerning these trees.

In Puerta the respondent's beliefs in spirits was almost completely gone, until he remembered that there might be spirits in the big rain trees. It would be ok to cut the tree, but he preferred not to because they give shade. One time when he was walking through the village at night and his hair went up. But he is not sure that ancestral spirits exist or not. Some people from Puerta with both Ybanag and Itneg ethnicity have stronger beliefs when it comes to spirits. They would go to Masipi when they turn ill to a man who would help them offering food, drinks and cigarettes to the spirits in the hope they would get better. This would happen several times a year or less.

The respondent from Dy Abra was the man of the story in the introduction, so he did believe you should not cut the *balete* tree. He was ok with cutting the rain tree, although he didn't, because it gave shade.

In Capellan there was a *balete* tree and many rain trees, but the belief that there could be spirits inside was absent. The *balete* was still there because the wood was useless and the rain trees were being cut and one was useful as a barrier for land.

In Ampoy there were two big trees left for different reasons.

The respondent in Quimalabasa was not afraid of the *balete* tree unless there is a snake in the tree. The fear for these (black) snakes in trees is also present in Capellan. He personally did not have spiritual problems with the tree, but other people might have. It is ok to cut the tree for him.



Photo 1: balete

Termite hills and other big humps

These big hills where ants or termites reside are known for the dwarfs that they may contain. These dwarfs can be good or bad, known as black dwarfs, but you never know whether a hill is inhabited and what kind of dwarf. Some people believe that there is also a king and a queen dwarf living in the hill, and that these dwarfs live there to protect it.

The *nuna sa punso* is also a creature that lives in the anthills, but it is not a dwarf. These dwarfs and *nuna sa punsos* can be provoked when destroying the hill, disturbing the ants or termites, throwing stones, speaking bad words or even when passing by. When provoked, the dwarfs might bring you bad luck and sickness.

This is also the belief in Casala, where the respondent told that there were anthills next to the house, and in her irrigated rice fields. Everything is flattened except for the anthills because it's dangerous to provoke the spirits inside. So it is believed to be dangerous to destroy the anthills, but some people do it nevertheless. When you turn sick afterwards, you might be cured by offering and asking forgiveness.

In Magamian people are careful when building a house: they prefer to build it away from the anthill. The *nuna sa punso*, who also live in anthills, should be respected and not be touched or disturbed. In Magamian there are some anthills on the agriculture fields. If there's a hill on your field, you should leave it there and plough around it. If you do plough it, the chance is big you get sick.

In Dy Abra there are several stories about anthills. One time an anthill grew in a house and the people broke down the house and moved ten meters further because they were afraid to get sick because of the anthill. In another house they kept the anthill, and everything was fine. There is still one anthill left in the deserted Banig and people avoid the hill and certainly not provoke it. They are afraid to throw stones, because it is believed the testicles will swell because the fairy gets angry. If you throw hot water on it, your hair and skin will fall off, and also urinating on the hill will bring bad luck.

In the other villages there were no anthills or people were not afraid of provoking spirits, dwarfs or *nuna sa punsas* in the hills. They often destroyed the hills because they are in the way.

Trees with fireflies

It is believed that when a bigger amount of fireflies resides in a tree, there might be a spirit or a good fairy present. In the past people respected the trees and didn't cut them; but is that still the case nowadays?

In Casala these beliefs are present: some people believed that a tree with many fireflies is inhabited by a spirit. The respondent in Quimalabasa told that fireflies bring good luck, but if you cut the trees in a circle of ten meters around the fireflies it might bring you bad luck.

Most respondents of the villages didn't believe that there was a spirit in a tree that swarms with fireflies. They told that fireflies just choose the trees they like and that it's all natural. Also in Ampoy, in spite of the many fireflies, there were no further beliefs behind it.

***Diwatas* and other fairies**

Diwatas are the fairies that reside in big trees. Also these fairies should not be provoked, because they can bring sickness. The respondent in Casala indeed knew about the good fairies, but when you destroy their houses, they will punish you like giving you big feet so you can't return home. In Mamaga the respondent told that there are *diwatas* living in any kind of tree. If people fear them, they can get ill. If they are brave, then the chance is small of getting sick.

In Pulang Lupa some people believe that there are fairies present in deep creeks. If they know about it, because someone falls sick after being near the creek, they stay away from that area. There are many other kinds of fairies, like the *dayaban*. This fairy flies through the sky during the night, looking like a ball of light or a flashlight. When someone sees this fairy, he can get sick. The teacher from the village once saw this fairy, but did not fall ill. Whether you fall ill or not depends on your personality and health.

In Quimalabasa there was one tree present with a *diwata*, and one should not throw stones near the tree because the fairy would get hurt. It is ok though to cut the tree when asked permission.

Giants in the forest: *kapre* and *gigante*

The tall dark giants that linger in the forests are called *kapre*. They smoke tobacco leaves, and that's why some people get afraid when they smell tobacco. The *gigantes* are also giants, but are not the same as the *kapre*. Some people associate the *kapre* with the big old trees, and tell that the name of the spirit in those trees *kapre* is, like the respondent in Dipugpug.

In Magamian people have seen the *kapre*, but other people say they only live in Ifugao. The *kapre* is a tall man with fire in his armpits. It resides in the forest or fields, and doesn't live in a specific tree. A story from the Japanese regime tells that a man once

tried to shoot a *kapre*, but the bullet just went through it and the *kapre* couldn't be killed. Because the man saw the *kapre* and because his fighting spirit was weak, he died.

Caves

According to the respondent in Casala there are scary, black spirits living in caves. The caves are seen as the house of *anitos*. Their physical appearance changes into pigs, cats, dogs and other shapes. These spirits can be recognized when the animal is disproportionately big and when it suddenly disappears or runs away. The belief systems are fading, which is good according to the respondent because the existence of these spirits is based on fear of people.

In Magamian there are no caves, but the respondent told that there are some in Ifugao that are dangerous. You can fall sick when entering the cave. For recovering one should go back to the cave to apologize. In Capellan a cave was present, but this was not sacred and people did not believe that there are spirits residing. In the other villages there were no caves or people didn't believe there are spirits dwelling in them.

Discussion

A difficulty with the subject is the fact that people are connected to Christianity and that they are often ashamed of their animistic belief systems and practices. The period that we stayed in the area was also too short to get a good impression on in what extent the belief systems still exist. In some villages nothing was believed anymore, or people were not willing to tell about it. Sometimes the beliefs were still present, like in Magamian, where some people believe in *kapre* and *diwatas*, but it was not clear what influence it had on the environment and on how people treated these trees.

Some traditional beliefs were still present, but they just practiced it in the Ifugao province, for example the ancestral (burying) places (not in their current village.)

Sometimes there were still big trees in villages where the spiritual beliefs are gone. The most common reason that the trees were still there, was that they were useful as a provider of shade and fruits. Some also answered that the wood of the tree was useless, the tree just grew there and they did not feel like cutting it, or that it was easy to shoot the birds and bats out of the tree because it fruits and attracts the animals. Big stones were too heavy to replace them somewhere else.



Photo 2: Balete tree in a field

Conclusion

Most of the spiritual beliefs of the people are gone, although many respondents still know spiritual stories. The belief systems are often personal and not widely shared. In some villages were people present who believed in several creatures, while other villages had no inhabitants that had spiritual beliefs.

The strongest existing beliefs are those about big trees, inhabited by spirits, *kapres* or fairies. About half of the respondents knew the stories and were careful. Some of them were essentially afraid to provoke the spirit inside. These fears and respect have an influence on how people shape their environment, because some people actually protect the trees by not cutting and burning it, although there are not many people who do this and there are very few trees left.

Five of the respondents in the villages spoke about their beliefs on fairies or *diwatas*. They were present in trees, deep water creeks and in the sky. They were afraid of provoking them, but it is not clear what influence this had on the environment. Trees with fireflies were in general seen as natural, and there were no problems to cut these trees.

In three of the villages anthills got protected by building and replacing houses away from it and cultivating land around the anthills, so this believe is still somewhat alive and influencing the landscape. The sacred caves have no influence on the environment because there are simply no caves or people don't believe there are spirits residing in them.

In table 1 the presence of a church and priest in the village is included and also the religious activities with their frequencies. There seems to be a connection between the intensity of the current religion and the spiritual believes, but different then I would expect. I assumed that their new religion would replace the spiritual believes, and that in villages with strong religious believes the spiritual believe would be the lowest. But the data seems to imply that it's the other way around and that there is a positive connection between religious and spiritual beliefs.

Name of village	Age	church	priest	Religious activities	Balete and/or rain tree	termite hills	trees with fire flies	<i>Diwatas</i> and other fairies	<i>Kapre</i> and/or <i>gigante</i>	Sacred caves	Total
Magansimid	1995	0	no priest								0
Mamaga	1992	0	no priest	weekly singing at home							0
Balete	1992	0	no priest	weekly at some ones home							0
Tapwakan	1997	1	no priest	weekly mass, not strict							0
Ampoy	1980	0	no priest	weekly to Pulang Lupa but not strict at all							0
Puerta	1972	0	no priest	once or twice a month in Masipi	yes						1
Coop	1985	1	no priest	weekly mass, not strict				yes			1
Capellan	1970	6	yes	several times a week depending on the church					yes		1
Nagbaracalan	1979	1	yes	once a week	yes						1
Quimalabasa	?	0	no priest	weekly to Tapwakan but not strict at all			yes	yes			2
Dipugpug	1960	2	yes	2 times a week	yes				yes		2
Pulang Lupa	1978	1	no priest	1 or 2 times a week , intense masses	yes			yes			2

Banig/ Dy Abra	1989	0	no priest	weekly mass, born-again daily activities	yes	yes						2
Magamian	1993	1	no priest	mass on Sunday, social gathering	yes	yes		yes	yes		In Ifugao	4
Casala	1960	3	yes	daily activities, strict	yes	yes	yes	yes	yes		yes	6
Total					7	3	2	5	4		1	

Table 1: spiritual beliefs

3.14. Logging in the western side of the Northern Sierra Madre Natural Park

Celestino T. Reyes Jr.

Introduction

Logging is a source of livelihood in the upland particularly along the western side of the Northern Sierra Madre Natural Park (NSMNP). There are different people involved in such activity. Usually the farmers are the cutters financed by people in the lowlands (*capitalista*).

Methodology

We interviewed Ifugao living along the western side of NSMNP in 15 villages. The following questions were asked to the respondents:

- Do you own chainsaw?
- How many trips to the forest do you make per month to do logging?
- How many days is one logging trip?
- How much do you earn with logging per trip?
- What is your function?
- What tree species do you cut?
- Do you have a permit or permission from the officials?
- Do you think that logging should be stopped?
- Who is responsible to protect the forest?
- Do you also have a role in the protection of the forest?

Discussion

Out of 127 interviewed, 27 owned chainsaw this is 21.2% (table 1). Eleven people out of the 127 people interviewed in all the different research areas said that they participated in the logging (8.6 %). The majority of them said they make one trip per month (9 out of 11). It takes 3 to 7 days to make a logging trip. They earn from PhP. 1,000 to 6,000 per trip. Most of them are chainsaw operator, the rest are helpers and transporter.

Species cut are mostly dipterocarp (table 2). They have no legal permit (table 3). 86 out of 127 respondents said that logging should be stopped; the rest wants logging to continue (table 4). They said the DENR, LGU are responsible for the protection of the forest (table 5). 56 of the respondent said that they have also a role in the protection of the forest (table 6).

Village	Types of transporting logs	Number of chainsaws per village
Coop	Water logging	5
Balete	Carabao logging	2
Quimalabasa	No logging	
Pulang Lupa	Carabao//water logging	1
Banig (Dy Abra)	Carabao logging	1
Magansimid	No logging	2
Tapwakan	Carabao/water logging	1
Capellan	Carabao logging, then collected by trucks	2
Simanu	No logging	1
Ampoy	Water logging	1
Cinamnama	?	2
Magamian	Carabao logging	1
Puerta	Cow/ Carabao logging	2
Mamaga	No logging	4
Casala	Water logging	3
Total		27

Table 1: Logging

Common name	Scientific name
Red Lauan	<i>Shorea contorta</i>
White Lauan	<i>Shorea astylosa</i>
Bagtikan	<i>Parashorea malaanonang</i>
Mayapis	<i>Parashorea squamata</i>
Guijo	<i>Shorea guijo</i>
Narra	<i>Pterrocarpus indicus</i>
Abnid	?
Delawen	?
Apnit	?

Table 2: Species that are cut in the forest

Village	There is issuance of permit	There is no issuance of permit
Coop	1	3
Balete		3
Quimalabasa		
Pulang Lupa		1
Banig (Dy Abra)		
Magansimid		1
Tapwakan		1
Capellean	2	1
Simanu		1
Casala	2	
Ampoy		
Cinamnama		
Magammian	1	4
Puerta		
Mamaga		3
Total	6	18
Percentage	4.7 %	14.2 %

Table 3: People who say they have permit

In terms of permit to cut for forest protection 4.7 % of 127 respondents replied positively from the 15 villages while 14.2 % do not have a permit.

Village	Yes	No
Coop	5	1
Balete	5	
Quimalabasa	6	1
Pulang Lupa	1	2
Banig (Dy Abra)	9	1
Magansimid	8	2
Tapwakan	5	3
Capellan	5	3
Simanu	10	
Ampoy		
Cinamnama	10	
Magamian	7	1
Puerta	1	4
Mamaga	4	2
Casala	10	
Total	86	18
Percentage	67.7 %	14.2 %

Table 4: People saying logging should be stopped.

In terms of the views if logging should be stopped in these 15 villages, 67.7 % of the respondents said yes, while 14.2 % responded no.

Village	DENR	LGU
Coop	4	
Balete	5	
Quimalabasa	2	
Pulang Lupa	2	
Banig (Dy Abra)	10	
Magansimid	8	2
Tapwakan	8	
Capellan	2	1
Simanu	7	3
Casala	9	1
Ampoy		
Cinamnama	4	1
Magamian	7	1
Puerta	2	
Mamaga	4	
Total	74	9
Percentage	58.3 %	7.1 %

Table 5: Responsible government agencies to protect the forest

In terms of the responsible agencies involved in the protection of the forest, 58.3 % from 127 respondents from 15 villages say it comes from the DENR while 7.1 % of the respondents view the LGU as a responsible agency

Village	Yes	No
Coop		
Balete		
Quimalabasa		
Pulang Lupa		
Banig (Dy Abra)	7	3
Magansimid	9	
Tapwakan	7	
Capellan		2
Simanu	7	3
Ampoy	1	
Cinamnama	9	1
Magamian	4	4
Puerta	1	2
Mamaga	1	4
Casala	10	
Total	56	19
Percentage	44.1 %	15 %

Table 6: Villagers' role in protecting the forest

In terms of role of villagers in the protection of the forest, 44.1 % out of 127 respondents positively responded while 15 % of them answered negatively.



Photo 1: logger

In terms of trip going to the forest 81 % of them are once a month, and 19 % is once a week. In earnings per logging trip, 50 % earns between PhP. 1,000 and 2000 per logging trip. 73 % of the people who told us that they are logging.

Conclusion

Some said they are doing illegal logging because they have difficulties to support their livelihood, while others are not doing illegal logging. Illegal logging is one of the alternative livelihood strategies to survive. That's why they can't stop doing this illegal logging. They are trying to stop doing illegal logging, but cannot stop because of the influence of the some business men.

3.15. Hunting

Cynthia B. Malayao

Introduction

By definition, hunting is the practice of pursuing animals for food. In modern use, the term refers to the regulated and legal hunting, as distinguished from poaching, which is the killing, trapping or capture of animals, Hunted animals referred to as game animals, and are usually large mammals or migratory birds.

Hunting is also done by indigenous people such as Ifugao because it is a source of their livelihood and a source of food. Hunting can be an important tool for managing wildlife resources.

Research Questions

- What wildlife species do the Ifugao usually catch?
- What are the methods in hunting?
- What is the frequency?
- What is the purpose in hunting?
- What is the best season for hunting?

Methodology

The respondents for this topic were randomly sampled based on different 15 villages' records of household. The data presented here are based on interviews with 10 respondents (five males and five females).

Discussion and conclusion

Out of 131 interviews in all villages 19% respondents are hunting wild pigs, 12.2% wild chicken, 13.7 monkeys, 0.76% snake, 13.7 % monitor lizard, 1.5% wild cats and 9.1% birds.

Every species of wild animals caught in all villages is used for food. Traps (*silos*) are used for wild chicken and some kinds of birds. Air guns are also used for shooting birds and other wild animals. Blasting is used for hunting wild pigs. One of the respondents used dogs for hunting to pursue and kill prey. The best month or season for hunting is in the month of April to July and December to January, and they usually much prefer the rainy season.

Village	No. of finished interviews	No. of hunters	Wild pig	Wild deer	Monkey	Snake	Monitor lizard	Wild chicken	Wild cat	Bird
Simanu	10	1					1			
Magamian	10	3	3	3	3	1	1			
Balete	10	5	4				1	3		2
Puerta	9	3	3	1	3		1	3		1
Mamaga	10	1			2			2	1	2
Magansimid	7	4	5	2	2		1	2		1
Banig	10	8	6	2	2		3	1		1
Capellan	10	1	2	1	1		3	1		1
Tapwakan	8	3	1	1	1			2		2
Pulang Lupa	8	1	1				3			
Ampoy	5						1			1
Quimalabasa	6	3	2	2	2			1		
Coop	8	3	1	1	1			1		
Casala	10	2	1	1	1		1	2		
Dipugpug	10	3	2	2	2		1			1
									1	
Total	131	25	31	16	18	1	17	18	2	12

Table 1: hunting

3.16. Fishing

Edwin B. Diciano

Introduction

Water resources abound in the Isabela watersheds. Water flows from the mountains to different river tributaries. As such rivers are teeming with freshwater fishes. These fishes therefore serve us important food, source of many households along and near these river systems. Fishing becomes an important livelihood activity among villagers.

Objectives

Determine what types of fresh water fishes are locally present in the river near the villages that serve as food and source of income.

Methodology

From a prepared questionnaire, interviews were conducted in fifteen Ifugao villages visited by the different counterpart teams involving at least five male and five female villagers as to the following:

- name of the species of fish;
- methods used in fishing;
- utilization of fish species being caught;
- frequency of fishing.

Results and discussion

Table 1 shows the distribution of respondents that responded positively to fishing activity in the different fifteen villages: 58 out of 136 total respondents. The highest numbers of fishermen and -women were found in Banig at 90% followed by Casala at 80% simply due to accessibility of their houses to the rivers. Balete, on the other hand, does not have any fishing activity because of the distance to the river.

Village	number of people fishing	number of respondents per village	percentage of people fishing
Ampoy	1	7	14
Capellan	2	8	25
Coop	3	10	30
Banig	9	10	90
Mamaga	2	7	29
Dipugpug/Cinamnama	4	10	40
Balete	0	8	0
Tapwakan	5	8	63
Simanu Norte	5	10	50

Magamian	7	10	70
Puerta	6	10	60
Pulang Lupa	2	10	20
Casala	8	10	80
Quimalabasa	1	8	13
Magansimid	3	10	30

Table 1: fishing

Table 2 shows that there are 8 different types of fresh water fishes found in all of the 15 villages visited with a total of 136 respondents. Native tilapia was recorded as the most encountered fish at 33%, followed by mudfish (20%) and the least is goby fish (2%) and white shrimps (2%). The methods of fishing correspond to what is the most appropriate for a given type of fish. Fishing net is the most common method followed by the use of hooks, spear gun and electrolyte. 100% of the respondents said that the fish caught is used for food. The types of those that are sold to markets include the crabs, eels, catfish and mudfish.

Conclusion

There were 8 types of species of fish and crustaceans that serve us food source among the villagers. The methods are basically still primitive type, using net, hooks and spear gun. The most common species sold by the villagers are crabs, mudfish, eel and catfish. Hence, fishing is an important livelihood and subsistence activity among the Ifugao villagers

English name	Scientific name of fish species	Methods in fishing					Respondent total	Percentage n=136
		Hands	Hook	Fishing net	Spear gun	Electrolyte		
Goby fish	<i>Gobius criniger</i>		x	x	x		3	2%
Small fish	<i>Aulostomus maculatus</i>			x			16	11%
Tilapia	<i>Hermichromis bimacolatus</i>		x	x	x	x	45	33%
Catfish	<i>Kryptopterus bleeker</i>		x	x	x	x	12	8%
Eel	<i>Aguilla marmorata</i>		x		x	x	14	10%
Crabs	<i>Calinectes sapidus</i>	x					6	11%
Shrimps	<i>Macrobrachium resenbergi</i>	x		x		x	3	2%
Mudfish	<i>Christia obcordata</i>		x	x	x	x	28	20%

Table 2: fish species and fish method

3.17. Non-timber forest products

Mark-Anthony C. Tuliao

Introduction

Non-timber forest products (NTFPs), or non-wood products, are those items harvested or removed from the state forest lands for private use or for re-sale. Practically speaking, NTFPs are plants or parts of plants that are perceived to have economic or consumption value sufficient to encourage their collection and removal from the forest. While NTFPs have perceived values for humans, there are also conservation concerns. When the sustainability of a species or the health of the other components of the forest ecosystem are threatened by the NTFPs monetary importance and corresponding harvest rates, the conservation point of view becomes of great importance.



Photo 1: Roof made of Runu



Photo 2: Bamboo

Objectives

With this research we want to determine, first, the types of NTFPs that are being collected by the people in the Northern Sierra Madre Natural Park, specifically the Ifugao, second the purpose of their collection and third determine the frequency of collection to know the impact of this on the surroundings.

Methodology

Data was collected by interviewing 127 respondents of the 15 villages on the 3 formulated objectives mentioned above and also by observing the surroundings of the villages. The villages include: Quimalabasa, Tapwakan, Ampoy, Pulang Lupa, Coop, Capellan, Dipugpug, Casala, Banig, Magamian, Puerta, Balete, Magansimid, Simanu and Mamaga.

