Initial Assessment of Community Resource Use in Busra Village

1. BACKGROUND

1.1 General Situation

Busra is one of the six villages of Busra Commune in Pich Chenda District, Mondulkiri Province. Mondulkiri Province is seated on the plateau of eastern Cambodia and is rich in forest and wildlife resources. Local livelihoods depend heavily upon forest resources. Conversion of forest into crop and rain-fed rice fields, shifting cultivation and collection of NTFPs are the main livelihood activities of the local communities. Water from five streams adjacent to the village is used for domestic consumption and irrigation. Houses are made of woods, bamboo, vines and rattans roofed by thatch (imperata cyJindrica), walled by bamboo and pierced by soft-wood tree species such as Khlong, Thbeng, Pchek, and Sralao.

Each family of the village raises domestic animals, including chickens, ducks, pigs, cattle and water buffalo for food supplement and cash and particularly for spiritual purposes (Animism), which is an integral traditional characteristic of life for the indigenous highlanders.

1.2 Location

The village border is delineated as follows:

- in the north, by the villages of Potith and Ti Mouy;
- in the south, by the villages of Pocha and Ti Pram Mouy;
- in the east, by O’ Sre Pok stream; and
- in the west, by Sre Khting field and O’ Posh stream

1.3 History

Busra is named after a stream called O’ Srang Sra. In the past, villagers were settled along the O’ Srang Sra stream. Later, in 1952, two families of old men and women moved to this land and then converted it into rice and crop fields. Ten years later, another 20 families of the Phnong ethnic minority group settled there to carry out agriculture. Busra Village today is located about 12 kilometres from O’ Srang Sra stream.

1.4 Population

The village has 28 families, totaling 326 individuals with 164 males and 162 females. Children under 15 years old make up more than half the population. Over 90 per cent of population in the village is Phnong (Animist) and others are Khmer (Buddhist) and Cham (Muslim).

1.5 Occupation

1.5.1 Agriculture

For generations, villagers have been practicing shifting cultivation, growing highland rice, bananas, papaya, tobacco, com, beans and other vegetables. Since 1962, villagers have been growing paddy rice in permanent sites. They say this change was primarily due to population growth and the fact that the harvest from their shifting agriculture was not enough to feed the larger population. Only one rice harvest a year is possible as it depends solely upon rainwater. Villagers use traditional agricultural tools for cultivation.

The highland rice field is developed in forested areas on the plateau and along the stream banks containing hard wood trees and dense tree species (Sokram, Pchek, Beng, Koki). These areas are rich in natural fertilizers and close to water sources and provide high yields for rice cultivation. Each shifting cultivation field lasts for 3-4 years. After they have used up the existing fertilizer on the surface they move to a new area. At present, off-village shifting rice fields provide low yields, but are still the main practice for villagers.

The livelihood of the villagers depends upon a variety of agricultural products including:
cropping coffee
cassava
black pepper
other vegetables
highland rice
beans
paddy rice
tobacco
corn

Villagers also raise the following domestic animals:

- chicken
- ducks
- pigs
- cattle
- water buffalo

1.5.2 NTFPs

The exchange of goods and agricultural products also supplements their income. In addition to raising family animals, the main subsistence support is the collection of non-timber forest products (NTFPs):

- rattans
- bamboo
- bamboo shoots
- vines
- thatch
- mushrooms
- resins
- edible fruits

Most NTFP collections are used for household consumption and bartering with neighbours, except resin and wildlife products, which are sold to middlemen.

1.5.3 Hunting

Hunting is also an important activity to supplement their livelihoods, both for home consumption and for sale.

1.5.4 Fishing

Busra villager’s fish seasonally in streams near the village including O Ampork, O Chhel and O Roret. The quantity of fish harvested is low, mostly for household consumption and exchange with neighbors. These streams stock small amounts of fish and villagers use traditional equipment to catch fish. Everybody fishes.

1.6 Roles of Men, Women and Children

Generally, men are responsible for work requiring strength and the ability to walk long distances. Their work includes cutting and clearing forest areas for crop and rice fields, logging, collecting bamboo for house construction materials and fences, resins, and firewood, plowing and cropping.

Women also play a very significant role in rice and crop field cultivation as well as household work such as cooking, childcare, feeding the domestic animals, harvesting, grilling rice, collecting NTFPs including mushrooms, bamboo shoots and thatch and fishing. Children under marriage age are responsible for going to school, looking after their siblings, watching the cattle and buffaloes, guarding the house and gathering water as well as helping their parents.