Results

The respondents (127) of the different villages are using the following NTFP, these are:

Ifugao name	Ilocano name	English name	Scientific name	no. of people	% (n=127)	Food	Making baskets	building houses	for tying and other purposes	for chewing	selling	decoration	Medicine cough
<i>Hugoy</i>		Rattan	<i>Calamus margarite</i>	65	51%	3	44		43				
<i>Ugo</i>	<i>Bulu</i>	Bamboo	<i>Bambusa vulgaris</i>	55	43			47	20				
<i>Fenaang</i>	<i>Sugud-Sugud</i>	Rambutan	<i>Nephelium cuspidatum</i>	43	34	43							
<i>Hapid</i>	<i>Gawid</i>	(<i>Gawid</i>)		21	16	2				21			
<i>Iguon</i>	<i>Uyucan</i>	Honey	<i>Prosopis glandalusa</i>	33	27	33							2
<i>Billao</i>	(<i>Anahaw</i>)	<i>Anahaw</i>	<i>Levistona rotundifolia</i>	3	2			3			5	3	
<i>Dapo</i>		Orchids	<i>Cyanicula blue orchids</i>	6	5								
<i>Ibanau</i>	<i>Runu</i>	(<i>Runu</i>)		42	33			42					

Table 1: non-timber forest products

As we can see in the table 1:

- 51% of all the respondents are using or collecting rattan,
- 43% of all the respondents are using or collecting bamboo,
- 34% of all the respondents are using or collecting rambutan,
- 16% of all the respondents are using or collecting *gawid*,
- 27% of all the respondents are using or collecting honey,
- 2% of all the respondents are using or collecting *anahaw*,
- 5% of all the respondents are using or collecting orchids,
- 33% of all the respondents are using or collecting *runu*.

The majority of the people collect rattan for use in their own households (68%) or to use during the construction activities (66%). Only few people collect rattan for food (3%).

Most people collect bamboo to build their house (85%). But bamboo is also used in other structural purposes (36%). Out of 43 respondents, 43 are collecting rambutan for their food (100%). Out of 21 respondents who are collecting *gawid*, 9% use it for food and 100% use it for chewing. Out of 33 respondents, 33 are collecting honey for food (100%). Some of them use it also for medicine to cure cough (6%). Out of 3 respondents, 3 are collecting for building houses (100%). Out of 3 respondents, 3 collect *anahaw* for the roof of their houses (100%). Out of 6 people collecting orchids 5 of them are using this for selling (83%), and some of them use it as decoration (50 %).

Conclusion

In 15 villages, the most common NTFP is rattan because it can serve them in different ways and purposes. We found out also that some Ifugao migrants are not using NTFPs. Collecting NTFPs is very hard work; therefore some people are not doing it. Another reason can be because they can buy them from other people.

3.18. The use of medicinal plants by Ifugao-migrants in the foothills of the Sierra Madre mountain range

Jasper Wester

Introduction

With this research we wanted to see in how far the Ifugao migrants would be in touch with their environment, looking at the usage of medicinal plants taken out of the forest versus the medicinal plants they cultivated themselves or are growing around the village.

Archaeological evidence tells us of early man's use of herbal cures for his common ailments; and it is from ancient herbals that our pharmacopoeias have developed. It is well known that here in the Philippines, not only the so-called *arbularyo* (or *herbularios*) but also those who have scientific schooling make use of plants in the treatment of diseases (Padua 1997). In what level are the Ifugao in the Northern Sierra Madre using these medicinal plants and how much do they know about the availability of the curing possibilities by the plants surrounding them?

Methodology

By asking the people which medicinal plants they knew in the forest and in their cultivated area and then asking them which of these plants are of biggest importance to them we wanted to see if there would be a difference in importance of the wild medicinal plants and the cultivated medicinal plants. By using this method we might be able to say something about their connection to the forest instead of asking this as a direct question. In every one of the 15 villages, students filled in two forms, one form with the cultivated medicinal plants and one with the plants found in the forest. After filling in these forms people asked what was the most important plant for them. In this way you should be able to see where the most important medicinal plants are to be found, in the forest or in the cultivated domain. Next to that there were three questions in the regular questionnaire, namely (question number 105, 108 and 110 in the questionnaire):

- Which steps do you take when you fall ill?
- Do you think there is a reduction in the availability of medicinal plants in the forest?
- Do you perform any rituals when somebody falls ill

These questions are asked to 115 informants of both sexes and living in all the 15 sitios.

The first thing I noticed when we got all the forms back from the other 14 villages was that there was some methodological problem concerning the ranking of importance of the medicinal plants. Most of the people were not able to do this or said that all the medicinal plants were of equal importance. Or, "the importance was depending on the cause of illness" (Bruins 2007). Out of the 14 forms only 2 were used in the way I wanted it to be used. This is a lesson for me to try to make things more clear the next time I have to think of a methodology.

List of the mentioned medicinal plants and their utility

Table 1 presents a list of species mentioned by 20 Ifugao migrants of both sexes living in the 15 different sitios. The numbers show the frequency an informant mentioned the species.

Ilocano name	English name (scientific name)	Cultivated or around village	Wild, found in forest	Usage
<i>Oregano</i>	Oregano (<i>Plectranthus amboinicus</i>)	12	-	Mild cough, child fever
<i>Guyabas</i>	Guava (<i>Psidium guajava</i>)	6	2	Sores, cuts, diarrhea
<i>Bain-Bain</i>	Shy-plant (<i>Mimosa pudica</i>)	5	3	Kidney problems, snake bites
<i>Dangla</i>	Chasete tree (<i>Vitex negundo</i>)	7	2	Tiredness, fever, with birth
<i>Alipauen</i>	Milky pine (<i>Alstonia scholaris</i>)	3	4	Malaria (boil bark)
<i>Boa</i>	Betel-nut (<i>Areca catechu</i>)	3	3	Teeth, de-worming, diarrhea
<i>Lapting</i>	Hauili (<i>Ficus septica</i>)	3	2	Diarrhea, cough, malaria, stomach
<i>malunggay</i>	Horse radish (<i>Moringa oleifera</i>)	3	1	Snake bite, infection
<i>Makabuhay</i>	Makabuhay (<i>Tinospora crispa</i>)	2	1	Diabetics, high blood, malaria
<i>Susuk</i>	Banana-flower (<i>Musa sapientum</i>)	2	2	Stomach-ache, diarrhea
-	Avocado-leaves (<i>Persea americana</i>)	4	-	Diarrhea, common sickness
<i>Caimito</i>	Star-apple (<i>Chrysophyllum cainito</i>)	2	1	Diarrhea
<i>Gawit</i>	Betel-leaf (<i>Piper betle linn.</i>)	2	1	Cough, mild fever
<i>Papaya</i>	Papaw tree (<i>Carica papaya</i>)	3	-	Wounds, rabies
<i>Yesabila</i>	Aloe (<i>Aloe vera linn.</i>)	3		Hair problems, dandruff
<i>Bang-bang-sit</i>	Bush-tea-bush (<i>Hyptis suaveolens</i>)	2	1	Heal wounds, infections
<i>Erbaka</i>	Worm-wood (<i>Artemisia vulgaris</i>)	1	1	Cough, menstruation, kidney
<i>Sob-sob</i>	Camphor (<i>Blumea balsamifera</i>)	1	1	Itchy body

<i>Kalamansi</i>	Chinese orange (<i>Citrus microcarpa</i>)	2	-	Cough, cold
<i>Laya</i>	Ginger (<i>Zingiber officinale</i>)	2	-	Colds, cough, throat, stomach
<i>Lukban</i>	Pomelo (<i>Citrus grandis</i>)	2	-	De-worming, cough, diarrhea
<i>Narra</i>	Narra (<i>Ptecarpus indicus</i>)	-	2	Arthritis, skin disease, malaria (bark)
<i>Paria</i>	Bitter gourd (<i>Momordica charantia</i>)	2	-	Malaria, stomach-ache
<i>Tagumbau</i>	Physic nut tree (<i>Jathropa curcas</i>)	2	-	Stop bleeding, headache, bites
<i>Andadasi</i>	Ringworm-bush (<i>Senna alata</i>)	2	-	Skin disease, white spots
<i>Kogon</i>	Cogon (<i>Imperata cylindrical</i>)	2	-	Kidney problems
<i>Kayanga</i>	Shoeflower (<i>Hibiscus rosasinensis</i>)	2	-	Flower for pain and teeth
<i>Mahogany</i>	Mahogany (<i>Swietenia mahogany</i>)		2	Malaria, cough, miscarriage
<i>Abisrana</i>	Katakataka (<i>Bryophyllum pinnatum</i>)	2	-	After heating for throat, headache
-	Garlic	1	-	Body defense
-	Ginseng	1	-	Cleansing of body
-	Spring onions	1	-	Strong resistance
<i>Lanot</i>	German ivy (<i>Senecio scandens</i>)	1	-	Stop bleeding
	Orchids	1	-	Kidney problem, fever
<i>Bila-bila</i>	Wire grass (<i>Eleusine indica</i>)	1	-	Against some bites
<i>Pako</i>	Fern (<i>Asplenium nidus</i>)		1	Vegetable with vit.B, stomach
<i>Disol</i>	Gisol (<i>Kaempferia galangal</i>)	1	-	Cough, stomachache
<i>Luha</i>	Bird-cactus (<i>Pedilanthus tithymaloides</i>)	1	-	Skin burn
<i>Kalingag</i>	Mind. Cinnamon (<i>Cinnamomum mindanaense</i>)	-	1	Wound infection
<i>Tubli</i>	Tubli (<i>Derris elliptica</i>)		1	Wound, skin disease
	Pineapple	1	-	Worms
<i>Busbusilak</i>	Pandakaki (<i>Tabernaemontana</i>)	-	1	Milk for wounds

	<i>pandacaqui</i>)			
<i>Ipil-ipil</i>	San pedro (<i>Leucena glauca</i>)	-	1	Worm infection (seeds)
<i>Adelfa</i>	Oleander,Ceylon (<i>Nerium indicum</i>)	-	1	Sneak bite, ringworm
<i>Itangan</i>	(<i>Zanthoxylum avicennae</i>)	-	1	“curing any disease”
<i>Hagonoy</i>	(<i>Wedelia biflora</i>)	-	1	Stomach disorder
<i>Kabatiti</i>	Sponge gourd (<i>Luffa cylindrical</i>)	1	-	Malaria (seeds)
<i>Apatot</i>	Indian mulberry (<i>Morinda citrifolia</i>)	1	-	Closing cuts
<i>Atis</i>	Sugar apple (<i>Anona squamosa</i>)	1	-	Mild fever
<i>Pandan</i>	Fr. Screw pine (<i>Pandanus odoratissimus</i>)	1	-	High blood
<i>Santol</i>	(<i>Sandoricum koetjape</i>)	1	-	Diarrhea
<i>Guayabano</i>	Sour sop (<i>Anona muricata</i>)	1	-	Dysentery
<i>Acacia</i>	Rain tree (<i>Acacia concinna</i>)	-	1	Stomachache, diarrhea
<i>Tartaraok</i>	Chinese honeysuckle (<i>Quisqualis indica</i>)	-	1	headache
<i>Herba Buena</i>	Peppermint	1	-	Pregnancy !/?
<i>Kuchay</i>	(<i>Allium odorum</i>)	1		UTI (bark)
<i>Banaba</i>	(<i>Lagerstroemia speciosa</i>)	-	1	
<i>Bugnai</i>	Bignai (<i>Antidesma bumus</i>)	-	1	UTI
<i>Cadena de amor</i>	(<i>Antigonon leptopus</i>)	-	2	Closing wounds
Total : 59		122	43	

Table 1: list of medicinal plant species



Photo 1: sample of Dangla

Ethical note regarding bio-prospecting

The publication of the local knowledge of medicinal plants and their usage is a sensitive issue. It should not be the case that for example a western pharmaceutical would get rich by the knowledge that is actually owned by the local people. The IPR (Intellectual Property Right) tries to protect these rights. “The policies imposed from above by international agencies and state bodies have frequently not met the needs and aspirations of ordinary people” (Sillito 2002). The information published in this report is purely meant for academic purposes.

Ifugao name or unknown dialect	Cultivated or around village	Wild, found in the forest	usage
<i>Talafing</i>	-	1	rabies
<i>Lakba-lakha</i>	-	1	For wounds
<i>Kusia</i>	1	-	For injuries
<i>Run Lai</i>	-	1	-
<i>Hanak tea</i>	-	1	<i>Naganwalan</i>
<i>Hopa</i>	-	1	Diarrhea, headache
<i>Agimit</i>	1	-	Stomach diseases
<i>Gatasan</i>	1	-	Sour eyes
<i>Pawekan</i>	1	-	wounds
<i>NPA-vine</i>		1	Closing wounds
<i>Tatalikod</i>	1	-	Mild cough

<i>mancanilia</i>	1	-	Fever and cough
<i>Nymph tree</i>	-	1	Anti mosquito
<i>Melda</i>	-	1	Closing wounds

Table 2: Medicinal plants only by the Ifugao or some other local name (I couldn't find these plants in the literature)



Photo 2: The papaya tree next to house can be used for curing a wound.

Data analysis

Most of the Ifugao migrants don't use medicinal plants or only for minor injuries or mild diseases, but will take medicines instead or will visit the local healthcare facility if they have the money.

What steps do you take when you fall ill?	Frequency:	Percentage:
Pray	5	4.3
Pray and go to doctor if praying doesn't work	9	7.8
Pray then use plants if that not works go to doctor	5	4.3
Use plants and go to doctor	20	17.3
Go to hospital	14	12.2
Take pills	31	27
Perform a ritual	1	0.9
Go to a doctor	27	23.5
Take medicinal plants	2	1.7

Total	115	100
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Table 3: Steps when people are ill

A lot of the Ifugao migrants are Christians and pray to God to cure the sick. As you can see in the below table only a few are still practicing or in touch with their traditional healing methods like for example *buni* (a traditional healing ceremony coming from Ifugao).

Do you perform any rituals when somebody falls ill?	Frequency:	Percentage:
<i>Buni</i>	4	3.5
Use medicinal plants	5	4.3
Not anymore (no)	15	13
Yes (some people slaughter a pig for example)	17	14.8
Praying to God	32	27.8
No	42	36.5
Total	115	100

Table 4: healing rituals

Most of the plants used by the Ifugao immigrants are found in the cultivated domain. There will be exceptions and also in our research we found some people who knew much more about the availability of medicinal plants in the forest but in general the plants that are most used are found in the cultivated domain. If the people out of the sitios or barangays would get medicinal plants out of the forest they do this most of the time in secondary forest and not so much in virgin forest. The people who will get medicinal plants in the virgin forest were very few in this particular research.

Some Ifugao migrants took plants out of Ifugao province and tried to plant them here, sometimes that works but most of the time this is difficult because of the difference in climate.

In the place where we were situated, namely Capellan we did not find many people who went out to the forest to collect medicinal plants. Mostly only the hunters or loggers that we met knew a little bit more about the plants that can only be found in the forest but in general I would say that the Ifugao-migrants in Capellan sometimes use medicinal plants that they get out of there garden or a nearby place but more often they will go to see a doctor or use medicines (if they have money) when they are ill, next to that many of them pray to God.

Do you notice a reduction of the availability of medicinal plants in the forest?	Frequency:	Percentage:
No	29	25.2
Yes	50	43.5
I don't know, I don't use medicinal plants	36	31.3
Total	115	100

Table 5: scarcity of medicinal plants

Conclusion

The Ifugao migrants are using some medicinal plants that can be found in their environment especially when it comes to mild sicknesses, but most of them prefer to get medicines, go to a doctor or use a prayer. We have found a total of 59 medicinal plants plus 14 unidentified species, with all the villages combined there is quiet some knowledge about the available medicinal plants.

The plants used by the Ifugao that were interviewed are mostly cultivated and many people mentioned the reduction of the availability of medicinal plants in the forest or they didn't know if that was the case (see table above). The majority of the respondents named logging as the primary cause for this reduction of medicinal plants.

There are some individuals who have a connection with the forest through the use of medicinal plants but the majority of the people interviewed lacked this connection with the forest through the use of plants but are using medicines prescribed by doctors or going to the hospital in the nearby towns and if they use a medicinal plant most of the time they will get that out of there 'cultivated domain'. It seems that Christianity and medicines provided by the pharmaceutical industries have a more important role in curing diseases and treating other health problems than the medicinal plants found in the environment that is surrounding these Ifugao migrants.

Medicinal plants and healthcare

Many medicinal plants that people mentioned where used to cure diarrhea and I was shocked when some people told me that diarrhea was the number one killer in Capellan. It is nice to be in contact with the old traditions regarding the use of medicinal plants and see in how far people are aware of there environment but in the second week I stayed in Capellan there was a 4 year old girl who died because of diarrhea and that puts the use of traditional herbs in a different perspective. I don't mean to say that she died because of using medicinal plants but this death was close to my research topic and made a deep impact on me. This girl had been playing at my host families' house while I was there, and I was told that this girl suffered diarrhea for two days before she died. In our last interview we also spoke to man who lost his one year old son in May, because of stomach problems. Off course these deaths have not much to do with the use of medicinal pants by Ifugao migrants but in a more general way you could say that there is definitely a problem regarding the use of medicines or the access to healthcare in Capellan. When we spoke to the people about this problem, most of them would say that this problem was primarily caused by the water system. For example, upstream somebody was cleaning his pesticides sprayer in the river and 100 meter downstream someone was taking a bath in there. In Capellan many people we spoke to mentioned that the rivers were running dryer every year because of the intensive logging that is going on in the mountains.

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3.19. Drinking water management

Katherine Vad

Introduction

The Ifugao are known for building large and complex water systems. In Ifugao province, rice terraces were built to enable the cultivation of irrigated rice, demanding complex irrigation systems. The irrigation systems were completed with drinking water supply systems, bringing the water from sources in the mountains to the Ifugao settlements. The purpose of this research topic is to give a picture of the water systems of the Ifugao settlements in the Northern Sierra Madre. In this region, the cultivation of irrigated rice was abandoned in favor of upland rice, which does not need irrigation. Therefore, the focus will especially be on drinking water systems and their management by the Ifugao communities. The purpose is also to learn how much knowledge the migrants have brought with them from their original Ifugao province to the Northern Sierra Madre.



Photo 1: Running water in Balete

Methodology

Several techniques were used to gather the information presented in this paragraph. First, an observation and analysis of the drinking water sources used in each of the 15 sitios was performed. For each sitio, the students went to the water source and described the area with the help of a series of criteria. The criteria were the type of source used, the water transportation techniques, the distance to the village, the height and diameter of the trees around the source, the density of the forest, the vegetation covering the ground, the presence of signs of erosion or land slides, the appearance of the water (running or constant, color, odor) and the presence of fish in the water. The goal of this observation was to learn which types of water sources were used and the techniques to transport the drinking water to the settlement areas and to evaluate the state of the environment around the sources in order to assess the water quality and to identify sustainable water management practices.

Then, interviews were conducted to assess the water management practices of the Ifugao communities and the perception of the inhabitants of the sitios on the situation regarding the drinking water. The topics of the questions asked (questions number 77 to 83 see appendix 1) were focusing on the rules of the communities to protect the water source, on the maintenance of the drinking water systems, on the problems of seasonal water shortages or pollution and on the perception of the problems that can arise in the future, due to the changes in the environment. A hundred and twenty respondents answered the interview.

Type of water sources and water transportation techniques

Each of the fifteen sitios has one or several sources of drinking water. The types of drinking water sources are quite diverse though. They encompass mountain springs (in Ampoy, Tapwakan, Balete, Pulang Lupa, Casala and Quimalabasa), creeks or rivers (in Magansimid, Magamian, Quimalabasa and Puerta), *bubon* (a well dug beside a river or a creek; the water flows from the river or creek to the well and is filtered by the soil in between) making at the side of a creek or river (Lower Balesi and Magansimid), waterholes (in Coop and Mamaga) and underground water fetched with pumps (in Capellan and Dipugpug).



Photo 2: bubon

The water is transported to the sitios either by hoses or pipes (in Ampoy, Tapwakan, Magansimid, Quimalabasa, Balete, Mamaga, Pulang Lupa, Dipugpug, Casala and Puerta) or by the inhabitants with the help of plastic containers (in Capellan, Magamian, Coop and Lower Balesi).

There seems to be no general rule about which person of the household has to fetch the water, even though the men (husband, sons) seem to do it more often than the women.

The Ifugao communities were not always the ones to build the water systems. In the case of the sitio of Balete for example, the inhabitants were helped by Plan International to develop their drinking water supply system. The system is quite interesting. The village is using two sources from the mountains. The water from one source is directly transported by pipes from the source to the village but is only supplying water to a couple of households. The water of the other source is stored in a concrete tank built fifteen minutes walking distance from the village, upwards in the mountains. From the tank, the water is then transported by pipes to the rest of the households of the sitio. The tank assures the steady supply of running water to the households. During our stay in the sitio, we remarked that the tank is functioning well, since the supply coming from the tank is steadier (less water shortages, less pollution by mud) than the supply coming directly from the source.

Plan International also helped the inhabitants of Upper Casala to find a drinking water source and to build a water supply system. But, contrary to the improved situation in Balete, this has created problems among the communities of Upper and Lower Casala, the inhabitants of Lower Casala trying to damage the water supply system of Upper Casala. A complicating factor in this conflict is that the inhabitants of Upper Casala are mostly Ifugao and the inhabitants of Lower Casala are mostly Ilocano and Ybanag.

Maintenance of the drinking water supply system

The maintenance of the drinking water system is well organized in the fifteen sitios. The water systems are usually cleaned and repaired by the whole community depending on the water system, and especially by the men of that community.

The choice of who will perform the maintenance operation is usually done on the basis of who is available / has time in the village. Sometimes, one specific person or household is in charge of the maintenance of the system, then receiving compensation from the other households.

Drinking water quality

The state of the surroundings of a water source is a good way to assess the quality of the water of the source. A dense forest for example is usually a sign that the source will provide a steady supply of water. Furthermore, with the help of bushes and grasses, forests filter and clean the water.

Around the majority of the drinking water sources, the environment seemed preserved. The trees have generally a height lower than ten meters but the forest is quite dense and the soil is covered with bushes and grasses. Very few surroundings of the water sources show signs of erosions or land slides in the fifteen villages.

The inhabitants of the sitios are aware of the importance of preserving the environment around their water sources. A majority of the interviewees confirmed that there were specific regulations and rules to protect the surroundings of the source. Most of the rules cited are good environmental measures, as for example preserving the trees around the sources, planting new trees, cleaning the surroundings of the sources, not using chemicals like soap, pesticides, etc. close to the sources. It is interesting to note though that in each sitio, not every interviewee was aware of the rules concerning the water source.

The sitio of Magamian has a specific drinking water management. The water of this sitio comes from the river, ten minutes walking distance from the first houses of the sitio. The river is used for several purposes: carabao bathing, cloth washing, bathing and fetching drinking water. To assure the good quality of the drinking water, each purpose is performed in a specific area. According to the inhabitants of the village, the water containing soap or carabao dirt does not mix with the water used as drinking water because of a natural wall present in the river, even though the drinking water is fetched downstream of the other activities. The respondents explained that no intoxication due to drinking water has happened in the village, so they think the drinking water is of good quality.

As a consequence of these preventive measures, the quality of the drinking water in most sitios seems to be good.

A strong exception to this statement is the barangay of Capellan, which has an important problem of intoxication through drinking water.

The water used in the sitio comes from an underground source and is provided through a pump. The problem comes from the fact that the water first flows through all the rice and corn fields, where a lot of pesticides is being used, before regenerating the underground source. Furthermore, during March, April and May every year, the water in the pump

dries out, so the inhabitants fetch the water from the river, which is also polluted with chemicals from the fields. Finally, because of illegal logging upwards in the mountains, the rivers are getting dryer throughout the years, according to a couple of inhabitants, which is worsening the water quality.

This has led to dramatic consequences during the past few years. For example, during our stay in the barangay, a child died of diarrhea and parasites, which, according to the inhabitants, were probably caused by the bad quality of the drinking water.

A possible solution considered by the inhabitants of Capellan is to find a new water source in the forest of the mountains, more far away from the field areas, where the water would be of a better quality. But this takes a long time to implement, due to the infrastructure it demands and the investment both in time and financially the inhabitants have to make, because of the big distance between the forest and the barangay.

Problems in the water supply

Problems of water supply are often encountered by the inhabitants of the sitios and are linked to two specific climatic phenomena: drought and heavy rainfalls.

During the dry season, when there are long periods of drought, the drinking water sources can dry out. This is especially a regular problem in the following villages: Lower Balesi, Magamian, Balete, Pulang Lupa, Casala and Capellan. But every village has experienced water shortages during the dry season.

In Casala, the problem of water shortage is really severe during the dry season. One person is responsible for the maintenance of the water system in the sitio, and he is also the one to solve the water shortage problems usually. But since the problem is so regular, the inhabitants are also looking for a new source that could be used as a complement to the old one.

During the rainy season, the water usually gets dirty with mud when heavy rainfalls take place, making it unusable as drinking water. This one of the most common problem among all the sitios, since it concerns Ampoy, Coop, Tapwakan, Magansimid, Magamian, Quimalabasa, Capellan, Balete, Mamaga, Pulang Lupa, Dipugpug, Casala and Puerta.

This problem starts quite early in the season, since we encountered it twice during our stay in Balete in the month of July, just after the first heavy rains. In Balete, the problem of muddy water is less concerning than the water shortages though, since it lasts for a few hours, until the hoses and pipes gets cleaned of the mud.

Perceptions on the future of the water supply

The inhabitants of the different sitios are quite divided on the question of possible future drinking water shortages.

Forty-seven percent of the respondent answered that they do not fear that the seasonal water shortages will get worse. They think the source will continue to provide them with sufficient water, since they have not observed any changes in the water supply over the years.

Thirty-six percent of the respondents do think that the water supply will become more and more scarce in the future. The communities are aware of the practices

provoking the shortages since the reasons evoked to explain that fact were mostly illegal logging and kaingin. The inhabitants of Pulang Lupa and Ampoy are also particularly concerned for the water supply because of the recent development of mining activities in the proximity of their sitios. But in Ampoy, the mining company Altera is providing wood and help to the inhabitants to built a water tank that will improve their water supply system. Climate Change and the El Niño phenomenon were also given as reasons of more severe water shortages in the future by two different respondents.

All these answers are quite surprising and show that the communities of these villages get more and more information about environmental problems, which creates awareness for the quality of their own environment and the consequences that different actions can have.

The only solution proposed by some of the inhabitants to the possible future problem was to find another source in the mountains so that they would reduce their pressure on the source used at present and leave it to regenerate.

Seventeen percent of the respondents answered that they do not know what will happen in the future.

Conclusion

The Ifugao communities in the Northern Sierra Madre have shown that they are aware of the importance of having a clean and safe drinking water system. Through the protection of the environment around the source and the maintenance of their supply system, most of the sitios have a steady supply of safe drinking water.



Photo 3: Water tank in Balete

But the occurrence of regular seasonal drinking water shortages is concerning. A good solution to that problem is the utilization of a storage tank in between the source and the sitio. The tank produces a steadier flow of water to the sitio, can protect the water from mud during heavy rainfalls and will be able to level out the consequences of small

drought. But the construction of a tank is an important and difficult investment for the villages. Only two sitios out of fifteen were equipped with a tank: Balete, with the help of Plan International, and Ampoy, with the help of the mining company Altera.

But there are some reasons for concerns. The illegal activities like logging and kaingin making going on in the Northern Sierra Madre are putting the environment under a huge pressure. The Ifugao communities are aware of the possible consequences on the water supply. Solutions involving alternative livelihoods and better farming systems like agro-forestry exist, but are often complicated to implement. The communities need the help of the government to realize these changes.

3.20. Perception of waste and possible alternatives in waste management for migrants in the NSMNP

Angelica Mendoza

Introduction

In different societies and cultures the perception of what is considered to be waste or trash varies considerably, as do the attitudes of people towards it. Hence the definition of this concept is also a bit tricky and it is directly related to this perception.

There can be a case where waste is perceived as those materials that are left over from a certain activity and that need some type of handling. It can also be that people perceive that all materials have a use and therefore there is no waste.



Photo 1: waste

For the purpose of this research, the perception of the waste concept by the migrants of the NSMNP will be evaluated and described in order to formulate possible alternatives that can be implemented in these communities as options to improve the livelihood (hygienic conditions and alternative sources of income) of the inhabitants.

Methodology

To evaluate the perception of the concept of waste there are mainly two research methodologies used: first, observations in the field made by the students in the 15 villages (local initiatives, attitudes, habits) and second, the formulation of three basic questions that might give an impression of what migrants in the NSMNP think waste is and can be done with it.

These questions are:

- Do you have a word for waste in Ifugao? (84 in the questionnaire, see appendix 1)
- Which types of waste do you have in your village? (85 in the questionnaire)
- What do you do with it? (85 in the questionnaire)

The first question will lead to identify if in their language they use words to express a certain conception of waste and what you would like to do with it, plus obviously see if the word actually exists.

The second question pretends to see what they consider to be waste and needs to be handled or managed in some way and of course the following question will describe their attitudes towards what they consider to be waste.

With these data it is possible to identify waste management alternatives that arise from the communities' culture and normal behaviors, increasing the chance of success on their possible implementation.

Possible biases

During the interviews the formulation of the first question was done in Ilocano directly using the term *basura*. This could already bias the answer of the respondent that couldn't think of any other word in Ifugao language for it.

Also not all the respondents spoke Ilocano so the question was directly made in Ifugao, giving already the answer to the respondent and sometimes not making possible the formulation of the question.

In the second and third question suggestion of options by the students is a big bias in the results since we presented as options of waste what we (international and Filipino students) consider as waste and that might not be for them (the communities). This also might have created a situation in which the respondent did not speak freely and say what they really think.

Observations were much more useful since they are less biased and it's much better to describe practices that were really observed on the field by the students.

Data

The following tables show the number of respondents that mentioned on their answers a specific word for waste, a specific type of waste and a certain treatment applied by them in their respective villages.

	Basura (Ilocano)	Lokit, logit, lukit, lugit, nokit, Rugit (Ilocano)	Kalot, galot, kalut, halot	Most Common Origin place or ethnic group
Capellan	3	0	0	From around Banaue
Ampoy	3	2	0	Hungduan
Balete	1	1	2	Aguinaldo and Mayouyao
Casala	9	1	2	Lagaue
Baning	0	3	0	Tinguians
Dipugpug	5	1	1	Ifugao
Quimalabasa	0	0	0	Ifugao
Tapuakan	7	1	0	Lagaue
Mamaga and Masipi East	5	0	0	Ifugao - Ilocano
Magamian	6	3	2	Banaue and Lagaue
Simanu Norte	0	8	10	Ifuago - Ilocano
Pulang Lupa	1	0	0	Ifugao
Coop	7	0	0	Ifugao Nueva Viscaya
Magansimid	9	0	0	Ifuago
Puerta	3	2	0	Tinguians
Number of Villages that use the word	12	9	5	

Table 1: Main words for waste

	Plastics packages	Glass Bottles	Batteries	cans	Organic wastes (food skin)	Sacks	Animal Manure	paper	Leaves of trees	Human feces	Insecticides bottles	Cigarette Buts	Old Clothes	rice and corn straw	grass	Beetle Nut Shell	weed	carton	small pieces of wood	feathers
Capellan	4	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Ampoy	5	5	1	1	0	0	5	0	0	4	0	3	0	0	0	0	0	0	0	0
Balete	5	5	4	0	5	4	4	0	0	0	3	0	0	0	0	0	0	0	0	0
Casala	7	4	3	1	0	0	6	3	0	2	1	0	0	0	1	0	0	0	0	0
Baning	4	3	5	2	3	3	4	1	1	0	0	0	1	0	0	2	0	0	0	0
Dipugpug	10	7	6	5	4	1	2	1	0	1	2	0	0	0	0	0	0	0	0	0
Quimalabasa	8	5	4	2	0	1	4	1	4	2	0	1	0	0	0	0	0	0	0	0
Tapuakan	6	6	1	5	2	1	2	0	3	0	0	0	2	2	0	0	0	0	0	0
Mamaga and Masipi East	6	4	1	6	3	0	0	3	5	0	0	0	1	3	1	0	1	1	1	0
Magamian	9	8	1	0	6	1	1	2	7	1	0	0	0	8	0	0	5	0	0	1
Simanu Norte	9	9	9	2	7	3	5	1	2	0	3	0	0	0	0	0	0	0	0	0
Pulang Lupa	5	4	5	1	3	3	5	0	0	0	0	1	0	0	0	0	0	0	0	0
Coop	9	9	0	6	10	3	0	0	0	0	4	3	0	0	0	0	0	0	1	0
Magansimid	10	10	8	0	3	2	0	4	2	0	1	0	0	0	0	0	0	0	1	0
Puerta	9	7	0	6	4	0	0	2	3	0	0	1	1	0	0	1	0	0	0	0
Number of Villages that Mention the type of waste	15	15	13	12	11	11	10	9	9	5	6	5	4	3	2	2	2	2	2	1

Table 2: types of waste identified as wastes by the respondents

	Selling cans and bottles	Burning almost everything	Throwing away everywhere	Recycling and Reusing *	Burning almost everything	Throwing away in a disposal place	Animal Manure as Fertilizer	Burning Plastics	Composting Organic Waste**	Pile Glass not for selling	Leave pest/herb/insect bottles on the field	Store cans or bottles	Compact Glass	Piling batteries	Composting field waste in the field	Compost including batteries	Storing sacks for future reuse	Pile plastics and not burn or bury	Bottles use in landscape
Capellan	3	4	3	1	2	0	0	1	0	0	4	0	0	0	0	0	0	0	0
Ampoy	1	4	5	1	1	0	2	1	0	0	0	0	0	0	0	0	0	0	1
Balete	4	7	6	4	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0
Casala	2	7	3	1	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Baning	1	0	10	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Dipugpug	6	8	4	1	4	2	0	0	2	0	0	0	0	1	0	0	0	0	0
Quimalabasa	1	7	6	1	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Tapuakan	2	6	5	1	1	2	1	1	2	0	0	0	0	0	0	0	0	0	0
Mamaga and Masipi East	1	7	4	1	4	2	0	1	0	0	0	0	0	0	0	0	0	0	0
Magamian	2	10	5	1	1	5	0	0	2	3	0	0	0	1	0	0	0	0	0
Simanu Norte	7	9	8	0	0	1	2	0	3	0	0	0	0	0	0	1	0	0	0
Pulang Lupa	4	5	4	1	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Coop	7	10	3	***10	2	1	0	0	0	0	4	1	0	0	0	0	1	0	0
Magansimid	1	9	3	5	0	2	0	0	5	6	0	0	0	0	0	0	0	2	0
Puerta	6	6	0	0	0	1	0	1	0	4	0	4	0	0	0	0	0	0	0
Number of Villages that Mention the type of waste	15	14	14	13	11	10	8	5	5	3	2	2	1	1	1	1	1	1	1

* Of different types of waste (sacks, plastic and glass containers, feathers...)

** In some cases includes the leaves of trees

*** Coop case (See box 1)

Table 3: Treatment of the different types of wastes practiced in the villages

Observations from students

- Capellan: 2 young men come to the village to buy cans and empty glass bottles that are collected by our host family kids. They reuse sacks as long as possible. Pesticides, insecticides and herbicides empty bottles are all over the place.
- Ampoy: Cleaning the garden and throwing the waste wherever is a common practice; they reuse rice wine bottles and cooking oil containers for putting other things in them.
- Balete: they use sacks to put animal manure in them.
- Casala: There are disposal places in some households. Wastes are separated in some cases and dispose in different ways.

- Banig: Observations of plastics all over the village; clothes are reuse when old as pieces of cloth for different purposes; reuse of sacks to dry their products.
- Dipugpug: Notions of danger for kids caused by empty insecticides bottles; mentioned that broken glass has a lower price on the market and that they collect locally but there is no regional collector; some burning takes place always in a specific location instead of a random spot.
- Quimalabasa: mentioned that plastic makes fire better; burn the leaves; sweeping takes place; dumping occurs besides the house; burning also takes place in the kitchen (plastics); one of the respondents mentioned there is no word for waste in Ifugao because they burn everything.
- Tapwakan: they burn the field waste; dumping takes place next to the houses
- Mamaga and Masipi East: They bury glass bottles; they burn the dry core of the corn against mosquitoes; disposal of organic wastes in front of the house; reuse plastic containers; use of good feather from chicken to clean their ears.
- Magamian: Reuse of sacks in good quality; burn field waste to get rid of it (easy way of doing it); mentioned that human feces were the most common waste; throw plastics and organic waste in slope places near the houses; burn takes place in random spots near the houses, burning core of corn against mosquitoes.
- Simanu Norte (Nagbaracalan): Throw animal manure away from the houses; bury empty bottles of insecticides.
- Pulang Lupa: Reuse of empty bottles; dump batteries far away in the forest.
- Coop: Big place to burn and bury; local initiative on recycling chain (See box 1).
- Magansimid: reuse of bottles of pesticides to carry kerosene; dump batteries everywhere.
- Puerta: burn all together; some people just pile glass but they don't sell it, other do for 1 peso per 3 bottles.

Analysis of data

There was a consistent word that was used in all the villages to refer to waste. *basura* is the Spanish word for waste and comes from the Latin *versura* that refers to what has been swept, probably introduced in the Philippines during the Spanish colony period. This is an Ilocano word in the Philippines, which will initially suggest that in Ifugao there is no word to refer to waste as such.

On the other hand, 7 villages used the words *lokit*, *logit*, *lukit*, *lugit* and *nokit* in Ifugao dialects to refer to something you want to throw away. This gives a clue on the perception of waste even though it can not be generalized since it is not used in 100% of the villages. Another common word used in 5 villages is *kalot*, *galot*, *kalut* or *halot* and it is used by communities coming from Ifugao provinces. It apparently varies with the dialect of each area.

Some other words were mentioned in Ifugao, Ilocano and Tinguian. They refer to disposal places, types of wastes and actions you do when you handle waste. Some examples are:

- *Rugit* (waste in Ilocano)
- *Tacki* (human feces in Ilocano)
- *Punta palan* (disposal place in Ifugao)

- *Kawet* and *amak* (waste in Tinguian)
- *Basura-an* or *basurahan* (place to put the *basura* or disposal place in Ilocano)
- *Binalok*, *kinalot* or *ginalout* (waste in Ifugao)
- *Nilig* or *nilit* (disposal place in Ifugao)
- *Abuk* (compost pit in Ifugao)
- *Itapayu* (action of throwing away in Ifugao)

The existence of these words suggests that these migrants are aware of waste as things you need to handle somehow and/or that you need to get rid of, hence waste does exist for these communities and related concepts like dirty, throwing away, compost pit and disposal place are embedded in their language. Observations done by students in most of the villages, confirm that the perception of waste relates to those materials that need certain type of treatment after using them for their original purpose or after carrying out an activity, but depending on beliefs and knowledge of the people the practices will vary among villages.

On the other hand there is a certain pattern of what can be considered more common types of waste identified by the respondents (see table 2):

- Plastic packages
- Glass bottles
- Batteries
- Cans
- Organic waste (refers to vegetables and food skin mainly)

There are also some common practices even though not common reasons to practice them. They are (table 3):

- Burning: sometimes everything together, sometimes selective.
- Burying: usually selective, just bottles or animal manure or human feces, among others.
- Recycling and reusing: cans, bottles, sacks, and mainly everything for which you can find an alternative use or sell to get extra income.
- Throwing away everywhere and in specific places: mostly practiced with plastic packages and biodegradable waste.

There are beliefs and practices which are causing troubles for the environment and for the health of these communities; but it's also clear that there are other good practices that should be encouraged for the benefits of those communities (see below).

Relevant alternatives and initiatives

As mentioned on the analysis of the data, there are certain activities related to waste management that are performed in most of the villages, that need to be encourage and some other that are causing troubles for the environment and health of the inhabitants.

Most of the times the activities causing troubles are performed because of three main reasons:

- Lack of knowledge and awareness of the danger
- Because it is the easiest way of treating a certain waste

- Because it does not represent any benefit to do it in another way.

Activities such as the following imply health and environmental risks:

- Plastic burning: can cause emissions of toxic substances such as dioxins that can carry out malfunction of cellular mechanisms (cancer), reproductive problems such as malfunction of the endocrine system and neuronal problems in children. They also cause environmental problems since they accumulate throughout the food chain.
- Batteries burying: can conduct to evaporation of heavy metals contained in the batteries such as lead, mercury and cadmium. These heavy metals are highly toxic to humans and chronic exposure (through air or water) can end up in neuronal problems especially in newborn children that are exposed throughout their mothers' milk.
- Insecticides, pesticides and herbicides thrown everywhere: they represent high risks of intoxication and can leak through the ground ending up in water sources, increasing the routes of exposure.
- Composting including batteries: it implies a direct contact of the leaked heavy metals from the batteries into the crops.
- Piling batteries: can cause soil pollution with heavy metals if they are not well treated and just piled and exposed during long periods to strong weather conditions.

This is why actions like creation of awareness and education of the communities need to take place. Even though it might be better to encourage the good practices in order to avoid the negative ones and in this way the benefits of carrying out waste management in a beneficial way, will be seen and practiced by the communities.

The advantage is that beneficial practices are already part of their routine behavior so encouragement, which can be held by the government, is easier. Some of these practices are:

- Use of animal manure as fertilizer
- Composting of organic waste
- Culture of reusing and recycling
- Glass and cans separation for selling, among others.

These normal activities on the village represent opportunities in waste management that with a little bit of communal organization (which is already taking place in some villages) can lead to the improvement of livelihood of the NSMNP communities. Some possible examples of actions that can take place are:

- Identification of local or regional markets in central places for plastics, cans, glass and batteries recycling. Once the communities are aware of whom, where and how much will they get as incomes from selling these wastes in regional markets there is a clear incentive for them to have better practices on their villages. It's important to mention that some of the inhabitants of the villages are aware of these issues but there are few communal initiatives which will have a higher impact for these communities. They need to be taught on how to organize these initiatives.

- Selective burning and burying is something that can easily be taught and that is complementary to the recycling culture.
- Encouraging the formation of cooperatives or communal recycling initiatives, which can also include gender issues since females can be involved in organizing these activities. (See case of Coop)
- Community composting projects. They represent advantages such as avoidance of environmental problems like smells and improvement of hygienic conditions by prevention of disease vectors (mosquitoes, rats and others). Plus they are cost effective and need of very few initial capital investment.

Case: Coop recycling initiative:

An old man from Ilagan comes to Coop once a month more or less (even though he has only been there twice) and he collects the plastics, cans and bigger pieces of metal that people has collected for him. He goes to each household depending on what they had. This encourages people to separate their wastes with the aim of getting some extra money (plastics bottles PhP. 6 / kg, metal cans PhP. 2 / kg and the big pieces of steel PhP. 8 / kg)

Some people from the village do the bargain with him about the weight and prices of the materials he gets from them. He goes to many villages and collects the wastes. When he gathers enough he gets a truck and drives to Manila with the materials where he sells them to recycling companies. He gets usually double the price he pays to the people in the village.

This is an example of an incentive for people to carry out good practices in waste management. Even though, the community could get more benefits by organizing themselves more.



Photos 2 and 3: collection of waste in Coop

Conclusion

There are good waste management practices embedded in the habits and culture of the migrants in the NSMNP. These practices might be endorsed in order to increase the livelihood of people in terms of extra income sources and better hygienic conditions, plus avoiding the negative ones that are harming their health and surroundings.

There is room for actions like the education of leaders that can be in charge of managing these initiatives or the creation of awareness in these communities to encourage those practices. Facilitating the formation of cooperatives might not only increase local livelihoods but also create alternatives for these inhabitants that are at present involved in other activities (sometimes illegal) for survival.

3.21. Impact of typhoons

Sarai Alons

Each year, about 20 typhoons occur in the Philippines. Most of the typhoons occur during rainy season, from June until December and Northern Luzon receives by far the most tropical typhoons (Bankoff 2003). The destruction caused by a typhoon has of course enormous implications for the people that are affected.

Most of the 15 villages where we conducted our research are in remote places and the people are mainly depending upon the land. This makes them very vulnerable for environmental disasters such as typhoons. The purpose of my part in this research was to find out how people respond to the impact of a typhoon and if they adapt their behavior to minimize (future) damage to their houses and their crops. The strategies adopted by communities to reduce the impact of a disaster are known as coping mechanisms and are based on the assumption that what happened in the past is likely to repeat itself again in the future (Blaikie et al. 1994).

All of our respondents in the different villages have at least experienced one super typhoon (category 5) which has damaged their house and/or crops. Although there are of course differences in the way that people deal with the effects of a typhoon, depending upon their situation and abilities, I think it is possible to draw some general conclusions from the data that we have gathered on the coping mechanisms of migrant communities living close to the buffer zone of the Northern Sierra Madre Natural Park. To create an idea of these coping strategies, I have looked at a couple of basic aspects:

- The damage: what kind of damage did the typhoons cause to respondents' houses and crops?
- Help: from whom did the respondents receive help and how?
- Changes: did the respondents make any changes in their routines to prevent more damage in the future?