Woman pounding rice in Busra Village.

1.7 Income Generation and Expenditures
The main income of local villagers is derived from harvesting agricultural products from the rice fields and shifting cultivation. Moreover, supplementary income generation comes from selling other products such as coffee, black pepper, domestic animals, wildlife products and resins.

Resin (Char Tauek) is also collected for sale to middlemen. Collectors can spend up to 7-10 days to reach resin collection areas. For 30 liters of liquid resin, people can earn between 15,000-20,000 riels, depending upon its quality.

A second kind of tree resin is also collected. This dry resin is called Char Chang. It takes one day to collect one kilogram. It sells for 500 riels per kilogram.

Wildlife product prices vary as follows:

<table>
<thead>
<tr>
<th>Products</th>
<th>Price in Riel per Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turtle</td>
<td>4,500</td>
</tr>
<tr>
<td>Land monitor lizard</td>
<td>14,000</td>
</tr>
<tr>
<td>Water monitor lizard</td>
<td>7,000</td>
</tr>
<tr>
<td>Pangolin (this price is for a wildlife with weight below 5kg, while over 5kg is 120,000 riel/kg)</td>
<td>140,000</td>
</tr>
</tbody>
</table>

In addition, villagers are generating income from selling their labor, making baskets, mats and fishing equipment.

They spend the money earned for medicines, clothes and tobacco and cooking ingredients (salt, monosodium glutamate). There is a big gap between income generated and livelihood needs. Therefore, they often have to borrow money to make ends meet and endanger their livelihoods.

1.8 Traditional Belief and Religion

Most of Busra Village people are ethnic Phnong highlanders, part of the group of indigenous ethnic minorities called Khmer Leu, or Highland Khmer. Most of the Highlanders practice Animism, thus they give strong emphasis to the worship of the forest spirits. Every year they celebrate various traditional and cultural ceremonies to pray for harmonious lives, to receive good harvests and to avoid harmful accidents, illnesses and other disasters.

There are two important ceremonies the rice ceremony and health and well-being ceremony.

**Rice ceremony: There are four different ceremonies each year**

**First time:** The ceremony is held in April, when villagers are restocking the rice for grounding. They for these seeds to grow a bountiful harvest.

**Second time:** It is celebrated at the being of rice planting season during the month of May. Local rice wines, chickens, ducks and pigs are prepared and sacrifices to pay homage to the spirits. They pray that in return the spirits will held the rice to thrive and protect it from pests and other problems that would impede its growth.

**Third time:** It is celebrated once the rice has flowered, approximately during the months of August and September. (Aun Juss) stick figures, chickens, ducks, pigs and local rice wines are prepared for the ceremony. Villagers pray for the spirits to guard and protect the rice from birds and insects.

**Fourth time:** The last ceremony takes place from November to December, when the villagers are harvesting. The object is to pray for an absence of wildlife (mice, rats) that would damage the crops in the field and later when they have brought the harvest in to be stored.

**Offering food to the forest spirits for health and well-being**

Yearly, but particularly in April, the entire community makes a ceremony asking the forest spirits to guard and protect the village from any kind of disaster.
Ceremonies are also held if a family member has a long illness without recovery or if someone dies without apparent reason. The rest of the family may abandon the house and in some cases, even the entire village may move. They will leave only the clothes they are wearing, burning the house and all other materials and belongings, taking only their seeds and rice. These can only be exchanged with neighbours, not used by the original family.

When a person dies naturally, including because of serious illness, during childbirth and when constructing a house or clearing and cutting forests, the villagers have to offer foods to the forest spirits. The village chief and respected elders lead the ceremony.

1.9 Marriage

Children are allowed to choose their own spouse. It is the parent's responsibility to arrange the wedding ceremony according to the traditional practices.

Both sets of parents must agree on the types of gifts that must be exchanged. Some common items that the bridegroom is required to provide are dresses, a set of beads, a bracelet, cotton craft, cotton sarong, corn, a knife, salt, and some domestic animals. The bride commonly offers a wine jar, some cooked rice, cotton thread and food for the guests.

The wedding ceremony commences with the bridegroom being escorted to the bride's house. His entourage carries fruits and meats. After offering foods to the forest spirits and other deities, both sets of parents invite the guests to take food and drink. The bridegroom has to stay two nights in the bride's house and then the new couple prepares a food offering to the spirits of the grand parents. In cases of divorce, the one who requests to separate must pay compensation to the other.