In addition to this, I will discuss the impact of illegal logging and mining, because activities like these have huge implications for the environment and are increasing the damage that is caused by typhoons.

Damage

The typhoons that are mentioned most often by the respondents are *Harurot* (International name: *Imbudo*, July 22, 2003) and *Yoyong* (International name: *Nanmadol*, December 2, 2004). The severity and impact of these typhoons differs of course per village, depending on the location and surroundings. However, the results of all the interviews in the different villages shows that 56% (n=120) of the respondents experienced damage to their houses because of one of these typhoons and 80% of the respondents mentioned that all or part of their crops were damaged. Most damage is caused by flooding or heavy winds. The parts of the house that are most often damaged are the roof ("the roof flew away"), and the kitchen when in a separate shed from the

house. There are only several cases where the house completely collapsed: in Magamian (San Pablo), Pulang Lupa (Iligan) and Casala (San Mariano).

With regard to the crops, mostly rice, corn and banana were damaged and a lot of respondents had their whole harvest destroyed by the typhoon. The corn is easily damaged when it is near harvest time because the crops are 'too tall and fall down' and banana trees can break. Several respondents also mentioned that banana sickness (Banana Bunchy Top Virus) caused by the typhoon destroyed their banana trees. Obviously, banana sickness is not caused by a typhoon but by an aphid. This aphid spreads a virus in the banana trees and this is very resilient and hard to remove. An explanation for the fact that people think that the Banana Bunchy Top is caused by the typhoon could be that the aphid does not have the ability to fly very well and therefore it does not spread quickly. The strong winds of a typhoon can increase the speed of contamination and in this way it might seem as if it is causing the disease. The effect of this is that some people mention that they do not want to grow bananas anymore. This can be explained by the fact that once the banana trees are infected by the virus, it is very hard to remove and in many cases it is necessary to remove all the trees completely and get new virus-free plants. On top of this, farmers often have to wait for two or three years before they plant banana again to make sure that even the soil is free of the virus (Jackson and Wright 2005).

When a typhoon is about to strike a certain area, the people are often informed about this by radio. Even in remote places where there is no electricity, most households have a radio that runs on batteries. This enables people to take some measures to minimize the damage. In Capellan (Iligan), for example, all the people that are living outside the barangay seek shelter in the village when they know a typhoon is coming. Others make sure that all their belongings are inside the house or their harvest stored in a safe place. However, most houses are made of bamboo and wood which are in many cases not strong enough to resist a typhoon and fields are often on steep slopes cleared by *kaingin*, without any buffer against strong winds and floods to protect the crops.

Help

After a typhoon a lot of respondents received help from their relatives and neighbors. When they were able, they would also provide help to others in return. Help from relatives often came from close family members such as siblings, parents and children, in the form of rebuilding their houses, and cleaning their fields and planting new crops. In some cases family members helped with food and money. Help from neighbors was also mostly in the form of rebuilding and repairing houses and work on the fields. However, after a typhoon most people are in the same situation; they are all victims and this can make it difficult for them to give help to others. On the other hand, when everybody is affected, the community has the best chances of survival by joining their powers. There are a lot of stories about *bayanihan*, which means that people cope with the destruction left by a typhoon through working together. They will clean their fields together one by one and plant new crops together for example.

Help from the government is a different story: 35% of the respondents received support, but this was often not more than 2 kg of rice, 2 cans of sardines and 2 packs of noodles per household, enough to survive on for one day. These goods provided by the governments are given to the barangay captain and he is the one to disperse them. There

are only a few incidents in which respondents received more support from the government, mainly in larger villages such as Casala (San Mariano) and Magamian (San Pablo). In these villages some people received help for a longer period of time (3 months) or goods such as lamp oil and mosquito nets.

Changes

After looking at the impact of the typhoon and the way the villagers are coping with the damage, I wanted to find out if they made any changes in their routines, to prevent more damage in case of another typhoon. It does not seem like there are any significant changes made. Only a couple of respondents rebuild their house in a different place where it might get damaged less easily. However, 33% of the respondents that had their house damaged by a typhoon rebuild it with different materials, mostly using stronger materials such as hardwood and metal instead of cogon. There are also some respondents who mentioned that they used a different method to make their house stronger when they repaired it, or that they are planning to do so in the future. Several respondents cut down the trees surrounding their house to prevent more damage by falling trees during a next typhoon. Mainly old trees and Gmelina trees (the latter one because it has superficial roots and hardly any deep roots) are mentioned here.

Of the respondents who had their crops damaged, 17.5% started to grow other crops after the typhoon. It is difficult though to find a general pattern here. There are some respondents for example that mention they don't want to grow rice anymore and now grow mostly corn, beans or pineapple. Others on the contrary, decided to grow only rice after the typhoon. When they were asked if there are any crops that they do not want to grow anymore a lot of people mentioned corn (especially yellow corn) and fruit trees.

Effects of logging and mining

In the media and in scientific research, it is often mentioned that illegal logging magnifies the disastrous effects of typhoons. Big trees work as a buffer and the forest can prevent a lot of damage done by typhoons. For many people living in or close to the forest, an important part of their income is derived from illegal logging. This is something many of us encountered while doing research in the field. In fact, many farm households extract even more timber from the forest after a typhoon. The logs are used to rebuild houses and to earn additional income after crops are destroyed by the typhoon (Huigen and Jens, 2006). So on the one hand the forest is decreasing rapidly and because of this, typhoons cause more damage. On the other hand, the damage caused by typhoons makes people extract even more timber from the forest to have an additional income after a typhoon.

Another activity which has a huge impact on the forest is mining. This is something I encountered in Pulang Lupa, the village where I did my fieldwork. All the people living in the village are depending upon the land, they are all farmers. The forest is also an important part of their subsistence, because they gather many Non Timber Forest Products and some of them are even involved in illegal logging. Six months ago, a mining project started very close to Pulang Lupa. For the purpose of the mine, a dirt road was constructed and a large area on top of the hill above the village was cleared to extract iron ore. The villagers are aware of the fact that the mining company is clearing the land

of trees and of the negative impacts this has for the soil and the forest. At the same time they are happy with the road, because the village is easily accessible now, and the mining company provides work for a lot of people in the area. This illustrates that even though a lot of people are aware of the negative implications that activities such as illegal logging and mining have on their environment, they do not change their behavior; in fact they are often involved in these activities themselves. This could be attributed to the fact that a lot of people feel that they do not have an alternative in their current situation.



Photo 1: Mining project in Pulang Lupa, Ilagan

Conclusion

Because of the decrease in forest caused by kaingin and logging, the impact of typhoons and the damage they cause in the Philippines are continuously increasing. All of our respondents have been affected by one or more typhoons and all of them experienced more or less severe damage to their houses and crops. However, when looking at coping strategies, they do not seem to make a lot of significant changes in their behavior. The majority of the respondents rebuild their house in the same place, and 67 % used the same materials to repair their house. With regard to land use, 82.5 % started growing the same crops on their land again. In other words, most people continue business as usual. An explanation for this could be that many of the respondents do not find themselves in a situation where they are able to make any changes. They are depending upon their land and the crops they are growing, and often do not have enough money for stronger (more

expensive) materials to rebuild their houses. *Bayanihan* though, working together, is mentioned as a way of dealing with the destruction left by typhoons. The villagers help each other to rebuild their houses and together they plant new crops on their fields.

Apart from their land, a lot of people are depending on the forest for their livelihood. By extracting timber as well as non-timber forest products such as fruits and rattan, they complement their incomes. In certain areas mining provides in additional incomes as well. This has its implications on the environment and increases the damage caused by typhoons. Though people are aware of this, providing in their needs to survive today seems to be more important than preserving the environment to minimize the effects of future natural hazards such as typhoons.

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3.22. Education

Allan G. Panao

Introduction

The Philippines Department of Education (*Kagawaran ng Edukasyon* abbreviated as DEPED) is responsible for primary, elementary and high school levels of education, and for the management of the system of education. It is the chief formulator of the Philippine educational policy. The tertiary level, on the other hand, is under the Commission on Higher Education (CHED). Access to education however is deemed unattended to especially in every remote areas.

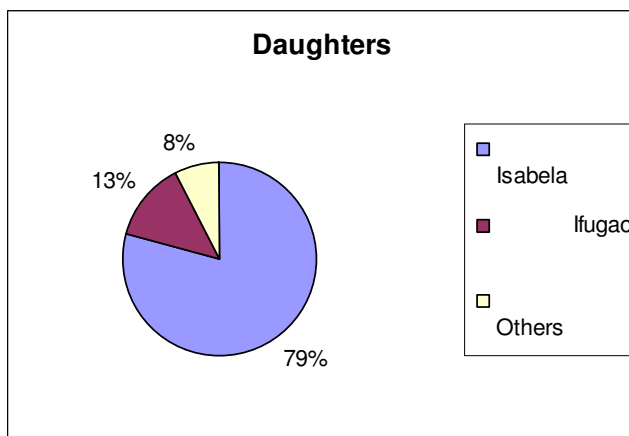
Methodology

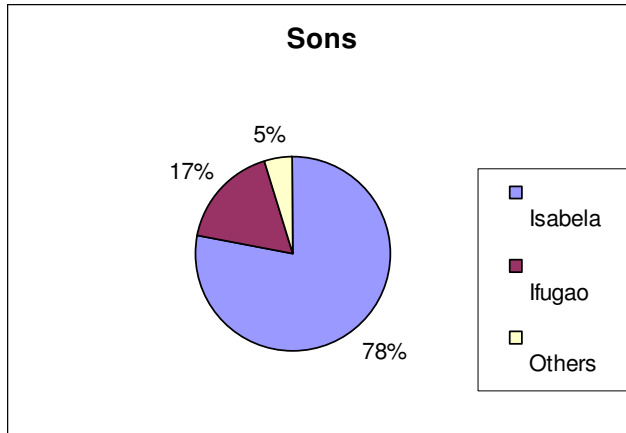
The answers of the following research questions are based on the 15 days fieldwork in 15 different villages. During the fieldwork I worked together with my Dutch partner who is an anthropologist. The most important research method we used is interviewing. We did interview with the villagers during their spare time in the morning and the evening. The questions formulated are as follows:

- Where does your son go to school?
- Where does your daughter go to school?
- What job do you want for your sons?
- What job do you want for your daughters?

Result and discussion

The graphs show the places where sons and daughters are studying:





Based on the results, more or less 80% of both sons and daughters prefer to study in the nearby village located in Isabela, where about 13% to 18% prefer to study in Ifugao. The remaining percentages are those who are studying in other place. So as I observed, most of them opted to study in nearby villages because this is only the possible solution in sending their children to schools with less effort, time and money. But others tend to send their children in their place of origin as they believe that the quality of education there is better than in other school. Future because it's only for them to decide of what is best for them.

Because of the preference of the villagers to send their children in their own villages but some schools are non-existent, access to schools should be made a priority of the concerned LGUs. The people even in the remote areas believe that education would be important for the development of their children, although at times, these same children are used as household labors for their farms and other activities. Further gains in education such as value transformation, personal development and for their future should be strengthen therefore by concerned agencies.

For questions 101-102, what job do you want for your sons and daughters? The respondents do not know exactly what jobs they wanted for their children. They only express that someday their children would have better lives and with learning capacity. Sometimes, they would say "*bahala na*" or "*que sera sera*", probably due to lack of means to send their children to school.

Conclusion

Ifugao migrants send their children to school in Isabela. The parents are unsure what types of job are good for their sons and daughters.

3.23. Health and illness

Marjon Gibcus

Introduction

Everywhere in the world people get ill and for so many places are so many ways to cure these illnesses. People learn how to recognize illness and ways to cure illness from their own experience, from their parents and other relatives, from their neighbors, classmates, and colleagues and also from books, radio, television and the internet.

All these different kind of knowledge can be divided in two kinds, namely etic knowledge and emic knowledge. We consider etic as global, commonly known, often proved by scientist. Emic, on the other hand, is mostly known as local, or traditional. But because local and traditional refers often to a subject who is limited to creations or innovations of the past, I prefer to use the word emic if I talk about medical knowledge of indigenous peoples. This because this distresses more on the way knowledge develops.

But where do we talk about when we talk about emic knowledge in the medical world? As Leistner (2004) explains, emic knowledge is a multifaceted phenomenon, that in the broadest sense constantly evolving human interaction with the environment. Therefore is it typically dynamic and current. Emic knowledge systems, also when we talk about health and illness, are inextricably interwoven with historical, ethical and religious aspects that touch at the very identity of the respective indigenous group or local community. It doesn't belong to individuals in general, but is rather owned and transmitted collectively.

Nowadays we see this phenomenon that the people live in a 'glocal' world, as Eriksen (2002) says. People with indigenous, local, rights, use local medical knowledge, but because of migration and new communication, like cell phones and internet, world citizens get connected and share global medical knowledge.

How do immigrants from the Cordillera in Cagayan Valley use etic and emic knowledge to cure illness? How do they prevent themselves to get ill? What actions do people take when they are ill? And is there a difference in there actions for themselves and their children? When and why do they use emic knowledge?

Results

This research was done in 15 villages in the Cagayan Valley. Data is collected about how people deal with their health and illness, also in relationship with their culture, the community and their environment.

Prevention of illness

If we talk about health, it is important to know what actions people take to stay healthy. We asked the people how they prevent illnesses. People gave us all kind of answers and it is important to know that this list is not inexhaustible. It is just the first thing people say when they are asked about prevention of illness and it is very good possible that people

take more actions than they sum up. On the other hand can it be possible that people know how to prevent illness, but don't do it themselves. For example if they say it's good to use a mosquito-net, but don't have money to buy it.

Table 1 shows that the most known way to prevent illness is to eat enough and nutritious food. Also using a mosquito-net, to prevent getting malaria is a common know object in the areas around San Mariano. The researchers didn't see that many mosquito-nets but people told them they only use it in the malaria season.

In this analyze it is clear that emic and etic knowledge is interwoven. The respondents know and use different knowledge, like cleaning and using herbal medicines. There is not a strict boundary between local and scientific kinds of prevention

Village	main group IP	# respondents	good food	mosquito net	take a rest	clean body	pray	clean surrounding	don't go in rain	Exercise /work hard	clean water	herbal medicine	hat or umbrella against sun	don't take bath when it's hot	smoke against mosquito	nothing
Capellan	Ifugao	7	2				2			2		1				1
Ampoy	Ifugao	6	5		3							1				
Dipugpug / Cinamnama	Ifugao	10	5	5				1			2				1	
Puerta	Tinguian	10			2	1			1							6
Tapwakan	Ifugao	8	1			4	1	3								3
Mamaga / Masipi	Ifugao	7	1		3				2	1			1			
Pulang Lupa	Ifugao	5					1									4
Banig / Dy Abra	Tinguian	10	1		1	3		2	1	2		1				1
Balete	Ifugao	7	5		2				1				1			
Casala	Ifugao	10	4	7	1	1					1					
Magamian	Ifugao	10	2				1		1	1				1		5
Magansimid	Ifugao	9	1		2	2	3			1						1
Coop	Ifugao	10	2	6	1		1	3	1		5					
Simanu Norte / Nagbaracalan	Ifugao	10	2			1		1	2				1	2		3
Danak	Ifugao	8	1				3			2	1	1				3
Total		127	32	18	15	12	12	10	9	9	9	4	3	3	1	27
Total in %		100%	25%	14%	12%	9%	9%	8%	7%	7%	7%	3%	2%	2%	1%	21%

Table 1: how the respondents protect themselves and their families in different ways from illnesses.

Health insurance

In the Philippines it's possible to get a health insurance. There is PHILAM LIFE and PHIL HEALTH. We asked our respondents about these cards and only one of them had a PHILAM LIFE card, so I will focus on the PHIL HEALTH card.

People have to pay for this card, depending on what they want to insure. But for indigenous peoples the card is free. It's the task of the Local Government Units to take care that every indigenous person gets a PHIL HEALTH card. In theory every respondent should be in receipt of the card, but in practice this is not the case. Only 40 % owns a card, and even 7 % of them have their card in Ifugao Province (see table 2).

Village	main group IP	# respondents	Yes		No		Yes, in Ifugao		Don't know	
			F	%	F	%	F	%	F	%
Capellan	Ifugao	7	4	57	3	43	0	0	0	0
Ampoy	Ifugao	6	3	50	3	50	0	0	0	0
Dipugpug	Ifugao	10	4	40	6	60	0	0	0	0
Puerta	Tinguian	10	3	30	6	60	0	0	1	10
Tapwakan	Ifugao	8	5	63	3	38	0	0	0	0
Mamaga/Masipi	Ifugao	7	0	0	7	100	0	0	0	0
Pulang Lupa	Ifugao	5	1	20	4	80	0	0	0	0
Banig/ Dy Abra	Tinguian	10	3	30	6	60	1	10	0	0
Balete	Ifugao	7	0	0	3	43	4	57	0	0
Casala	Ifugao	10	3	30	6	60	0	0	1	10
Magamian	Ifugao	10	3	30	7	70	0	0	0	0
Magansimid	Ifugao	9	2	22	4	44	3	33	0	0
Coop	Ifugao	10	3	30	7	70	0	0	0	0
Nagbaracalan/ Simanu Norte	Ifugao	10	6	60	4	40	0	0	0	0
Danak	Ifugao	8	2	25	3	38	1	13	2	25
Total		127	42	33	72	57	9	7	4	3

Table 2: owners of a PHIL HEALTH card

Illness

The main question is: what actions do people take when they fall ill? This is difficult to measure, because it depends on many factors. For example the distance to a hospital, the knowledge of medicinal plants, helps from relatives, if they believe in spirits and of course what kind of illness they suffer from.

Table 3 shows that 67 % of all the 127 respondents visit a doctor or hospital, 39 % takes medicine from a drugstore, 27 % uses medicinal plants, 18 % use rituals like *buni* or offer spirits to take away their illness and 15 % pray to the Christian God. The table shows that the way people react on their illness is strongly depended from the place they live.

The frequency of going to a hospital is also depending on the distance to the hospital (see table 4) and the way how they can get to the hospital. Some respondents mention that in case of serious illness money is the main factor in going to a hospital or not. Then are people also depending on their neighbors and relatives for borrowing money to go there. Chemical medicines are everywhere available. Especially painkillers are often used, even for prevention of getting ill. On the other hand it is difficult to get the right medicine for the right illness. The inhabitants, who live in the villages close to for example Masipi and Cinamnama, often visit the midwife there. She can help with small sickness, but she is not a doctor and has only a limited amount of different medicines.

Herbal medicines are used by 27 % of the respondents. Some people swear by using herbals to cure them, other people won't even try it. This is of course also depending of the knowledge of these plants and this belongs most often to the older generation.

The use of rituals and offering is for a lot of people a sensitive topic. It has to do with the old tradition, spirits, pagans, curses and other things the white Christian missionaries tried to fade out. During interviewing you get your information piece by piece and it is not sure if you get all the correct information. Some respondents mentioned the missionaries in their homelands when the saw the international student researchers. Even though, we found out that some Ifugao still know and use *buni*. As an Ifugao respondent explains:

“Buni is used to liberate somebody from a curse. They slaughter three pigs and some chickens. The skin of the pig will be burned and blown over the cursed person. Then the person is set free from the curse. In church we learn that it from Satan, that is way also even the older generation doesn't practice these rituals anymore.” (Conversation between Sanne van der Hout and her hostess, Casala 5 July 2007).

Also the Tinguians knows different ways of offering, like *atang*, the offer of a pig to the spirits. Even 8 of the 10 respondents in Dy Abra see that they use this ritual in case of serious illnesses. Another ritual is to offer eggs and other food to get rid of *talado*, the bad spirits.

Praying to the Christian God is something that 19% of the people do. Almost all the respondents tell us they belong to a christen church. But the way people deal with their religion is very different. Sometimes it is only in name, sometimes people pray for preventing and also curing their illness. They do it alone, with their family or go to church and pray together for their own illness or the patient.

We also asked what actions people take when there children fall ill. The majority (90%) answered that they take the same actions as for themselves.

Village	main group IP	# resp.	doctor/hospital		chemical medicine		herbal medicine		ritual/offer		Christian pray	
			F	%	F	%	F	%	F	%	F	%
Capellan	Ifugao	7	5	71	2	29	4	57	1	14	2	29
Ampoy	Ifugao	6	6	100	0	0	1	17	0	0	1	17
Dipugpug	Ifugao	10	5	50	7	70	3	30	0	0	1	10

Puerta	Tinguian	10	6	60	6	60	6	60	2	20	0	0
Tapwakan	Ifugao	8	5	63	2	25	0	0	1	13	0	0
Mamaga / Masipi	Ifugao	7	4	57	4	57	3	43	0	0	0	0
Pulang Lupa	Ifugao	5	1	20	4	80	3	60	1	20	0	0
Banig / Dy Abra	Tingian	10	3	30	6	60	2	20	8	80	0	0
Balete	Ifugao	7	2	29	4	57	0	0	1	14	2	29
Casala	Ifugao	10	9	90	7	70	4	40	4	40	0	0
Magamian	Ifugao	10	9	90	0	0	4	40	1	10	3	30
Magansimid	Ifugao	9	7	78	1	11	3	33	3	33	3	33
Coop	Ifugao	10	7	70	2	20	1	10	1	10	7	70
Nagbaracalan / Simanu Norte	Ifugao	10	10	100	1	10	0	0	0	0	0	0
Danak	Ifugao	8	6	75	4	50	0	0	0	0	0	0
Total		127	85	67	50	39	34	27	23	18	19	15

Table 3: actions the respondents take when they are ill.

village	main group IP	place of hospital	judge distance to hospital in hours
Capellan	Ifugao	Ilagan	2,5 h
Ampoy	Ifugao	Ilagan	1 h
Dipugpug	Ifugao	San Mariano	2 h
Puerta	Tingian	Cabagan	1 h
Tapwakan	Ifugao	Marana	3 h
Mamaga/Masipi	Ifugao	Cabagan	2,5 h
Pulang Lupa	Ifugao	Ilagan	2,5 h
Banig/ Dy Abra	Tingian	Tumauini	1 h
Balete	Ifugao	Cabagan	2 h
Casala	Ifugao	San Mariano	2,5 h
Magamian	Ifugao	Cabagan	2,5 h
Magansimid	Ifugao	Cabagan	4 h
Coop	Ifugao	San Mariano	1 h
Nagbaracalan / Simanu Norte	Ifugao	Cabagan	1 h
Danak	Ifugao	Ilagan	3.5 h

Table 4: judge of the fastest distance to the closest hospital, estimated in hours.