1.10 Death

The corpse has to be put in a coffin made of woods from the Roka (Bombax ceiba) or Boan Si Phlae (Spondias pinnata) trees. Coins, clothes, blankets and mosquito net are placed in the coffin and it is buried in the forest in the village's traditional burial ground.

1.11 Education

- Most of the adult villagers are illiterate, with only a few of the community who studied during the Sihanouk time in the 1960s being able to read and write the Khmer language. Although there is a school building there is no teacher and they are busy with daily livelihood activities.
- 1983 to 1993 - the villagers built a school of bamboo and roof made of grass (imperata cylindrical)
- 1994 to 1995 - a NGO constructed another school with two rooms
- 1998 to 2000 - Prime Minister Hun Sen supported the construction of a third school with 6 rooms

Nowadays, Busra village has two schools with 8 rooms, for grades 1 to 4, but only 5 rooms are functioning and the other three closed, as there are not enough students.

1.12 Health

In Busra Village there is a basic health care service center. The center is able to provide care only for uncomplicated cases. The center has few medicines and the health officers possess little training. When villagers have major illnesses they must travel 48 kilometres to the Provincial Center or resort to other means to treat their problem.

The villagers experience malaria, fever, cough, stomachache, diarrhea and so on. The main reason for these illnesses is insufficient food and nutrients, poor hygiene, contaminated drinking water, sleeping without mosquito nets and lack of latrines.

At present there are three traditional healers in the village. To cure malaria, parts of plants, mainly the tree bark containing quinine is boiled and drank; to cure fever the bark of the Roka (Bambax sp.) or Neem (Azadirachta sp.) is soaked in water and this water is drunk.

1.13 Water Source
A hand well is the main water source for the village. It provides water for drinking, washing, bathing and cooking. The villagers dug the well by hand for public purposes. In addition, it is also is used for irrigation for farming. The water table is sufficient to provide water year round, but during the dry season its water level significantly decreases.

1.14 Infrastructure

Roads entering and leaving the village are of very rough and difficult condition for travelling, particularly in the rainy season. They accommodate all kinds of vehicles including carts, homemade vehicles, motorbikes and bicycles. There is a road connection to Vietnam as well as to the Provincial Center.

1.15 Interaction with other nearby villages

In the Busra area, the local people live in small groups separately from one another, but always connected to and respecting each other's rights. When a villager organizes an event or a spirit ceremony, other villagers always take part to enjoy together and help both in efforts to prepare and to celebrate, particularly the selection of son and daughter-in-law.

In other official matters formal communication takes place via the administrative structure of the provincial authorities, from the provincial center to the districts, to the communes and ultimately to the villages.

1.16 Other Employment Opportunities

Aside from the main work tending crops and farm fields, villagers utilize their free time for other business depending upon age and gender. Some men are hired to carry cut wood from the forest to construct houses, to collect poles to support pepper plants or collect vines and rattans to sell. Some villagers operate small businesses and trade for their basic daily needs.

1.17 Social Structure

For centuries, villagers have greatly respected their culture and traditional practices, in which they are united and led by a respected elder or Mei Kantrin. The Mei Kantrin has influence on decision-making, but needs agreement from other elders, for instance, on the relocation of the village. Newcomers have to respect this traditional way of life as well as accept the new structure of an appointed (or elected) Village Chief.

The Mei Kantrin and respected elders are in the position of decision-making and conflict resolution, between neighboring villagers. If the Mei Kantrin and village elders cannot resolve the case, it may be forwarded to the next level, from commune to the district or province. In most cases, the Village Chief works closely with the Mei Kantrin and council of elders.

1.18 Outside Support

The study area is remote. However, it has received support from some NGOs, including Medicines Sans Frontier and GTZ. The government has assisted with education and primary health-care through construction of the school and health center. Although of significance, this assistance has not yet fully met the needs of the villagers.

2. LAND USE AND MANAGEMENT

This minority group still practices land use management following their traditional practices. The Director of the Provincial Cadastral Office, Mr. Peng Ream, said that his office had been functioning only since the middle of 2000; and it is only now that it is being upgraded to a Provincial Department. In reality, there is no official recognition of land use management in Mondulkiri Province.