Etic and emic ways to cure

In table 5 we see a division made between emic and etic methods of curing illnesses. This is roughly done by making a division between on the one hand going to the hospital, or the doctor and using chemical medicines and on the other had using herbal medicines and doing rituals.

The use of medicinal plants is not per se the result of indigenous knowledge. Also knowledge from the Ybanag, Ilocano and Tagalog is used. This is because they know a lot about the regional plants and people share information about what, how and when to use which plants. Interesting in this table is that almost one third (29 %) of all the informants use the etic, as well as the emic ways of curing illness. This is a way of spreading their possibilities to cure. Respondents often say that they start with taking medicinal plants and if it's not cured they will go to a doctor. If they go to a traditional healer, they have to pay. Mostly it is an amount of money they themselves can choose. Using own herbal medicine is also a way of trying to save money. In the category others is also praying included. In some villages, like Balete, this is also a very important practice to prevent illness.

A remark with this table is the fact that we asked an open question. That 29% of the respondents use both ways of curing is a minimum. It's also possible that people didn't mention it, but that they also do using emic and etic ways of curing.

village	main group IP	# resp.	doctor/ medicine (etic)		ritual/ herbal (emic)		both		Other	
			F	%	F	%	F	%	F	%
Capellan	Ifugao	7	2	29	1	14	4	57	0	0
Ampoy	Ifugao	6	5	83	0	0	1	17	0	0
Dipugpug	Ifugao	10	6	60	0	0	3	30	1	10
Puerta	Tinguian	10	2	20	1	10	7	70	0	0
Tapwakan	Ifugao	8	6	75	0	0	1	13	1	13
Mamaga/Masipi	Ifugao	7	3	43	2	29	1	14	1	14
Pulang Lupa	Ifugao	5	2	40	2	40	1	20	0	0
Banig/ Dy Abra	Tinguian	10	2	20	1	10	7	70	0	0
Balete	Ifugao	7	5	71	0	0	0	0	2	29
Casala	Ifugao	10	5	50	0	0	5	50	0	0
Magamian	Ifugao	10	8	80	1	10	1	10	0	0
Magansimid	Ifugao	9	5	56	1	11	3	33	0	0
Coop	Ifugao	10	7	70	0	0	2	20	1	10
Simanu Norte / Nagbaracalan	Ifugao	10	9	90	0	0	1	10	0	0
Danak	Ifugao	8	8	100	0	0	0	0	0	0
Total		127	75	59	9	7	37	29	6	5

Table 5: etic and emic actions the respondents take when they fall ill.

Availability of medicinal plants

As a result of logging and mining we see that the forest in the Northern Sierra Madre is declining. We are concerned about the amount of available medicinal plants in the forest and wondering if the inhabitants of the Cagayan Valley experience a reduction of available medicinal plants in the forest. The result seems that the respondents are not

sure: 38 % don't see a reduction and 37 % sees a reduction (table 6). The other 26 % don't know about the medicinal plants or if they are reduced in the forest.

Table 6: if respondents experience a reduction of medicinal plants

Community

To find out what the social function of the people around the respondents in the village is, we asked them to who they went when they fall ill. A lot of people don't ask help from other people, beside members of their household if they fall ill, 48% don't go to anybody when the fall ill, 19% is going to the midwife, if she is around. Only 29% of the respondents ask neighbors (17%) or relatives (12%) for help (see table 7). This help often consists of money.

A problem with this question is that neighbors are often relatives and vice versa. Another problem is that the midwife is often not in their own village, but in a bigger close village. The midwife is a woman with medical education, but is not a doctor. She can give people medicine for small illnesses. The midwife can also be a relative or a neighbor. It's good to keep that in mind while reading the table.

Village	main group IP	# resp.	nobody		midwife		neighbor		relative	
			F	%	F	%	F	%	F	%
Capellan	Ifugao	7	5	71	0	0	0	0	2	29
Ampoy	Ifugao	6	1	17	0	0	4	67	1	17
Dipugpug	Ifugao	10	6	60	3	30	1	10	0	0
Puerta	Tinguian	10	4	40	0	0	2	20	4	40
Tapwakan	Ifugao	8	2	25	0	0	5	63	1	13
Mamaga / Masipi	Ifugao	6	1	17	4	67	1	17	0	0
Pulang Lupa	Ifugao	5	0	0	0	0	1	20	4	80
Banig / Dy Abra	Tinguian	10	8	80	0	0	1	10	1	10
Balete	Ifugao	6	6	100	0	0	0	0	0	0
Casala	Ifugao	9	3	33	6	67	0	0	0	0
Magamian	Ifugao	10	7	70	1	10	2	20	0	0
Magansimid	Ifugao	9	7	78	0	0	1	11	1	11
Coop	Ifugao	10	5	50	0	0	0	0	0	0
Simanu Norte / Nagbaracalan	Ifugao	10	1	10	9	90	0	0	0	0
Danak	Ifugao	8	4	50	0	0	3	38	1	13
Total		124	60	48	23	19	21	17	15	12

Table 7: to whom the respondents go to when they fall ill

Connection with homeland

There are several reasons to go back to your homeland, celebrations, family visits, but also to cure from illness. Before the research was done, the prospective was that the people maybe go back to cure in a 'traditional' way. But the answers are different. If people go back, then it is mainly because of the hospitals.

From our respondents 34% is going back to Ifugao Province or Abra when they are ill. The main reasons they give are not very positive for their new residence: “the doctors are better in Ifugao”, “in Ifugao they take better care of our children” and “the doctors discriminate here”. The respondents also mention that health care is more expensive here and that the doctors will not cure them if they don’t have money. This in contrast with Ifugao Province where they can pay after their visit. But still most people (66%) just stay here for curing and don’t feel the need to cure in Ifugao.

Village	main group IP	# resp.	no		yes	
			F	%	F	%
Capellan	Ifugao	7	7	100	0	0
Ampoy	Ifugao	6	1	17	5	83
Dipugpug	Ifugao	10	8	80	2	20
Puerta	Tinguian	10	9	90	1	10
Tapwakan	Ifugao	8	4	50	4	50
Mamaga / Masipi	Ifugao	7	6	86	1	14
Pulang Lupa	Ifugao	5	4	80	1	20
Banig / Dy Abra	Tinguian	10	7	70	3	30
Balete	Ifugao	6	3	50	3	50
Casala	Ifugao	9	2	22	7	78
Magamian	Ifugao	9	4	44	5	56
Magansimid	Ifugao	9	2	22	7	78
Coop	Ifugao	9	8	89	1	11
Simanu Norte / Nagbaracalan	Ifugao	10	10	100	0	0
Danak	Ifugao	8	6	75	2	25
Total		123	81	66	42	34

Table 8: whether the respondents go to their homelands or not if they are ill.

Conclusion

There is a lot of diversity in the behavior patterns from the migrated indigenous people in the Cagayan Valley concerning health and illness.

Fifty-seven percent doesn’t own the PHIL HEALTH card. Nonetheless 88% make use of a hospital or buy regular medicines. Next to that, the respondents make use of the herbal medicine in their surroundings and still do rituals and offers to expulse the illness caused spirits (7%). This is the same for their children.

In some areas the Christian religion is very strong and if someone is ill the people will pray for the patient. Praying is also a way to prevent illness, 9% from all the respondents do it. The most common known way to prevent illness is to eat healthy (25%).

If we look within the village, money is more often a reason to take action, then social bonding. Twenty-nine percent of the villagers goes to their relatives or their neighbors and if they go there, it is often to ask money to buy medicine or going to the hospital.

Their connection with their homeland is more a case from trust in the medical health care in the hospitals, than a case of meeting relatives who can take care or doing the old rituals. Only 34% goes back to cure in their homelands, and if they go, they don't go very often.

So, also in the research area of the Cagayan Valley the immigrants from the Cordillera use as well the local, as the global ways to cure illness. We see a dynamic pattern of using medicinal plants, chemical medicines, going to the doctor, doing rituals and searching help in the Christian religion. Emic and etic knowledge is used to stay healthy or to get cured. Being an indigenous group doesn't mean at all that the members only use emic knowledge. Emic knowledge is still important, but to cure illness they induct this local knowledge in their changing global environment.

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3.24. Burials

Sanne van der Hout

Introduction

In the following, I will try to create a greater understanding with respect to the funeral rituals of the Ifugao. I will focus on the rituals that play a role during the burials of family members. In my opinion, it is crucial to know how people cope with death, in order to gain more insight into their culture in general. During my research, I have concentrated on the following four questions (see questions 113-117 of the questionnaire):

- Where do you bury your family members?
- Why do you bury your family members on this location?
- What will happen with your family members after their physical death?
- Do the ancestors play a role in the lives of present generations?

By asking above mentioned questions, I will try to gain more knowledge about the extent in which the old Ifugao values are present in the way the living generation copes with death: are the old customs completely overshadowed by Christian tradition, or do they still play a role in the funeral rituals of the present generation?

Before I show my results, I first have to declare that not all our respondents were willing to answer my questions. For some of them, the subject was too sensitive. Another respondent was afraid that answering my questions would cause him bad luck. These personal opinions of course need to be respected.

Where do you bury your family members?

Most common answers:

a) Migrated people:

- Cemetery in settlement area: 56
- In Ifugao province: 24
- Around the house: 10
- Depends on request of the person who died: 5
- In area family used to live before (is not place of origin!): 3
- Depends on request of relatives: 3

b) People who live in Ifugao province:

- Around the house: 21
- Cemetery: 2

Why do you bury your family members on this location?

Most common answers:

a) Migrated people:

Cemetery in settlement area:

- Ifugao province is too far: 12

- It is our custom to bury the dead in the cemetery: 7
- The settlement area is our home now: 7
- It is prohibited by the government/barangay captain to bury the bodies elsewhere: 4

4

- The cemetery is the best place available: 4
- It is too expensive to transfer the dead to Ifugao province: 3
- Protection against diseases: 2
- It is good to have our deceased relatives nearby: 1

In Ifugao province:

- It is our tradition to bury the bodies in Ifugao province: 10
- Most of our relatives still live there: 6
- Our whole family is buried there: 2
- Ifugao province is our place of origin: 2

Around the house:

- It is our tradition to bury the bodies around the house: 3
- The cemetery is too expensive: 3
- It is easier to take care of the graves: 2
- To protect the graves from being replaced: 1
- It is good to have our deceased relatives nearby: 1
- The road to the cemetery is difficult to pass: 1

In area family used to live before:

- Most of our relatives still live there: 3

b) People who live in Ifugao province:

Around the house:

- No cemeteries available in our area

Cemetery:

- no better location available

Most common answers given in each village

Ampoy (cemetery in settlement area)

- Ifugao province is too far
- It is our custom to bury the dead in the cemetery

Balete (in Ifugao province)

- Most of our relatives still live there
- Ifugao province is our place of origin
- Depends on request of the person who died

Banig (around the house)

- It is our tradition to bury the bodies around the house
- Depends on request of relatives

Casala (cemetery in settlement area)

- Ifugao province is too far
- It is prohibited by the government/barangay captain to bury the bodies elsewhere

- Protection against diseases
- Depends on request of relatives

Cinamnana (cemetery in settlement area)

- Ifugao province is too far
- The settlement area is our home now
- Depends on request of the person who died

Coop (cemetery in settlement area)

- The cemetery is the best place available
- Protection against diseases
- It is prohibited by the government/barangay captain to bury the bodies elsewhere

Capellan (cemetery in settlement area)

- The settlement area is our home now

In Ifugao province

- It is our tradition to bury the bodies in Ifugao province:

Magamian (cemetery in settlement area)

- Ifugao province is too far
- The settlement area is our home now

Magansimid (in Ifugao province)

- It is our tradition to bury the bodies in Ifugao province
- Our whole family is buried there

Mamaga (cemetery in settlement area)

- The settlement area is our home now

In Ifugao province

- Most of our relatives still live there

Puerta (cemetery in settlement area)

- The settlement area is our home now
- It is prohibited by the government/barangay captain to bury the bodies elsewhere

Pulang Lupa (in Ifugao province)

- It is our tradition to bury the bodies in Ifugao province

Quimalabasa (around the house)

- The cemetery too expensive
- It is easier to take care of the graves

(For many respondents: subject too sensitive to talk about)

Simanu Norte (cemetery in settlement area)

- The settlement area is our home now
- Depends on request of the person who died

Tapwakan (no experience with burials)

What will happen with your family members after their (physical) death?

Most common answers:

- They will go to heaven (hell not mentioned): 24
- Christians will go to heaven, pagans will burn in hell: 16
- I don't believe in afterlife: 19
- I don't know: 12
- Only God knows what will happen after our (physical) death: 6

Do the ancestors play a role in the lives of present generations?

Most common answers:

- They don't play any role: 53
- They don't play a role anymore: 12
- They do play a role: 11
- I don't know: 3
- They are only present in my dreams: 3

Discussion of findings

It has become clear that most of the respondents bury their family members in the cemetery in the settlement area. There are nevertheless still quite a lot of migrants, especially in Balete, Magansimid and Pulang Lupa, who prefer to bury their relatives in Ifugao province. A distinction can be made between the customs of the younger and the older generation concerning funeral rituals: where old family members often are transferred to Ifugao province after dying, the majority of the younger generation prefers to be buried in the settlement area. Our respondents explained this distinction as follows: in contrast with the young ones, most members of the older generation were born in Ifugao province. Most of their relatives are buried there, and some of them still live in the province. Often, the family has possessed a private burial site in the area of origin since generations. In general, it can be stated that most of our young respondents are more focused on the future, while the older generation has a stronger orientation towards the past. The last group feels closer connected with the traditions propagated by its ancestors. As a consequence, it is more important to them to be buried in Ifugao province. The funeral rituals of the younger generation on the other hand, are strongly determined by Christian values.

I just mentioned that a distinction needs to be made between the orientation of the younger and the older generation. In this respect, the inhabitants of Simanu Norte (Nagbaracalan) are an exception: none of the respondents, neither the old, nor the young ones, feel strongly attached to their indigenous land. In contrast, they feel much more connected with the soil they cultivate. As a consequence, almost all respondents from Simanu Norte wish to be buried in the settlement area.

We have asked our respondents in Upper Casala if they were willing to tell us something about the funeral rituals of their ancestors in Ifugao province. Combining the stories they told us, has led to the following data. If a parent dies, his or her body will be placed on a bier in the home of each child for three days. The children were not allowed to refuse the bodies from being placed in their houses: if one of the children had difficulties with it, his siblings needed to stand by him. Some respondents added that it was the responsibility of the children to decide at which location their parents had to be buried. They gave us the following example: if a mother dies in Casala and she has children both in Casala and in Lagawe, she will first be transferred to the homes of her children in Casala, and transported to her children in Lagawe later. Nowadays, parents will not be transferred to the homes of all children anymore. By contrast, they will stay in the house of one of the children until the other family members have arrived.

Where the majority of the respondents believe in afterlife, most of them start to laugh if you ask them whether the ancestors play a role in the lives of the present generations. In my opinion, the distinction between the positive answers on the question “what will happen with your family members after their (physical) death?” and the negative answers on the question “do the ancestors play a role in the lives of present generations?” can be explained by the influence of the Christian church. Many respondents told us that the presupposition of an active role played by the ancestors is part of the old Ifugao tradition. This belief contravenes God’s law and is therefore satanic. Although most of our respondents esteem the traditional Ifugao beliefs in a negative way, I had the impression that some elements of this belief still play an important role during funerals. In the following I shall discuss these elements.

Before a person is buried, a vigil of nine days will take place. An important element during this vigil is the *novena*, a prayer that is recited during midnight and needs to help the soul to find its way to heaven. Before and after the *novena*, the villagers are gambling and playing card; a pig is slaughtered and eaten by the whole barangay. Since the soul of the deceased undergoes specific changes both after 40 days and after one year, a vigil will take place again during these two special occasions.

After the funeral, the relatives leave food behind for the deceased. When the body has decayed, the bones are excavated and placed in a cabin at the cemetery. In Casala, Ifugao and Ilocano are buried in the same cemetery. In some other villages, for example in Ampoy and in Simanu Norte (Nagbaracalan), the Ifugao and Ilocano have their own burial sites. The respondents of Simanu Norte explained the presence of two private cemeteries as follows: the souls of the Ifugao and Ilocano do not understand each other; they are not able to communicate.

Some of our respondents, especially the older ones, did not deny the attendance of the ancestors in the lives of the present generations. They told us that the ancestors sometimes return to their homes and try to communicate with their bereaved. Sometimes, they take the body of one of their living family members into possession. It is remarkable that some of our respondents believe in the power of ancestors and in a Christian afterlife at the same time. For them, both traditions do not negate one another: conversely, they seem to enforce each other.

Conclusion

During my research, it has become clear that Christian tradition indeed overshadows the original Ifugao customs. The present generation has learned that the Ifugao rituals are the work of Satan. However, the Ifugao tradition has not completely disappeared yet. A part of the old generation is practicing the rituals of its ancestors openly. The majority of the younger generation speaks about the old tradition in a negative way: their customs around burials nevertheless show that the old tradition is thoroughly present.

3.25. Poverty

Bess Doornbos

Introduction

The villages which were the object of this research are all rural villages, remotely situated on the slopes of the Sierra Madre. Most of the respondents are fulltime farmers. Others combine this livelihood with income generating activities as small-scale logging, on occasions working as an agricultural laborer or supplementing their income with *sari-sari* stores.

Identity

The conducted research focuses on Ifugao migrants. The self-image of these migrants is based on their identity as a farmer. It is a logical consequence of the fact that most of their life evolves around agriculture. These farmers make decisions based on what will increase their livelihood and thus what is in the best interest of their farm. Farmers perceive their surroundings in terms of agriculture. They work from sunrise to sunset on their *uma* and eat the fruits of their land daily. That farming defines a large part of a farmer's identity is being underlined by the fact that of all different ethnical identities mentioned, being a farmer is at least as important. This is what I encountered during my interviews conducted in Mamaga and Masipi East.

Being poor

Seventy percent of the respondents consider themselves to be poor. The main reason for this, according to one third of them, is because they work on their fields: "We work with our hands in the soil, just to get food". Another respondent agrees: "Before we are able to eat, we have to do heavy labor in the burning heat of the sun". Doing manual labor in these conditions is a decision you only make because you have no alternatives. But being a farmer does not necessarily imply being poor though: you are not poor because you are a farmer.

Poverty is a relative concept which is created in relation to other people. It can also be the outcome of comparing different situations to each other. The questions shown below elaborate on this idea. Shown in the table below are the cumulative answers of the respondents:

Village \ Question	1) Have you become richer or poorer during the last few years?			2) Do you have more or less money to spend than most other people in your village?		
	Poorer	Same	Richer	Less	Same	More
Balete	1	6	1	3	6	1
Magansimid	4	2	3	3	6	1
Quimalabasa	0	7	1	1	7	0
Ampoy	0	7	0	1	6	0
Capellan	1	0	1	1	1	0
Coop	8	1	0	3	0	4
Dy Abra	8	1	0	3	6	0
Mamaga	1	1	5	4	2	0
Dipugpug (Cinamnama)	3	5	1	7	3	0
Tapwakan	0	3	5	2	6	0
Nagbaracalan	8	0	0	9	1	0
Magamian	1	1	7	0	7	2
Puerta	3	3	3	1	7	1
Pulang Lupa	1	0	0	1	0	0
Casala	2	4	2	4	3	1
TOTAL	41 (37%)	41 (37%)	29 (26%)	43 (38%)	61 (53%)	10 (9%)

Table 1: perceived relative positions

Changes in livelihood

When looking at question one (see table 1), the majority of the respondents of three villages (namely Tapwakan, Magamian and Mamaga) noticed that their livelihood improved during the last few years. Shown are three different phases distinguished by the respondents of these particular villages. The respondents often contrasted earning money with producing food. This contrast is being used to indicate differences in wealth.

Phase	Past	Present	Future
Situation	Landless / not enough land (often reason of migration)	Owner of land in settlement area (subsistence farmer)	Other paid jobs / hiring people to work on land
Wealth	No food, no money	Food, not enough money	Enough money

Table 2: Farmers view on progress

The respondents living in Tapwakan, Magamian and Mamaga who experienced financial progress over the last few years were mostly migrants. They left their respective place of origin in search of available land (past). When they settled in Isabela Province they acquired land for the cultivation of crops. As subsistence farmers they are able to satisfy their basic needs (present). The respondents generally consider themselves to be better off now than before migration. Migration has led to an improvement of their livelihood: they are owners (whether officially recognized or not) of a small agricultural plot now. The farmers can meet their limited needs, but they have a lack of cash income. Progress in their current situation is equal to earning more money (cash). Being rich in this context means not having to endure the hardships of life as a farmer. It encompasses yet a new shift in means of existence: a shift to off-farm paid jobs (future). This way of thinking about progress is illustrated by my experiences in Mamaga and Masipi East. One of the conclusions I drew here, is that parents don't want their children to become farmers just like them. They would rather see the next generation make a living as a nurse, a teacher or a soldier.

Regarding question one, the villages of Coop, Dy Abra and Nagbaracalan had a different experience from the one described above. The majority of the villagers experienced the opposite: they became poorer during the last few years. For Dy Abra the respondents didn't mention a specific reason for this decline in livelihood. The inhabitants of Nagbaracalan all complain that life is getting harder and more expensive. The people from Coop attribute the negative changes to their failed harvest. Different factors are blamed (typhoon, drought, *tungro*).

Monthly spending

For the studied villages it is difficult to indicate an average income. A careful estimation, calculated by taking the average of all the answers, would be PhP. 2,700 per month. However, all kinds of differences occur, mainly caused by differences in types of jobs. Subsistence farmers don't make a lot of money: with selling bananas they usually earn PhP. 2,200 per month. Paid jobs in the mining industry (for example in Pulang Lupa) are more attractive. It pays PhP. 200 per day (PhP. 4,000 pesos per month) which is paid in cash every two weeks. Logging is another activity that can be an important part of subsistence paying approximately PhP. 750 per trip. Further, the Philippines are known for their citizens working abroad. In most villages you will notice this is the case: many respondents have relatives earning money abroad. Households with family members working abroad, usually receive a part of their salary: they have more money to spend on luxury items than others.