As a result, there has been little effort made to disseminate information about the existing Land Law or relevant legislation concerning land ownership to the local communities, especially in remote areas. Even in communities that have been informed orally by local authorities about Cambodian land use management and how to obtain land title, there is no law enforcement.
Recently, the Provincial Department has been issuing land titles in Sen Monorum District. The reason for selection of the district is that it has the highest concentration of population in the province.

2.1 Land Use and Land Title

The Phnong highland minority group has traditionally used and managed land for their subsistence livelihood, i.e., agriculture. The land can be divided into a number of categories:

<table>
<thead>
<tr>
<th>Type of Land</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village area</td>
<td>Settlements, pasture land</td>
</tr>
<tr>
<td>Rice field</td>
<td>Producing rice only</td>
</tr>
<tr>
<td>Home garden</td>
<td>Land nearby the settlement for subsistence crops</td>
</tr>
<tr>
<td>Shifting cultivation area</td>
<td>Land that has been converted from forest areas into farms in a limited period</td>
</tr>
<tr>
<td>Ceremony land</td>
<td>Burying the deceased</td>
</tr>
</tbody>
</table>

**Village area**

Individual property, as defined recognized by district and commune authorities is limited to a 30 x 50 meter plot, for each family. Any land still unused within this plot may be utilized to grow crops. As children marry and separate from their parents, remaining parts may be given to them to build their own homes. If the family does not have enough land for the new couple, they have to ask for land, but they have to wait for two years to get a plot of land formally. There is no restriction for moving a shifting cultivation area to another site.

Generally there is has been limited effort made in disseminating information about the Land Law to the public in the remote areas. Land use management and land ownership is practiced according to the traditional management system.

**Rice Field**

For cultivation of rice, each family is allocated 1-2 hectares, up to the individual family size.

**Off Village Areas**

Forested areas around Busra Village are cleared for crop farmland. Most fields are close to the village as it is easy to guard. However, only one hectare of this land is available for each family. Since 1997, some households have turned this subsistence-crop farmland into plantations of coffee and black pepper because these agricultural products could provide cash and are highly demanded in the market. Middlemen come directly to the village to buy these products.

**Unclassified Land**

The local authority has reserved this land class for the population growth of the village, especially if outsiders come to seek refuge. Land in this category is prohibited from being used by the local community, unless they have permission from the authorities.

**Shifting Cultivation Area**

The Phnong people are still practicing shifting cultivation as they assume that there are many hectares still covered by forest, with many water sources, enabling them to occupy a new crop field when necessary. After cultivating one area for 1 to 4 years, they have to move and find a new crop field, but then, 5 to 7 years later, they will come back to the abandoned field.

**Burial Land**

Busra villagers have set aside a piece land for burying corpses and do not allow others from outside the village to use it. Each village has their own traditional burial ground.
2.2 Land Management by Government Authorities

Local authorities delineate village land, rice fields, and crop farmlands to individual family groups to manage via: demarcation, using fences, painting or natural physical boundaries. Each family claims their land by clearing the forested area and converting it into cropland.

According to the government administration on land management there is no valid way for selling this allocated land, even to buyers from the same village. Land sold or leased will be taken back and the seller may be fined. The fine includes pigs, bull/cow, buffalo or rice, depending upon the selling price.

Land for crop and rice fields that has been allocated to individual families can be handed over to their children.

2.3 Land Management by Traditional Practice

Villagers are free to practice shifting cultivation and do not require getting permission from the local authority or any government agencies. Hills, standing trees or tributaries define traditional demarcation of each land plot. The priority for claiming land is who has arrived and cleared the forest first. The next person will have no right to claim occupied land. Even if the land is free from cropping the next person must first ask the original owner for his permission to use the land.

2.4 Conflict in Land Use Management

Up to the present only a few cases of conflict have been encountered in the village concerning land use. Usually this involved the use of previously used and then abandoned shifting agricultural land. The Village tribal chief and elders resolved these conflicts. Now, because of the sharply increasing population and more outsiders who do not abide by ethnic tradition, there may be more conflicts in land use management.

3. ETHNOBOTANY (Relationship between communities & natural resources)

3.1 Forest Sector

Common species of Dry Deciduous, Evergreen and Mixed Forests in Busra Village

- Pchek
- Reang
- Pdeak
- Trach
- Koki
- Kreul
- Chambak
- Boan Si Phlae
- Roka
- Chrey
- Sralao
- Beng
- Neang Nuon
- Sokram
- Krakas
- Thnong
- Russey

This forest supports diverse wildlife, which is the main food source for the subsistence livelihood of the local communities.