In our research we tried to find out where people generally spend their money on. Most of the monthly budget is spent on food (60% or PhP. 1,550). Other expenditures are dependant on the composition of the household. Especially school-going children can be a big financial burden. It was difficult for respondents to estimate the money spent on healthcare. These costs only occur when a family member gets sick. When a visit to the hospital is necessary this often has a big impact on the limited budget of our respondents; especially because only a few people are saving money for these emergencies. For most respondents, spending much money on clothes is not possible: "If they didn't give us clothes, we would be walking around naked". Clothing is only bought when necessary,

on average once a year. Last, almost no money is spent on relatives. People are more likely to help other people by providing food or shelter.

The one thing that was not mentioned in the questionnaires was the money used for agricultural products like fertilizers, seeds, laborers etcetera. As the majority of the respondents are farmers, this might have influenced the gathered information and drawn conclusions.

Future perspectives

The period of time spent in the field gave me two contradicting impressions of the farmer population. On the one hand, it seemed like farmers were only thinking of the near future. They did not have a long-term vision. The answers to the questionnaire confirm this impression. They are as follows:

Possible answers	Total nr. of respondents	Relative percentage
Yes	59	53%
No	16	14%
Don't know	25	22%
I hope	12	11%
Total	112	100%

Table 3: Do you expect big changes in the future?

As can be seen in the overview, one third of the respondents did not expect any changes for the future or did not know what to expect from the future. A woman phrased her answer to the question of possible scenario's for the future as follows: "I don't think". This remark shows that a large part of the respondents don't think of how things should be or could be: they react on given circumstances.

This last remark leads to an important conclusion. Though it is obvious, it is still fundamental to keep in mind that these farmers simply aren't able to predict the future. Farmers are dependant on the weather circumstances because it will determine the quantity and the quality of their harvest. This makes them extremely vulnerable. Environmental conditions have an immediate effect on their livelihood. For farmers it's difficult to anticipate on the future because the prospects can instantly change. A farmer concludes: "Sometimes I'm poorer, sometimes I'm richer. Life's like a wheel: when you get good harvest, then it's good."

On the other hand, the information shows that more than half of the respondents do believe that changes will occur, be it positive or negative. Positive changes (70 %) were related to the ability to work harder and produce more or to the hope that the education of children would improve their livelihood. Especially the villages of Magamian, Quimalabasa, Ampoy and Dy Abra have a positive attitude towards the future. The expectation of negative changes (30 %) is mostly a crystallization of the fear of having a bad harvest due to unpredictable weather conditions. The inhabitants of Pulang Lupa and Nagbaracalan (Simanu Norte) can be mentioned in this context.

Conclusion

A large part of the respondents consider themselves to be poor. They relate this to their identity as a farmer. Subsistence agriculture being their livelihood, they do not have much cash income. As a result they do not have much money to spend. Expenses on healthcare, agricultural products and education can hardly be met by them. Further more, the respondents perceive the past in different ways and their expectation of the future varies.

3.26. Identity among the Ifugao migrants in the Sierra Madre

Anna Piestrzynska

The last decades have been witness to the rise of a growing global indigenous peoples' movement, which did not only lead to empowerment, rising self-awareness and made many issues discussable but it also led to the growth of public interest concerning indigenous issues. Many international and national funds have been made available for projects concerning indigenous peoples and nations have started to acknowledge their indigenous peoples through formulation of legal acts concerning the collective (land) rights of indigenous peoples. Many indigenous peoples are realizing that their cultural identity and traditional ways of life are threatened by growing industrialization, globalization and commercialization. At the same time the indigenous peoples' movement could not have reached the scale it is on now without globalization, industrialization and commercialization. We have to keep in mind that the struggle of many indigenous peoples for the rights to live their life in a dignified way according to their own ways (not subjugated to colonizing forces), has been going on for centuries but it has never before reached the global proportions it has reached now.

In the Philippines in 1997 the Indigenous Peoples Rights Act (IPRA) was passed, recognizing the rights of ownership of Indigenous communities over ancestral lands according to the principle of self-delineation. The National Commission on Indigenous Peoples (NCIP) was created. It is the primary government agency that formulates and implements policies, plans and programs for rights and wellbeing of indigenous peoples. It also recognizes the importance of land (ancestral domains) for Indigenous peoples as well as their rights thereto. Land means life for indigenous peoples, without it indigenous communities disintegrate. (personal comment Ruben S. Bastero, 25 June 2007) What does this all mean for indigenous migrants such as the Ifugao? Are they aware of organizations such as NCIP and do they know IPRA? How do they identify themselves, where do they feel they belong? Do they know the terms used by the national indigenous peoples' movements and do they hold the same meaning for them? What influence has migration on their cultural identity and community sense?

In order to find an answer to all these questions I have used the paired-comparison methodology involving five terms: Ifugao, Filipino, Isabeliño, Igorot and Katutubo. In 14 Ifugao villages around the Northern Sierra Madre Natural Park, the people were asked to choose 10 times between pairs of combinations of the five terms (example; do you feel more like an Ifugao or Filipino?). They were also asked to answer the same questions for their children and spouse. Additional questions were asked concerning the meaning of the terms; what does it mean to be Ifugao? What is Katutubo? People were also asked if they knew IPRA and what it means. Through informal talks with people and observation it was possible to obtain some indication of their community sense and relations.

It turned out that more than 80 percent of the respondents hadn't heard about IPRA. Nagbaracalan (this sitio is part of barangay Simanu Norte) seems to be exceptional because 40 percent of the respondents knew IPRA and could explain the meaning.

These are the general results for the 14 villages concerning the meaning of the 5 terms:

- Ifugao: You are born an Ifugao and you die an Ifugao. People are proud to be Ifugao and they link the term with having parents who are Ifugao and/or being born in Ifugao province. There is a strong community sense among the Ifugao migrants; they help each other because they are Ifugao.
- Filipino: All the people who live in the Philippines are Filipino. If you are Ifugao, you are Filipino. Some respondents said Igorot, Ifugao, Ilocano, Kalinga are Filipino, while there were a couple of respondents who defined Filipino as anyone who was in the Philippines (including the foreign students)
- Igorot: Most respondents replied that they are not Igorot because Igorot are culturally and linguistically distinct from Ifugao. There were some respondents however who said that Igorot and Ifugao are the same but speak different dialects. During the interviews it became clear that people who shared this view identified themselves more with Igorot than with Isabeliño, Katutubo or also Filipino in some cases. Some people had not ever heard the term Igorot before and did not know what it meant.
- Isabeliño: Someone who lives in Isabela. Some respondents did not identify themselves with Isabeliño because Ibanag and Ilocanos are Isabeliño. Many respondents did not know the meaning of Isabeliño, but could answer the questions after we told them it is someone who lives in Isabela. There was only one respondent who felt much more an Isabeliño than Ifugao, while being born and raised in Ifugao.
- Katutubo: this term was the least familiar to the respondents. One respondent thought it was a place in Ifugao. Several respondents said it means native. Around 70 percent of the people had not heard the term before and did not know its meaning. The majority of people who had heard it before said it means the young generation; the young people. In Nagbaracalan, for example all people shared this view and identified their children as Katutubo. The children themselves also identified themselves as Katutubo. In some of the other villages people could not answer the questions relating to Katutubo.

For all the villages it is true that most respondents clearly identify themselves as Ifugao in the first place, some did not answer the questions because they said: we are Ifugao. When it comes to the other terms it is possible to discern big variation among the villages. There is some uniformity in the villages itself though. For example in Pulang Lupa people identify themselves mostly as Ifugao and Igorot. In Ampoy people are Ifugao in the first place and then Filipino, nobody feels like an Isabeliño. In Nagbaracalan people identify themselves either as Ifugao or Filipino and their children are identified by their parents as well as by themselves as Katutubo also. 50 percent of the respondents did not feel like an Isabeliño, while another 50 percent did not feel like Igorot. In Quimalabasa 50 percent of the respondents identify themselves as Ifugao and Katutubo and they don't feel like Isabeliño. The other half of the respondents did not know the terms Katutubo, Isabeliño and Igorot. In Coop 50 percent of the respondents identify themselves as Ifugao in the first place and 20 percent feels they are Filipino in the first place. Three respondents felt mostly as Isabeliño. 70 percent of the respondents did not identify themselves as Katutubo.

In Magansimid every respondent identified him or herself as Ifugao firstly; there was one exception who felt firstly as Filipino. In Balete all respondents identified themselves as Ifugao in the first place. In Magamian every respondent identified him/herself as Ifugao firstly, but there was one exception who felt he was mostly a Filipino. In Dipugpug every respondent felt as Ifugao in the first place. In Casala all respondents felt as Ifugao and Filipino and they did not know what Katutubo meant. There are no clear results for Abra, Mamaga, Masipi and Capellan. When it comes to the answers people gave concerning the identity of their spouse and children, most people just gave the same answers they gave for themselves. Nagbaracalan is an exception because here people identified their children as Katutubo.

It appears migration has not changed the primary identity sense of the Ifugao who moved into the Sierra Madre. A grand majority of the respondents identified themselves primarily as Ifugao and many also stated explicitly the importance of being Ifugao. The term that was chosen mostly next to Ifugao was Filipino. It is surprising that so many of the respondents were unfamiliar with the term Isabeliño or simply did hardly or didn't feel at all as Isabeliño. The answers concerning Igorot and Katutubo differ immensely among the villages; some villages identify themselves also with the Igorot and Katutubo, while other villages don't know the terms or simply don't feel like Igorot or Katutubo. Katutubo was the most problematic term because the term was unfamiliar to a big part of the respondents. In conclusion it can be said that almost nobody knows IPRA and that there is uniformity among people of a single village concerning their primary cultural identity. Although most people aren't familiar with national politics concerning Indigenous peoples and organizations such as NCIP there is a strong community sense among the Ifugao and sense of belonging that continues even after migration. Children who are born in Isabela are still Ifugao in the first place.

3.27. Contemporary knowledge and use of rituals among the Ifugao migrants of the Northern Sierra Madre

Victor de Brabander

Introduction

The topic discussed in this chapter concerns the contemporary use of, and knowledge about, rituals among the Ifugao migrants who inhabit the Northern Sierra Madre of Isabela province. Rituals and ceremonies have an important place in many, if not all, cultures.

The techniques applied during these occasions are an important way to construct a bridge between the natural and supernatural world and even to use this connection to influence the supernatural world. In every culture social and/or religious rituals can be found, be it in a society where religion plays an important role or in a completely secular society. Most of the time rituals mark the beginning or ending of a certain period or the status of individuals or the group. The most common kinds of rituals are (1) calendrical rituals, (2) rites of passage and (3) status or crisis rituals (Beals 1977: 497).

The traditional Ifugao culture is been known for its complex religious beliefs and extensive use of rituals and ceremonies. Among the most prominent rituals in traditional Ifugao culture were calendrical rituals accompanying the cultivation of rice and curing rituals when somebody fell ill.

Since the Spanish period a process of cultural change has been taken place in relation to the cultural customs and beliefs of the Ifugao. The main driving force behind these changes has been the Christianizing mission of, at first, Spanish missionaries, which began converting the Ifugao around the beginning of the twentieth century. After the Spanish the Americans took over the control of the Philippines. Their influence especially has brought major changes to Ifugao culture. They Americans build schools and established churches and organized local government. In the domain of religious life changes have been very prominent and visible. This process of “acculturation of traditional beliefs and rituals” has, in a period of one century, severely changed the Ifugao culture. Many of the literature on contemporary Ifugao society notes that “a majority of today’s Ifugao population has been converted to one or another Christian group (Medina 2003: 13).

The purpose of this research was to find out if the Ifugao-migrants in the Northern Sierra Madre still possess knowledge about these old customs and if they are still using these practices today in the areas in Isabela where they have settled. By analyzing the data collected in the field we may be able to get an insight in the current stage of the acculturation process that has been, and still is, taking place and how people experience these changes.

Methodology

Discussing rituals & ceremonies is not always an easy task or topic. Often the occasions where these things are practiced are private or secretive within a certain society,

especially in relation to outsiders. Also, the complexity of some of these rituals, as well as their secretiveness, makes that the knowledge of these practices is in the hands and minds of a few people. Another reason why discussing these topics is difficult in the present is the influence and consequence of the conversion to the monotheistic Christian religion, which has to a large extent replaced the traditional practices.

To make the communication with the respondents about these topics easier and, maybe, more comfortable, visual attributes have been used during the interviewing to stimulate the respondents and to open up conversation. The attributes used were pictures (see previous page) of statues which are related to Ifugao ritual life. During the interviewing the pictures were shown to the respondents and the following questions were asked:

- What is this?
- What is it used for?
- At what times or moments are these objects being used?
- How important is it to you to have these objects?
- How can you obtain these objects? (self-made, bought, inherited, etc.)
- Are these objects still in use today? (here or in Ifugao province)



Photos 1, 2, 3 and 4: pictures used during the field work

Data gathering

After collecting the data from all the villages a first categorizing of the data took place with the purpose of filtering out all the respondents that could not be used for further analysis. In the preparation stage of this research it was believed that nearly all of the

respondents would belong to the Ifugao cultural group. During the fieldwork it became clear that many of the people living in the villages where the research was conducted were not Ifugao, but belonged to other cultural groups. Because this particular research question is about Ifugao cultural practices it is of primary importance to ask these questions to people who belong to this cultural group. The consequence of asking these questions to non-Ifugao is that people don't know what the questions are about because they don't recognize the pictures that accompany them and, because of this, answer the questions with: "I don't know".

Since this answer says a lot about the knowledge of the Ifugao when it is used by them as a response to the pictures, it would greatly influence the outcome of the research if the non-Ifugao would be included in the data analysis. Because of this it was decided that that non-Ifugao respondents would be excluded from further analysis.

Another reason why less than the total amount of respondents were included in the analysis was because of some confusion among some of the groups about the way how to gather the data for this particular question. As a consequence of this some groups only asked one respondent to look at the pictures and comment on them. This did produce some very interesting stories about the statues, but it further reduced the amount of respondents for the analysis.

After the filtering process there were 65 respondents who would be used for further analysis. These male and female respondents belong to different age groups and were all born in Ifugao province. During the analysis the answers given by these respondents to the questions were categorized so a comparison could take place between the answers. Furthermore, by looking for similarities and differences in the answers a general idea can be formed about possible variations in the use of rituals and the meaning they have for people. As an instrument of comparison the information provided by a key informant in Batad in Ifugao province was used as well as the available literature about Ifugao culture in the library of the CVPED office. Apart from this, information gathered during a visit to the Ifugao museum in Banaue was also included as a reference and an instrument for comparison.

Data analysis

As a response to the first question (what is this?) 18 of the 65 respondents (27.6%) didn't know or recognized any of the figures shown on the pictures. Another 18 (27.6%) named or knew one or more of the figures shown to them and 8 respondents (12%) knew about the statues without naming them specifically. The largest group (21 respondents, 32%) named all four of the figures that were presented. In this last group some used the same name for all the figures and some used different names for different statues. In total 13 different names were used. Some of these were quite similar, for instance *bulul*, *bolo* and *bulong* and the terms *tolor* and *valor*. Others used completely different terms. Some of the respondents just used the term *pi-naot* which means statue in Ifugao when discussing the pictures. From the 44 times the figures were given names the term *bulul* was used the most (20 times, 45%). More than half of the respondents who used this term considered all the four statues to be *bulul*. This corresponds to the information of the key informant in Batad who also said that all the statues were *bulul*. Through the writings of Ellis (1981) we learn that *bulul* are rice gods. He mentions that "*bulul* are usually made in

pairs, one male and one female. They represent a class of deities associated with the production of bountiful harvest, capable of miraculously increasing the rice before and after it is stored in the granary. *Bulul* are inherited by the first child of a family, along with the rice fields (Ellis 1981: 196)".

When asked what the statues are used for, many of the respondents mentioned the capability of increasing the rice before and especially after the harvest. Another comment given by many respondents was that the *bulul* protects the rice harvest. Also, a much mentioned remark to the question about the purpose or use of these objects was that by using these statues in a certain way you could prevent your relatives from falling ill. Some said that not using these objects during harvest time could make some of your relatives become ill. In relation to this some respondents said that the statues are also used during a curing ritual called *buni*. One respondent explained that "you can use *buni* by dancing the *gangsa* (offering dance) and playing the gong to cure people when they have fallen ill".

Another, smaller, group of respondents said these statues are just for display. Corresponding answers were also given when asking the respondents at what time the objects were used. Nearly all respondent replied that they were used either during the harvesting period or when someone was sick.

To the question: "Is it important to have these objects?" there was a similar correspondence in the answers given. Only a few respondents said that it was still important to have and use these objects, especially to prevent sickness. But the great majority of respondents answered this question by saying that these objects and the rituals connected to them are not important (anymore) or that they are only important to the "old people" or the ancestors.

When asked if these objects were still in use today, nearly all respondents said that the objects are still used by some people, but only in Ifugao province.

When asked how you could obtain these objects the answers were quite far apart because some of the respondents said that the statues can only be inherited and never bought or made by yourself while others said that you can make these objects yourself. Apparently there is some ambiguity in Ifugao culture about how to obtain these objects. Also, some said that you had to ask a special person to make such an object for you.

Conclusion

The purpose of this research was to find out if the Ifugao migrants who have settled in the Northern Sierra Madre still possess knowledge about ritual practices of their culture and if they are still using these practices in the present.

After analyzing the gathered data we can draw the following conclusions. It is clear that the majority of the 65 respondents did know or could name the statues that were shown to them during the interview with the help of the pictures brought to the field. Many people had interesting stories to tell about the use of the statues in Ifugao culture. It was interesting to see that the people who did possess some knowledge about the statues did not belong to a particular age group or sex.

The terms used to denote the statues as well as the stories told about them are being characterized by an enormous variety. For instance, there were thirteen different names used for the statues. Despite this diversity certain similarities could still be

discovered in relation to the statues. *Bulul* was the term mentioned most by the respondents and for the people who used this term more than half used it for all four of the statues. This is in correspondence with the information from other sources about *bulul* such as the available literature, information provided by the key informant and information gathered during the visit to the Ifugao museum. In regard to this we can conclude that there is still quite a lot Ifugao immigrants who have stories to tell about these statues. The research has been limited though in explaining the variation in the answers about the use of the statues and the terms used to denote them. Possible reasons for this variation could be the different dialects used among the Ifugao and regional variation in cultural practices. Another reason could be that precise knowledge about the correct way of using these statues has been greatly eroded because of the conversion to Christianity, a process that has been going for more than a century, but these are merely suggestions. More in depth research is needed for explaining these variations, for which there has unfortunately been not enough sufficient time during this research.

In relation to the importance of possessing these statues, and their use, in the present it became clear that the great majority of the respondents do not find it important anymore to possess these statues and if they are used at all they make reference to Ifugao province, where some believe the statues and the accompanying rituals are still practiced and carry importance to some people there. It seems that the process of “acculturation” as described in the introduction, as well as in much literature on these topics, is still going on and along its path is further deteriorating the traditional customs and belief systems of the Ifugao. The process of Christianization which started a little over a century ago in the Central Cordillera seems, at least among the present day Ifugao migrants in the Northern Sierra Madre, to have replaced animistic belief systems and traditional Ifugao material culture. A much heard comment in the villages was “we are Christians now; these old customs don’t have any importance to us anymore”.

Finally, I think it is important to note that this being a sensitive topic and the context people are living in, and have been living in, under the process of conversion, people might be ashamed or suspicious to talk about these issues. The research has not been elaborate enough to conclude this with certainty, but it is important to keep in mind when researching topics like this.

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3.28. Views on the future of adolescence

Jenifer M. Gatan

Introduction

Adolescence is the time for trying out various possibilities and refining them into sort of coherent whole that serve as an ego from which one operates and that others can know and recognize as who one is. Family environment shapes early-adolescent development. It is useful to recall that the key task confronting the adolescent is to develop a sense of self as autonomous individual. Adolescents have also been an important factor in many movements for positive social change around the world.

Methodology

Group discussions were organized with adolescents in the different villages by inviting the people in the age group of 15-25 years of age, males and females. The aim of the discussion was to explore the way they look towards the future.

Data

- Magamian: They would want to become farmers like their parents because they think they do not have enough education to do other things. They would also like to work overseas but again the barrier is education. They consider education as very important. They would like to have more access to it. They help their parents on the fieldwork and other daily activities.
- Balete: Education of youngsters is still on-going. So they really want to have a good future. They want that logging should be stopped. They really want to have a good job someday and prefer to work overseas.
- Puerta: The youngsters in this area wanted most to have their own land. One young lady wants to become a midwife. Most of them want to have a happy family.
- Magansimid: They would like to have a land which is officially registered. They want to guard the forest and stop illegal logging. Sierra Madre is very important to them because they used the wood for house construction. None of them want to work overseas because they have not studied in college. They do not think that there is a gap between the older and younger generation when it comes to lifestyle and tradition.
- Banig: They want to work overseas as maids. They want to finish college degree. Two girls and one boy have already experienced working overseas.
- Pulang Lupa: Education for them is very important although it is expensive. They would like to earn money and save. They also want to work on fields. They dream about a house with a grocery shop. One girl is dreaming to work in an office.

- Capellan: Discussion with one girl: she wants to have a good and permanent job to help her parents, siblings and relatives. She wants to work overseas. Education is very important to them in achieving goals.
- Coop: They are planning to have a good life in the future. They also expect that they will become a farmer like their parents because they lack education. Some are shy to go overseas because of no education. They utilized the forest in making kaingin and or logging to support lives and earn money. There is a gap between the generations because it seems that they are not engage anymore in the tradition and culture of their ancestors.
- Casala: The educated youngsters prefer to settle in the cities. However, most families are too poor to send their children to reputable school. As a consequence of this lack of education, the youngsters do not have the choice to leave the village. Most unskilled youngsters get children at young age.
- Dipugpug: The group varies in people who have enough money for education and those who have no enough money. They need the help of the government to achieve their goals. When it comes to forest, they say it is really important as a source of water, furniture and food for wildlife animals. They usually considered their parents as old-fashioned or very traditional. They are really glad to take a job in foreign country but the problem is education.

Conclusion

Most of the youngsters have not enough education to achieve their future goals. This is the most common reason that hinders the most of the youngsters. As observed in our village (Coop) the school is far from the village. Some youngsters want to engage in farming as their parents. Unskilled youngsters marry at very young age. Different youngsters in the different villages have different utilization on the forest. Most of the youngsters want also to work overseas. They consider their parents mostly as old-fashioned.