Wildlife found in the forest of Busra Village

- Wild pig
- Red muntjac
- Sambar
- Tiger
- Asian elephant
3.1.2 Forest Classified by Local Communities and Scientists

Local communities classify forest types according to their use:

**Village Forest:** This type of forest surrounds the village perimeter and grows along roads, hills and other terrain areas that aren't subject to local use. The forest type is secondary growth and degraded forest that is covered by:

- Sangkae
- Chrey
- Roka
- Khlong
- thbeng
- Kandaol
- Ko
- Ampli
- Svay
- Khnao
- Bangkeou damrey
- Other various species

This type of forest provides habitats for rabbit, Red Muntjac, squirrel, civet, mongoose, Slow Loris, Snakes and birds.

Foresters classify this type of forest degraded.

**Burial Forest:** This forest area is used as a piece of land that has been defined by local communities as a place burying corpses and for logging big trees making coffins.

Common species in this forest are:

- Roka
- Khlong
- Trach
- Chrey
- Russey

Wildlife includes rabbit, Wild Dog and Wild Pig.

This is also classified as Degraded Forest.

**Hill Forest:** This type of forest is characterized by growing on the high area.

Common species include:

- Reang Phnom
- Pchek
- Koki
- Sokram
- Thbeng
- Sralao
Wildlife in this area includes Red Muntjac, Sambar, Pangolin, Water Monitor Lizard and Snakes including Python and Cobra.

Foresters call this type of area Dry Deciduous.

**Spirit Forest**: Highlanders strongly respect this type of forest, as they believe that forest spirits live there and thus the villagers leave it alone and do not disturb it fear of disturbing the spirits. This category of forest is located separately from the village and characterized by sparsely growing big trees, such as:

- Sralao
- Pchek
- Beng
- chres
- Sokram

Wildlife found in this type of forest area includes Macaque, Wild Pig, Pangolin, Squirrels and birds.

It is called Mixed Deciduous Forest.

**Riparian Forest**: It grows along the banks of streams and its tributaries, and is characterized by the dominance of bamboo.

Common types of trees include:

- Choeuteal tuk
- Trach
- Chrey
- Pram dumlong

This type of forest provides habitats for other, Fishing Cat, Eagle, Python and Wild Pig.

**Mountainous Forest**: It is found in mountainous areas, for instance in Namlear and the Kon Ruk Mountains. This of forest is home for diversity of plants and wildlife and is characterized by evergreen trees that are of valuable economically and important to various ecosystems. It has relatively few disturbances, as only a few people are present to extract forest products and NTFPs from this forest type.

This is referred to as lowland evergreen forest.

### 3.1.3 Differing Perspectives of the Forest Community and Scientist

Ethnic minority communities recognize the forest as the source of natural nutrients and fertilizers necessary for their shifting cultivation. Thus, before deciding to open the forest to be a crop farmland, they have to search for a forest area dense in trees. Once this area has been clear cut and burned it will be high in natural nutrients and produce high agricultural yields. Equally important, the ethnic highlanders rely upon the forest for NTFP collection. The NTFPs significantly contribute to their daily subsistence.

Foresters explain that the forest is not only a significant source of support for humans by providing firewood, charcoals, construction timbers, medicinal plants, agricultural tools, transportation and wildlife, but it also vital for climate regulation, water resources, flood control and storm protection, which ensure environmental balance.

### 3.2 Forest Resource Use

NTFPs NTFPs provide significant benefits to local communities. NTFPs are harvested for basic needs including bamboo, rattans, resins, wild vegetables, wild edible fruits, grass (imperata cylindrica) and wildlife products. These NTFPs are widely available. Some NTFP collection takes place daily, such as bamboo, rattan, vines, poles for agricultural equipment and traditional medicines, etc. Others are collected as they are needed. These products are collected and used by both men and women. The main aim of NTF P collection is for daily subsistence foods and for family support. If they have collected more than NTFPs they need for their own family consumption local communities can exchange with neighbors. Some families earn income from these NTFPs via selling them to the traders or transporting them directly the market. Such trading is in
small scale, which supplements their family needs.

**Forest Products**

Forest products are used locally for house construction. Men cut trees. The trees are usually available about few kilometers from the village, making it easy to transport. Traditional tools, namely axes, hatchet and saw are used to fell the tree. After cutting a tree, pieces are sawed to meet their needs and then carried to the village by cart. The mobile chainsaws now being used are making it easier for the local population to obtain forest products for house construction materials.