Appendix 1: Questionnaire

A. General:

1. Name:
2. Male/female:
3. Age (years)
4. Born in (province):
5. Religion/Church
6. Civil status:
7. Where is your husband/wife living? (province)
8. Education (highest grade):
9. Number of children:
10. Where are your children born? (province)
11. Where is your spouse born? (province)
12. Number of people staying the house:

B. History

13. When did you settle here (year)?
14. Did you migrate elsewhere before coming here? (province)

15. Why did you leave that place?
16. Why did you migrate to this specific place?
17. With whom did you migrate? (husband/wife, household, clan, friends, neighbors, religious group, etc.)
18. What were your sources of livelihood (job, farming, off-farm income) before migration?
19. Do you own land at the place you come from (in Ifugao province) (NB not the household but the respondent)?
If yes, who takes care of this land now?
20. How often do you go back to the place you come from and for what occasions?
21. Would you like to permanently return to the place you came from (live in Ifugao again - forever)?
22. Where would you like your sons to settle when they are grown up?
23. Where would you like your daughters to settle when they are grown up?
24. How far was the forest from the village at the time of your arrival? (in hours walking)?
25. How far is the forest from the village now (in hours walking)?
26. What will happen to the forest in the years to come?

C. Farming

27. Please fill in the table

Crops planted	Brand or traditional variety	Owner of the field	Area planted for crop (in hectares)	Production or output in quantities	Use of fertilizer (brands)	Use of pesticides (brands)	Use of herbicides (brands)	Number of harvests per year	Purpose of crop (food, market or food for animals)	How many hectares did you plant five years ago?
Yellow corn				sacks						
Upland rice				sacks						
Irrigated rice				sacks						
White corn				sacks						
Banana				pieces						
Others (mongo beans, cassava, camote, etc.)				kilogram						

28. Are you planning to expand your farm?

Yes, how much?

No, why not? Constraints (labor, money ...)

29. Who makes the decisions on the farm? (husband/wife/father/...)

30. Do women and men grow different crops?

31. Do you hire laborers for harvesting or planting?

32. Do you organize working-labor parties (*bayanhinan*)?

33. What crops did you grow before you migrated to this area?

1.
2.
3.
4.
5.

34. How large was your farming area in your area of origin? (hectares)

35. Which 5 crops would you prefer to grow and why?

	Why do you not grow them here?
1.	
2.	
3.	
4.	
5.	

36. Are you using a plough in preparing the land?

37. Does your household own a mechanical thresher for rice?

38. Does your household own a sheller for harvesting your corn?

39. Where does your household dry your products after harvest?

40. Whose job is it to dry the harvest? (husband, wife, children, laborers)
41. From whom did you learn to use fertilizer, pesticides and herbicides?
42. Do you borrow money to finance your farming inputs?
If yes, from whom?
At how much interest (percentage?)
What collateral?
43. Do you have other sources of income aside from agricultural crops?
44. How do you pay your debts?
45. Who is the one that borrows the money for the farming inputs, the wife or the husband?
46. Are there micro-financing possibilities in your community?
If yes, name:
47. In case of emergency where do you go to borrow money?
48. Who is the one that borrows money in case of an emergency, the wife or the husband?
49. How many hectares of land do you have in total (how big is your claim)?
50. Do you have an official paper or certificate of your land? If yes, what kind of paper? (name program)
If not, why not?
51. Do you have a tax declaration from the LGU? In whose name is it? (husband/wife/father/brother)
52. Are there any rules set by the government that you should respect on your land? (for example erosion control, tree planting, making the land productive?)
53. Please answer the following propositions:
Virgin forest is the best place to make a kaingin

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
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Grasslands (cogon) are the best place to make a kaingin

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
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Logged-over forest is the best place to make a kaingin

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

The farmers in this village are not practicing kaingin

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

Kaingin is destroying the forest

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

Illegal logging is more destructive than kaingin

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

There is still a lot of forest left to make new kaingin

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

The government is not helping the people in this village

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

Kaingin causes flooding in the lowlands

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

Ifugao protect the forest better than lowland communities such as Ilocano and Ybanag

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

The government should prohibit kaingin making in the forest

Strongly Agree	Agree	I don't know	Disagree	Strongly disagree
----------------	-------	--------------	----------	-------------------

54. Is your land suffering from soil erosion?

55. Can you stop soil erosion? How?

56. Is your land losing its fertility?

57. Can you improve the fertility of the soil? How?

58. Do you use any of these land investment types? (If no, why not?)

	Yes	No	Why
Contour bunds			
Rice terracing			
Agro-forestry			
Tree plantation			
Irrigation through water tubes			
Hedgerows			

59. Have you ever received training in sustainable land use practices?

If no, would you need that?

If yes, what topic?

60. Has your husband/wife received a training?

Forest

61. Do you own a chain saw?

62. How many trips to the forest do you make per month to do logging?

63. How many days is one logging trip?

64. How much do you earn with logging per trip?

65. What is your function? (chainsaw operator, transporter, helper, cook, supplier or as financier)

66. What tree species do you cut?

67. Do you have a permit or permission from the officials (who)?

68. Do you think that logging should be stopped?
Why?

69. Who is responsible to protect the forest?
(Ask specifically about DENR or the LGU)

70. Do you also have a role in the protection of the forest?

71. What wildlife species do you hunt? (minimum 5 species)

Ifugao name of the species	Ilocano Name of the species	English Name of the species	Methods in hunting (trap or gun or bow and arrow or dynamite, etc)	Purpose for hunting (For food? Or to sell? etc..)	Frequency (How many individuals of this species are being caught per month?)

72. What is the best season for hunting (month)

73. Is it prohibited to hunt specific species? If yes, which?

74. What fish species do you catch? (minimum 5)

Ifugao name of the species	Ilocano Name of the species	English Name of the species	Methods in fishing (Batang or net or spear gun, or snares or electrolyte or dynamite, etc)	Purpose of Fishing (For food? Or to sell? etc..).	Frequency (How many times of fishing every week?)

75. Are there any regulations for fishing?

76. Are you collecting non-timber forest products (such as honey, rattan, almaciga resin, fruits, tubers, leaves, etc)

Ifugao name of the NTFP	Ilocano Name of the NTFP	English Name of the NTFP	Collector (male/female)	Distance from the house (hours)	Purpose of NTFP collection	Frequency of collection

D. Village

77. How do you get your drinking water?

- private pump
- hose (running water permanently)
- river or creek
- others

78. Who fetches the drinking water for the household?

79. Are there particular methods (or rules) being used to protect the source?

80. Does it sometimes get dirty (mud, particles, soap etc)?

81. Who takes care (repairs, maintains, cleans) your drinking water system?

82. Do you experience drinking water shortage during the year?

83. Do you expect drinking water shortages in the future?
And if so, why?

84. Do you have one (or more) words for waste? (in Ifugao).

85. Mention various types of waste (what do you throw away – what do you not use):

Types of waste (for example: Organic waste, animal dung, plastics, batteries, empty bottles, sacks, cigarette butts, insecticides etc.)	Treatment (burn, re-use, bury, dump, sell, use on land, give to animals, toys etc.)
1	
2	
3	
4	
5	

86. When was the last super-typhoon?
87. Was your house damaged?
88. Were your crops damaged?
89. Did you get help from relatives? Which relatives? (sisters, brothers, fathers, mothers, etc.)
90. Did you get help from neighbors?
91. Did you get help from the government?
92. Did you take measures to protect yourself from typhoons in the future?
Did you rebuild your house in a different place?
Did you rebuild your house with different materials?
Did you plant different crops on your land after the typhoon?
Did you cut tree to prevent more damage to the house?
Are there any crops that you do not want to plant anymore? (trees)
93. Do the following government agencies visit your village?
 DENR (Department of environment and natural resources)
 NCIP (national commission)
 AFP (Armed Forces of the Philippines)
 LGU (local government unit)
 PNP (Philippine national police)
 Medical service
 Agricultural extension
 ISU extension
 Punong Barangay
 others...
94. How often do these government officials visit your village?
 once every week
 once every month
 once every year
 never

95. What are the projects of the government here in your village to conserve the environment?

96. What are the projects of the government here in your village to improve your livelihood?

97. Do you know the Northern Sierra Madre Natural Park?

yes, explain

no

98. Do you know the Indigenous Peoples' Rights Act (IPRA)?

yes, explain

no

99. Where do your sons go to school?

100. Where do your daughters go to school?

101. What job do you want for your sons?

102. What job do you want for your daughters?

103. Which Ifugao values (*pammati*) do you teach your sons?

104. Which Ifugao values (*pammati*) do you teach your daughters?

105. What steps do you take when you fall ill?

106. What steps do you take when your children fall ill?

107. Who do you go to in the village when you are ill?

108. Which rituals do you use to cure sickness? Is there a different cure for men/women?

109. What do you do to prevent sickness?

110. Are you experiencing a reduction in available medicinal plants in forest?

111. Do you go to Ifugao province to cure your illness?

112. Do you have a PHILAM LIFE or PHIL HEALTH card?

113. Where do you bury your family members? (be specific for which family members)

114. Why on this location?

Are all family members buried there (e.g. young sons and daughters as well as grandfather or grandmother)?

115. What will happen with your family members after their death? (Do you believe in afterlife?)

116. Do the ancestors play a role in the lives of present generations? If so, how?

117. Do you consider yourself to be poor? Why (not)?

118. Do you have more or less money to spend than most other people in your village?

Much less	Little less	More or less equal	Little more	Much more
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119. How much do you spend per month (in peso) on

- food
- education
- clothing
- health
- need of your relatives
- fiestas, socials
- others

120. Have you become richer or poorer during the last few years? Why?

121. Do you expect big changes in the near future? Yes/No? And why?

122. Please chose on of the following two items (informant has to chose between the two options presented)

a. Do you feel more like a: ...

...

Ifugao	Katutubo
Filipino	Ifugao
Igorot	Isabeliño
Katutubo	Igorot
Isabeliño	Filipino
Filipino	Igorot
Igorot	Ifugao
Isabeliño	Katutubo
Ifugao	Isabeliño
Katutubo	Filipino

b. Are your children ...

Ifugao	Katutubo
Filipino	Ifugao
Igorot	Isabeliño
Katutubo	Igorot
Isabeliño	Filipino
Filipino	Igorot
Igorot	Ifugao
Isabeliño	Katutubo
Ifugao	Isabeliño
Katutubo	Filipino

c. Is your spouse a

Ifugao	Katutubo
Filipino	Ifugao
Igorot	Isabeliño
Katutubo	Igorot
Isabeliño	Filipino
Filipino	Igorot
Igorot	Ifugao
Isabeliño	Katutubo
Ifugao	Isabeliño
Katutubo	Filipino

123. Show the pictures of Ifugao material culture

- What is this?
- What is it used for?
- At what times or moments are these objects being used?
- How important is it to you to have these objects?
- How did you obtain these objects? (Self-made, bought, inherited etc.)
- Are these objects still in use today? (here or in Ifugao province?)

Appendix 2: program

Week 1: Introduction			
Saturday 16 June		Arrival students (Pension Natividad)	
Sunday 17 June		<i>Intramuros</i> , Fort Santiago National museum	
	16:00	Introduction meeting	Dr. Mercedes Masipiqueña & Drs. Jan van der Ploeg
		Welcome dinner	
Monday 18 June	9:00	UNDP	Ms. Clarissa Arida
	13:00	Royal Netherlands Embassy	Mrs. Paula Schindeler
Tuesday 19 June	9:00	DENR-PAWB	Dr. Norma M. Molinyawe
	13:00	PAFID	Mr. Dave de Vera
		Travel to UPLB (Trees Hostel)	
Wednesday 20 June	9:00	ASEAN Center for Biodiversity	For. Rodrigo Fuentes
		IRRI – Rice Museum	
	13:30	ICRAF	Mr. Karl Villegas
	15:30	CFNR Botanical Garden	For. Roberto Cereno
		Dinner	
Thursday 21 June	9:00	Travel to Cabagan	
Friday 22 June	9:00	Welcome meeting ISU-Cabagan	Dr. Edwin Macaballug ISU-C Exec. Director
		Introduction to CVPED	Dr. Andres Masipiqueña
		Goals and objectives of the 2007 summer course	Dr. Mercedes Masipiqueña
		Rules and regulations EIC	Dr. Rose Araño
		CVPED student presentation	Mr. Zeno Wijtten
	15:00	Introduction to the ISU-Cabagan campus: ecological park, jatropa research area, colleges	Dr. Tomas Reyes CFEM Dean
Saturday 23 June	13:00	Callao caves	Mr. Arnold Macadangdang & Mrs. Jane Placido
Sunday 24 June		No schedule (market)	

Week 2: Proposal			
Monday 25 June	8:30	Lecture: Problem definition and assignment	Drs. Jan van der Ploeg
	9:00	The Northern Sierra Madre Natural Park	For. William Savella PASu NSMNP

	13:00	Indigenous Peoples' Rights Act	Dir. Ruben Bastero NCIP
	19:00	Film: Katutubo	
Tuesday 26 June	8:30	Lecture: Indigenous people and resource management	Dr. Dante Aquino
	9:30	Workshop: Problem definition & research questions	
	15:00	Lecture: Doing field work in the Sierra Madre	Mr. Arnold Macadandang
	18:00	Welcome dinner (CML House)	
Wednesday 27 June		Introduction to the barangays (Puerta & Balete)	Mr. Arnold Macadandang Mrs. Jane Placido
Thursday 28 June	8:30	Lecture: Researching the future	Dr. Gerard Persoon
	10:00	Lecture: Gender, households and resource management	Dr. Jose van Santen
	13:00	Lecture: Operationalization of concepts and data gathering through observations and interviews	Dr. Gerard Persoon
	14:00	Workshop 3: Research methods & techniques	
	19:00	Film: Philippines 2004 (options for the solution of environmental and developmental problems)	
Friday 29 June	8:30	Lecture: Forest policy	Prof. Cecile Mangabat
	10:00	Workshop: Logistics (field equipment, permits, transport, etc.)	
	15:00	Lecture: Nature conservation on farmland in the Netherlands	Dr. Geert de Snoo
	16:00	Introduction to the fieldtrip	For. Mari-Tes Balbas
	19:00	Film: Endangered Tales	
Saturday 30 June	7:00	Field visit San Mariano	CROC team
Sunday 1 July		Field visit San Mariano	CROC team

Week 3: Fieldwork			
Monday 2 July	8:30	Proposal Presentation	Dr. Gerard Persoon
		Workshop 5: Corrections and feedback	Dr. Gerard Persoon

	13:00	Coordination LGUs	Mr. Arnold Macadangdang & Mrs. Jane Placido
Tuesday 3 July		Departure for the field	
Wednesday, 4 July		Start fieldwork	
Thursday, 5 July		Fieldwork	
Friday, 6 July		Fieldwork	
Saturday, 7 July		Fieldwork	
Sunday, 8 July		Fieldwork	

Week 4: Visit to Ifugao			
Monday, 9 July		Return from the field	
Tuesday, 10 July		Workshop 6: Mid-term internal feedback and reporting	Dr. Gerard Persoon
Wednesday, 11 July	7:00	Travel to Ifugao Province (Banaue View Inn)	Mr. Arnold Macadangdang & Mrs. Jane Placido
Thursday, 12 July		Visit Batad (Rita's Mountain View Inn)	
Friday, 13 July		Travel to Cabagan	
Saturday, 14 July		Departure for the field	
Sunday, 15 July		Fieldwork	

Week 5: Fieldwork			
Monday, 16 July		Fieldwork	
Tuesday, 17 July		Fieldwork	
Wednesday, 18 July		Fieldwork	
Thursday, 19 July		Fieldwork	
Friday 20 July		Fieldwork	
Saturday, 21 July		Fieldwork	
Sunday, 22 July		Fieldwork	

Week 6: Reporting and presentation			
Monday, 23 July		Fieldwork	
Tuesday, 24 July		Fieldwork	
Wednesday 25 July		Return from the field	
Thursday, 26 July	8:30	Workshop 7: Report & presentation	Dr. Mercedes Masipiqueña & Drs. Jan van der Ploeg
Friday, 27 July		Reporting	
Saturday, 28 July		Reporting	
Sunday, 29 July		Reporting	
Monday, 30 July	10:00	Evaluation	Dr. Mercedes Masipiqueña

			& Drs. Jan van der Ploeg
	13:00	Presentation	Dr. Mercedes Masipiqueña
		<i>Despedida</i> (EIC)	Cultural Group ISU Cabagan & ISU combo
Tuesday, 31 July	6:00	Departure for Manila (Victory Liner)	
Wednesday, 1 August		Flight to the Netherlands	

Appendix 3: lectures

Lecture 1: United Nation Development Programme (UNDP)

By Clarissa Arida and Jose Antonio

June 18, 2007

Jocelyn B. Pagalilauan

Mrs. Clarissa Arida begins her lecture by giving an overview about what biodiversity is. Biodiversity is the wealth of life forms on earth. A continuum of variation rather than a countable number of 1.4 million species (20% of estimated total) scientist discovered. Philippine is a country blessed with 7,100 islands, 85 people of diverse ethnicity with over 100 distinct dialects and cultures, 5,000 identified species of Philippine marine, plants and animals 400 in the coral reefs alone. Mega-diverse countries are countries that claim 2/3 of the biological resources and 80% most endangered species. It includes also the Philippine National Policy is based on:

- Philippine Agenda 21: A National for Sustainable Development for the 21st century,
- NIPAS Act of 1992: National Integrated Protected Areas System,
- RA 7160: Local Government Code of 1996,
- RA 8371: Indigenous People's Right Act (IPRA).

These policies desire to ensure full participation of all stakeholders, ownership of development intervention and continuous policy dialogue. There are also 166 countries working for the solution to global and development network. There are programming processes involve such as: Country Programme Action Plan (CPAP), Millennium Development Goals (MDG), Medium Term Philippine Development Plan (MTPDP) and Common Country Assessment (CCA).

UNDP focal areas are; fostering democratic governance, achieving the millennium goals, crisis prevention and recovery and energy environment for sustainable development. There are expected outcomes such as strengthened, rationalized and effectively implementation of environment and natural resources (ENR) framework plans, promotes cleaner energy, support effort toward poverty alleviation and sustained economic growth, focus on policy development and capacity building and streamlined ENR services. Their objectives are to sustain environment and energy policies are in place and phases of implementation specified and key stakeholders are better able to manage the environment.

UNDP supported projects of biodiversity conservation or protected area management and IP's:

- Samar Island Biodiversity Project (SIBP): implemented in the island of Samar which aims to put in place a management system for the Samar Island National Park, which contains the Phil. largest tract of terrestrial forest and endemic species of flora and fauna.
- The Bohol Marine Triangle Project: implemented in the islands of Panglao, Balicasag and Pamilican. The project is a major initiative in response to the need to conserve the globally-significant and biodiversity.

- National Capacity Self-Assessment: to identify through a country-driven.
- Small Grants Project (SGP): the SGP (Global Environment Facility and EU Tropical) is managed by UNDP gives priority to community.
- Northern Sierra Madre Natural Park Conservation Development Project
- Sustainable Management of Mount Isarog Territories (SUMMIT)

Lecture 2: Department of Environment and Natural Resources (DENR)

By Norma M. Molinyawe

June 19, 2007

Christopher M. Telan

Norma Molinyawe the OiC of the Protected Areas Management Division Protected Areas and Wildlife Bureau gave the presentation about “Biodiversity and Developing Policies in Management of the National Integrated Protected Areas System”. She mentioned the status of the Philippines biodiversity. Philippines is one of 34 global biodiversity hotspots and one of 34 mega biodiversity countries in the whole world. She said that the Philippines has 7,101 islands and 36.239 km. shoreline, 5th in the world in no. of plants species, 4th in no. of endemic birds species, and 5th in no. of mammal species.

RA 5125 established the Northern Sierra Madre Natural Park. She also explained the process of PA establishment and management particularly the following:

- Review of context (status and pressures) and establishment of a site management vision;
- Site planning;
- Allocation of input resources (human and financial);
- Production of management outputs;
- Outcomes (conservation impacts).

But these five stages have a central core, which is a cycle of Evaluation, Reflection and Learning. Evaluation that assesses each of these elements and sketches a relatively comprehensive picture of management effectiveness. There are two levels: first is Presidential Proclamation and the second is Congressional Enactment.

In the last part of the presentation she told that the Basic policy of the program is to promote the Conservation of Biodiversity and Sustainable Development in Protected Areas and Buffer Zones in order to maintain essential Ecological Processes and Life support systems which will enhance peoples capacity to sustain human life and development as well as plants and animals, and also they provide tenured migrant communities and indigenous people within protected areas and buffer zone, tenure over established community base program areas, provided that the activities to be undertaken are consistent with the Protected Area Management Plan.

Questions and answers:

Q: What is Buffer Zone?

A: Boundary of a Protected Area

Q: What will the DENR do about illegal logging?

A: Call for the attention of the government.

Lecture 3: The Philippine Association For Intercultural Development (PAFID)

By Dave de Vera

June 19, 2007

Jenifer M. Gatan

Last June 19, 2007 we had a short, simple but detailed presentation about the Philippine Association For Intercultural Development (PAFID) which was presented to us by Director Dave de Vera. This presentation gives us the more knowledge to understand more about the indigenous communities which is related to the theme of the International Summer Course 2007. The theme was “Indigenous Peoples and Protected Area Management.” The research was focused on the people of Ifugao.

The Philippine Association For Intercultural Development or PAFID was founded on August 1, 1967 as an “association of people interested in the problems of cultural minority groups.” PAFID is a social organization which assists indigenous communities to regain and secure their ancestral domains. PAFID recently secured modern and state of the art survey and mapping equipment to further augment and update its current mapping capability. This new sets of equipments will enable PAFID to respond to the demands for its services form indigenous communities and at the same time address the legal and technical requirements that are now enforced in the process of securing Ancestral Domain Titles.

PAFID today is an institution which engaged in the development of indigenous social organizations, ancestral domain management, community-based natural resources management planning, community mapping, agro-forestry, technical services, policy advocacy and others.

About the presentation is the two main issues and problems includes: (1) lack of tenurial security for majority of the IP population; and (2) continuation and access to the land and resources.

The Government sees IP land as: (1) state property; (2) under threat by human habitation; (3) open access; (4) no existing management regime; (5) needs to be provided with scientific management plan; and (6) underdeveloped and does not produce new revenue.

Results: (1) inaccurate data and information on IP resource management/land-use patterns; and (2) laws and land-use policies do not consider traditional rights and skewed towards commercial exploitation.

Mr. Dave de Vera presented to us the Community Mapping Methodologies which includes: (1) Sketch Mapping; (2) 3D Modeling which is being used to settle boundary disputes which for a long time frequently cause bloody tribal wars; and (3) GPS Survey.

The presentation was ended with different questions which were answered by the PAFID Director Dave de Vera and Gilbert Hoggang a member of this organization and who belong to Ifugao.

Lecture 4: ASEAN Centre for Biodiversity (ACB)

By Roland Yap and Rod Fuentes

June 20, 2007

Sheryl S. Balubar

Dir. Roland Yap gave an overview of ACB (ASEAN Centre for Biodiversity) which is an intergovernmental organization that will strengthen the capacity of ASEAN Member Countries which includes: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

In the Philippines ACB evolved from ASEAN Centre for Biodiversity Conservation (ARCBC).

ACB is used to encourage and enable the ASEAN Region to meet the calls by one member state. Its key goal is the ACB's financial stability in the year 2009. And its strategy's to maximize synergy between ASEAN Member countries.

It was funded by the ASEAN and the European Union in order to further enhance the collaboration among ASEAN nations to fulfill obligations to relevant treaties on environmental conservation. Its objectives are the following:

- Enhance capacity development for effective management of biodiversity.
- Promote information sharing and data management of species, ecosystem and protected areas.
- Promote awareness on the value importance of biodiversity among ASEAN leaders and public.

The centre will also play a key role in formulating and coordinating policies related to access and equitable sharing of benefits from biodiversity. The ACB is composed of 5 components:

- Established and management of ACB
- Policy development and coordination
- Digital knowledge management capacity
- Promotion of awareness on biodiversity values for the ASEAN leaders and public
- Sustainable financing mechanism

Questions and answers:

Q: Victor asked an example of a Private enterprise that funded the ACB?

A: Hong Kong and Shanghai Bank

Q: Jasper asked how to stop illegal logging?

A: Through legislative guidelines.

Q: Bess asked how to develop communication to the stakeholders?

A: Mr. Rod Fuentes Executive Director of ACB answered by teaching people how to manage their resources for better sustainable biodiversity development.

Q: Marco asked where the funds go?

A: By conducting training capacity development.

Q: Sir Jan asked how to bring technical capacity to local stakeholders?

A: Through networking or sharing information by working with the government and recognizing the role of institution.

15 minutes film viewing “saving the ASEAN dream”: this is all about the extinction of wildlife due to the illegal activities done by man such as illegal logging, hunting and fishing.

Lecture 5: International Rice Research Institute (IRRI)

By Floor Sanchez

June 20, 2007

Lemuel D. Dao-ayan

The International Rice Research Institute is a non-profit research and training center established to reduce poverty and hunger to improve the health of rice farmers and consumers and to ensure environmental sustainability through collaborative research. IRRI aims to strengthen national agricultural research and extension systems, and IRRI is also an educational and research institute dedicated to creating a better world for rice farmers and consumers through scientific discovery of superior rice farming technologies.

The International Rice Research Institute was established in 1960 by the Ford and Rockefeller foundations in cooperation with the Philippine government. The headquarters which feature modern laboratories, training and accommodation facilities, and a 252 hectares experimental farms lies next to the main campus of the University of the Philippines Los Baños, about 60 kilometers south of the Philippine capital Manila.

The International Rice Research Institute is part of a global network of 15 nonprofit agricultural, forestry and fishery research centers supported by a coordinating organization known as the Consultative Group on International Agricultural Research (CGIAR), which comprises 64 members, including donor nations, international and regional organizations, and several private foundations. The CGIAR's three main sponsors are the World Bank, the Food and Agriculture Organization of the United Nations, and the International Fund for Agricultural Development.

The International Rice Research Institute's research agenda has developed in line with major global changes. Our strategic plan 2007-2015, "bringing hope, improving lives" reflects the latest priorities.

IRRI Goals are the following:

- Reduce poverty through improved and diversified rice-based systems.
- Ensure that rice production is sustainable and stable, has minimal negative environmental impacts and can cope with climate change.
- Improve the nutrition and health of poor rice consumers and rice farmers.
- Provide equitable access to information and knowledge on rice and help develop the next generation of rice scientists.
- Provide rice scientists and producers with the genetic information and material then need to develop improved technologies and enhance rice production.

Lecture 6: Isabela State University

By Andres Masipiqueña, Tomas Reyes and Rose Araño

June 22, 2007

Mark-Anthony C. Tuliao

The meeting was held at the EIC building on the 22nd of June 2007. This is the first day of the international students at the Isabela State University, Cabagan campus, together with the ISU student counterparts. The president of the university did not attend because he had an important meeting at the time of the introduction. That is why the executive director of ISU gave his warm welcome to all the students instead.

Dr. Masipiqueña introduced the Cagayan Valley Program on Environmental Development (CVPED). He mentioned that the CVPED is now eighteen years in service and talked about the projects and the role of CVPED. The CVPED has two directors. One from the Philippines, Dr. Andres Masipiqueña, and the other is Mr. Jan van der Ploeg, who is affiliated with Leiden University, which is situated in The Netherlands. CVPED is the joint program of ISU and Leiden University.

One of the speakers at the meeting was Dr. Rose Arano, who informed us about the rules and regulations of the EIC building. She told us that the students must abide by the rules to avoid any problems or complaints. Some of the rules were concerning loud conversation or making noise in public areas, like the hallway, lobby, stairway or in the rooms. Others were in regard of littering, smoking inside the hostel rooms and in the training hall, which is strictly prohibited.

An example of one of the many CVPED projects is the crocodile sanctuary. One of the CVPED students, named Zeno Wijten, gave a presentation about his research on crocodile behavior. He is also a student from Leiden University. He informed us about what he has been up to for the past few months and showed us some video of two crocodiles fighting each other.

At around 3.00pm, Dr. Tomas Reyes, the Dean of the College of Forestry and Environmental Management, showed the students around on the ISU Cabagan campus. The campus is made up of 4 colleges and one high school and the total area covered is 254 ha. The areas visited during the tour were the ecological park, the jathropa research area and the four colleges, which are CFEM, TC, PTIA, and CDCAS.

Lecture 7: Protected Area Superintendent (PASu)

By William Savella

June 25, 2007

Allan G. Pano

PASu has a vision to maintain and sustain the management of NSMNP (Northern Sierra Madre Natural Park) specially its habitat and ecosystem and their associated biological and cultural diversity. The mission of the PASu is to develop and promote clear policies on the protection of the NSMNP, work with various stakeholders in establishing the appropriate institutional arrangement, and facilitate the provision of necessary logistical support. The PASu has the full responsibility for the protection of land, water, wildlife, and other resources within the NSMNP.

The NSMNP has an approximate land area of 287,861 hectares and coastline water area of 71,625 hectares. Nine municipalities covering the NSMNP from the coastal or eastern area comprise four municipalities namely; Maconacon, Palanan, Dinapigue, and Divilacan while the western areas compose of five municipalities: Ilagan, San Pablo, Cabagan, San Mariano, and Tumauni.

The NSMNP (Northern Sierra Madre Natural Park) has a unique biological and ecological importance because of its widest remaining rainforest, rich and diverse ecosystems. It is recognized as home to a variety endemic species of plants and animals and threatened and endangered species (flora and fauna).

Because of its aesthetic, historical, cultural and economic importance, the policy of the state in accordance with Republic Act No. 7586 or the National Integrated Protected Areas System (NIPAS) Act of 1992 and Republic Act No. 8371 or the Indigenous Peoples Rights Act of 1997 as well as international conventions to which the Philippines is signatory, the Congress of the Philippines enacted the Republic Act No. 9125 or the "Northern Sierra Madre Natural Park Act of 2001". This is an act establishing within the Province of Isabela as a protected area and its peripheral areas as buffer zones. Hunting of wildlife, degradation of coral reefs and sea grass beds and fish poaching by alien fisherman, illegal timber extraction in the low land evergreen rainforest threaten the NSMNP.

The activities contained in a management plan and other activities concerning the NSMNP are financed by the IPAF (Integrated Protected Areas Fund). The IPAF is an established trust fund derived from fees, lease of multiple-use areas, contributions from industries and facilities and incomes from the operation of the protected area.

Lecture 8: National Commission on Indigenous Peoples (NCIP)

By Ruben Bastero

June 25, 2007

Enrico M. Cabaccan

NCIP is the primary government agency which is responsible for the formulation and implementation of policies, plans and programs to promote and protect the rights and well being of the Indigenous Cultural Communities/Indigenous Peoples. The NCIP is responsible for implementing the IPRA. The Indigenous Peoples Rights Act (IPRA) recognizes the right of IP's.

The NCIP is an independent agency under the office of the President. It is composed of seven commissioners, which belong to ICCs/IPs, one of whom shall be the chairperson. The commissioners shall be appointed by the President of the Philippines based on the recommendation by authentic ICCs/IPs.

Director Ruben Bastero begins his lecture by giving a historical overview concerning land ownership starting before the discovery of the Philippines in 1521 up to the implementation of the IPRA in October of 1997. This is important because the main issue for IP's is ownership of land. Before the Spanish Regime, land was commonly owned (traditional ownership). During the Spanish Regime (which lasted from 1521-1898) all the lands belong to the crown of Spain. The traditional ownership was not recognized. Those people who resisted the Spanish and rejected to be converted to Christianity are what we now call indigenous people (IPs). After the Spanish Regime the Americans came and took over the control of the Philippines. This regime was in effect from 1898-1945. The Americans reviewed the system of land ownership but maintained Regalian Doctrine. The Regalian Doctrine means that, all lands of the Public Domain are owned by the state by law (with the exception of agricultural land). The Regalian Doctrine has been taken over by the Philippine Republic after independence in 1946 and has been the main doctrine in regards to the land ownership in the Philippines until 1997 when the IPRA law, was implemented.

The IPRA law gives land rights to the IPs. As stated by Director Bastero: "For the IP's land is life". Through the IPRA the IPs gain the priority right to develop the natural resources in the Ancestral Domain. Ancestral Land falls outside the Public Domain: it will be privately owned. Ancestral Domain refers to an area and is bigger than Ancestral Land which refers to parcels. IPs can get the Certificate of Title on their Ancestral Domain. In this case the name of the owner is not an individual but a tribe.

With this title come certain rights and responsibilities. To utilize land of IP's you need their prior informed consent. The IPs also gain rights concerning their Ancestral Domain.

The most important one being the right to ownership, which contains the right to claim ownership over land, bodies of water traditionally and actually occupied by ICCs/IPs, sacred places, traditional hunting and fishing grounds, as well as improvements made by them at any time within the domains. Other rights are, for example, rights to develop land and natural resources, rights in case of displacement and the right to regulate the entry of migrants. With concern to the rights to Ancestral Land the IPs has the right to transfer Ancestral Land (property) among themselves.

Other responsibilities of ICCs/IPs to their Ancestral Domain are the maintenance of ecological balance, to restore denuded area and to observe laws.

Director Bastero continued his lecture by explaining the process by which IPs can gain rights to Ancestral Land. Before, this was regulated through a Certificate of Ancestral Domain Claim (CADC) by the DENR. Today, this is done through a Certificate of Ancestral Domain Title (CADT) by the NCIP.

Other important rights the IP's gain through the IPRA are the rights to self governance and empowerment and free and prior informed consent. Another important element of the rights to self governance and empowerment is that the IP's can have their own justice system and that they have the right to participate in decision making. There is a procedure which makes sure that the IPs are fully informed about activities on their land and that they have allowed these activities to take place: the free prior informed consent.

Question and answers

Q: Do indigenous peoples have the right to claim on the area where they to?

A: No, they don't have the right to claim for it.

Q: Anna asked about the ethnicity on how to recognize a certain individual as IP's?

A: The primordial consideration of recognizing the IP's is through blood percent, if they had still 12.5% blood of their ancestors then they still recognize as IP's.

Q: Jasper asked about the Section 56 (tenured migrant). Do you recognize domains who where there in the public domain before 1997?

A: If the migrant migrated there before 1997 they have be recognized or respected. Because it is in 1997 the law is implemented but if they were there after 1997 then we have the right to push them away of the area.

Lecture 9: Indigenous peoples and resource management

By Dante Aquino

June 26, 2007

Cynthia B. Malayao

Dr. Aquino presented his lecture about Indigenous Peoples and Resource Management. First he began giving his presentation by telling something about the Philippines by presenting the map of the Philippines which composed of more than 85 million people with the land area of 33M hectares, 7,100 islands (880 is inhabited) and the three group of islands (the Luzon, Visayas, and Mindanao). He also states the fifth teen administrative regions which composed of Local Government Units (LGUs) which can be found in the province, city/municipality, and barangay (village).

The second part he tells us who's the Indigenous Peoples (IPs) are and he defined the IP's as a people, social, cultural and economic conditions distinguish them from the other sections of the national community, and whose status is regulated by their own customs or traditions... He also defined IPs as a people having a historical continuity with pre-invasion and pre-colonial societies that develop on their territories, consider themselves distinct from the other sectors of the societies how prevailing on their territories, or parts of them. He gave also the criteria for IPs:

- Anteriority which the existence of civilization prior to colonization or post colonization
- Ethnic factors which is the combination of racial elements and socio cultural traits.
- Dependence on the environment as an element of their lifestyle and of their survival as a social group
- Possible confrontation with more recently arrived population which he explained to us that the colonizers must come into terms or co-exist with "indigenous communities".

He added also their characteristics one of these are:

- Close attachment to ancestor territories and to natural resources
- Self identification and ID by others as members a distinct cultural group
- An indigenous language
- Presence of customary social and political institutions and 5) is the primarily subsistence-oriented production.

He explained to us the Philippine IP definitions (DENR DAO 2, '93) which he stated that the indigenous cultural community (ICC) is a homogenous society identified by self ascription by others, who have continuously lived as a community on communally bounded territory, sharing common bonds of language, customs, traditions and other distinctive cultural traits, and who through resistance to the political, social, and cultural inroads of colonization, became historically differentiated from the majority of Filipinos. He added the tribal grouping which he states that all members of a tribe are considered IPs regardless of where one lives=Someone who is a member of the tribe is always an IP, regardless of where one lives the another tribe is based on tribal domain which the members of the a particular tribe are IP's with respect to their ancestral domain. He also

added the Certificate of Ancestral Domain's Claim(CADCs) awarded to Bugkalots contains six municipalities: Nagtipunan, Kasibu, Dupax del Norte, Dupax del Sur, Alfonso Castaneda, Maria Aurora. After a few minutes he showed a pictures of ancestral domains wherein extent of forest cover loss in the last 100 years, the logging, the timber pouching, road development, forest fires, swidden farming versus irrigated farming, migration, adoption of new technology, mining, illegal fishing, etc.

After presenting and discussing all those pictures he finally conclude:

- The major motivation of Indigenous peoples' to resource management is survival.
- The states plays the primary role in sustainable resource management.
- The direct and active role of the IPs as a unified group in a functional organization is necessary for effective ancestral domain management.
- Natural resource management is hastened by favorable co- management situations.

These interrelationships, usually conflicting, differ according to geographic location and cultural situation. Understanding them is a crucial is a crucial step in addressing the issue.

Lecture 10: The relevant context: researching the future

By Gerard Persoon

June 28, 2007

Glory Cañete

The relevant context: researching the future discussed by Mr. Gerard Persoon is a great help for researchers. In his lecture, he further discussed that doing research is making notes because memory is limited, selective and cumulative. It was also pointed out in his lecture that there is only one chance for first impressions so one must not economize on taking notes on what he see, observe, hear, what strikes him because these will help him a lot in writing his reports. Pictures can also be a great help to refresh memory.

There are different types of future:

- Scenarios: this includes visions, projections and pathways. Examples given are those what we hope will happen, what we fear will happen, what we consider most likely to happen and what we believe can be made to happen to ourselves, to our co-villagers, to close and distant leaders and to other parties.
- Immediate future: our daily survival.
- Future in terms of days, weeks, months.
- Future in terms seasons, cycles, circular moments.
- Distant futures or lifetimes
- Future generations

Forecasting and back casting were also defined. Forecasting means to calculate or plan before hand. Lineal features, predictions, creative futures in the making while back casting is anticipation, mitigating effects, future events and creating the future.

Threats of causal influence traced backwards in time, present-day realities combine planned and unintended outcomes of past actions and actions derived from projected futures. Projected futures today have consequences for present day behavior. Methods in researching the future were also discussed. The 4 methods are as follows:

- questions
- hypothetical questions
- storytelling
- creating the future

It's best to find out who is responsible, who is involved and how.

A Venn diagram was also discussed. The Venn diagram is used to study hypothetical situations where an indigenous community with a forest management plan wants to project long term viability of legal commercial forestry in the region. At the end of the lecture, relevant context has been defined. Relevant contexts in space and time have to be determined empirically. There would be no a priory assumptions and boundaries. People are interconnected through actual behavior originating from a variety of motives such as profits, law enforcement, love, bribes, status and moral influences. If people define situations as real, they are real in their consequences.

Lecture 11: Gender, women's rights and resource management

By Jose van Santen

June 28, 2007

Edwin Diciano

Dr. Van Santen gave a presentation about Gender that referred to how masculinity and femininity are constructed, lived, reconstructed and negotiated by people living in a specific context and/or in different communities.

She also presented the Women Rights which is a term that typically refers to the freedoms inherently possessed by women and girls of different ages and that may be institutionalized, ignored or illegitimately suppressed by law, customs, and behaviours in a particular society.

These liberties are grouped together and differentiated from broader notions of human rights because they often differ from freedoms inherently possessed by or recognized for men and boys, and traditional bias against the exercise of rights by women.

Men have the right to control the economic logic of the market in terms of money to goods and the function of Resource Management includes the variety of activities, and key among them is deciding what staffing needs.

Lecture 12: Operationalization of concepts and data gathering through observations and interviews

By Gerard A. Persoon

June 28, 2007

Novie U. Buguina

Dr. Gerard A. Persoon discussed theoretical concepts need to be operationalized. First, he discussed scientific concepts that are designed to have meaning. It could be often concepts from daily language and concepts often contain value judgments, as well as the types of concepts: descriptive concepts of concrete objects (houses), abstract concepts (power, happiness), ideological concepts (solidarity, love, corruption). Their use of concepts has consequences: guerillas or freedom fighters, war versus reconstruction, or legal or illegal. Theoretical concepts need clarity and a definition (what is its meaning?) concepts need to be operationalized. We must define the crucial aspects or element, defined the empirical or observable characteristics (indicators), defined the total coverage of the concepts (no meaningful left over) and the role of contrasting concepts (dichotomy).

Poverty is the one example of a theoretical concept. It is relevant in development and human rights discourse. Poverty are defined as low daily income; limited or no access to education, health care facilities; malnutrition, infant mortality and lack of material wealth (poor housing, limited possession). Poverty categorized as a social status: ascribed status; externally defined on basis of criteria, relevance of cultural context; not absolute and the last one is perceived status; do people look at themselves as being poor?

The concept poverty has many meanings amidst indigenous people (IPs). Indigenous people portrayed as being "the poorest of the poor". Indigenous cultures seen as a holistic self-sufficient societies were poverty in alien (no unsatisfied needs). The uses of poverty are: as an excuse (survival), in relation to law enforcement, reason for intervention, being poor in the Philippines is manipulated by law and sometime being poor is the reason to do a criminal act.

Lecture 13: Forest policy in the Philippines

By Cecilia Mangabat

June 29, 2007

Celestino T. Reyes, Jr.

Forest policy is a course of action adopted and followed by a certain entity to pursue a set of objectives regarding the use and management of forest resources

Importance of forest policy: it provides orientation for the choice and execution of government activities which affect both state as well as private forest and forest lands. It aids in decision making at the higher governmental levels. Provides a guide for the sub units of the governmental organization and helps in making decisions on resources allocation by planning and budgeting offices. For the private sector, it influences decisions regarding investment, expansion or retrenchment in the management, exploitation and regeneration of forest lands; and It affects decision on the possible conversion of forest o other uses It has wider impact on forestry related situation and activities such as rural community development, agricultural policy, environmental contamination, he existence of facilities for recreation, water supply and others

History of forest policy in the Philippines:

- Colonial period (Spanish era 1568-1898) and (American era 1898-1940)
- Post colonial (1946-1970)
- Policy shift toward local participation (1980-present)

Evolution of the Community Based Forest Management (CBFM):

YEAR	NO.	LAW	DESCRIPTION
1963	R.A 3701	<i>Kaingin</i> law	Emphasized prosecution and ejection of <i>kaingeros</i>
1971	Forestry AO 62	<i>Kaingin</i> management program	Mandated preparation of <i>kaingin</i> management
1971		Forest occupancy management	2 years FOM per unit issued, Adoption of agro forestry tech. as one condition to avail FOM
1079		Family approach to reforestation (FAR)	-Help uplift the living condition of upland farmers and those living in the forest lands. -3 years contract
1979		Community tree farm (CTF) 25 years certificate	Prioritized the development of denuded forest lands into productive farm lands to provide economically viable land holdings to participating farmers who would rehabilitate open and denuded forest lands.
1982	LOI 1260	ISFP	Provides tenurial security through the certificate of stewardship contract (CSC)

1986		National forestation program (NFP)	To rehabilitate denuded forest lands and provide income opportunities to up Landers through reforestation to open land rehab.
1989	A.O 23	Community forestry program (CFP) 25 years renewable for another 25 years	Awarding permits to organized rural communities to extract, process and sell
1993		Forest lands management program	Develop and manage a forest lands. Financial assistance. Holder provides 30% of the total proceeds in trust fund until whole cost is covered for use in expanding refo. Activities.
1992	RA 7586	NIPAS law, zoning and buffer zone	Biodiversity conservation under a participatory mgt. concept placed all national parks, wildlife reserves and similar areas under the genetic category protected areas.
1995	EO 263	ISFP, FLMP, CFP, SIFMA, Protected Areas Lease And Development program (PALADP) Integrated Rain Forest Mgt (IRMP) RRMP, (UDP) Forestry sector program FSP and the Ancestral Domain Mgt. Program. (ADMP)	-Consolidates all existing DENR program involving community based resource mgt. -Provides tenurial incentives to public land settlers to develop .Provide rural communities with profitable livelihood alternatives to kaingin farming by opening broader opportunities for self employment.



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