**3.3 Forest Management**

The present situation of harvesting forest products, in illegal and unsustainable ways has significantly contributed to Cambodia's deforestation. Harvesting forest products over the annual growth rate has seriously affected the natural resources. For instance, some species of trees are no longer available locally. More ominously, environmental components are changing, resulting in frequent droughts, storms, floods, erosion and soil nutrient run-off. These are the consequences of the forest destruction in Cambodia.

Concerned government institutions are enacting legislation related to natural resource use and management. A new Forest Law is being drafted, as is a new Land Law.

Presently, the existing decree is being applied. However, there are many gaps, inconsistencies and inapplicable legislation in the existing decree, which is not effectively enforced in the more remote areas, as it is not widely disseminated. In those remote areas, forest use and management is still traditionally practiced.

These traditional practices, including free clear cutting of forest to be converted into agricultural land, shifting cultivation and collection of NTFPs, are in conflict with the forest decree's objectives and the government's policy.

**3.4 Rights of Forest Management**

Cambodian Government Forest Law Paragraph 2 of Article 1 in Charter 1, Decree No.35 on Forest Management says, "Forest resources on forested areas are State property and managed by the State. Article 8 in Chapter 1 states that "People, soldiers and all government institutions have to participate in the protection of forest from fire and assist in tree plantations".

Paragraph 3 of Article 2, Chapter 9 says, "Cutting or collecting timber and non-timber forest products for family and public requirement have to get permission first, but do not need to pay to account for maintenance and protection of forest and for tax.

Paragraph 1 of Article 18, Chapter 2 says, "Cutting, up-rooting, clearing forest and converting forest into farmland for rice and crops, extraction of stone, sand and mines within forested land, cutting trees producing raisins of local occupation have to be requested to and get permission from the Ministry of Agriculture, Forestry and Fisheries".

Paragraph 1 of Article 22, Chapter 22 states, "Hunting of quadruped animals, birds, reptiles is prohibited strictly, unless new legislation gazetted". Article 30, Chapter 6 expresses that, "It would be warned and confiscated all evidences from violators, who:

- A - cut or transport timber and non-timber forest products from forested areas for family or public purpose without permission
- B - trade or use these products not stated in the requested plan for family or public purpose.

In case of re-offend violation again in protected areas, it should be confiscated all illegal harvested materials and fined up to an amount equal to their value.

**3.5 Ethnic Minority Traditional Customary Right to Use the Forest**

The right to use the forest and collect non-timber forest products by local communities is based upon the traditional perception that the forest cannot belong to anyone person or entity. The ethnic minority groups believe that the use of timber and non-timber forest products is their traditional right and there is no need to
inform to and get permission from local authorities.

4. CONCLUSION

The road network leading into and out of Busra Village is very poor, particularly in the wet season, when part of the road is under water. There is little outreach to this remote area and little dissemination of information to the community. The education system is very poor, primarily because they lack teachers. Consequently, many of the villagers are unaware of events and information that directly concerns their lives.

The one health service center in the village provides limited services to the community. Most of community have no knowledge of sanitation and hygiene and as a result, encounter many communicable diseases.

Most people living in Busra Village are from the Phnong ethnic minority group. Their livelihoods fully depend upon the natural resources. The population has grown gradually but with the adoption of a market economy the demand for material goods has increased and this has placed more pressure on the natural resources.

Tree resin is a main income, behind agricultural products. Wildlife, bee honey and wild edible fruits and vegetables are also contribute to the their subsistent livelihoods.

The demand for wildlife by outsiders has contributed to the increase in the use of illegal methods (setting forest fires) to hunt wildlife and is the main cause of wildlife depletion.

Market-driven socio-economic development and the influence of outsiders have impacted the traditional and customary livelihood of ethnic minority people. For instance these days ethnic minority people are operating small businesses in timber and non-timber forest products, constructing houses following Khmer design and dressing the same as Cambodians from the lowlands.

The right of forest resource use and management still follows traditional practices.

Shifting cultivation is not a main cause of deforestation, if it is conducted properly, by following a clear cycle period and within defined boundaries. Belief in Forest Spirits by ethnic Phnong minority people has contributed to natural resource conservation.

The Land Law is not yet enforced within ethnic minority community society. Land use and management practices follow traditional practices.

5. RECOMMENDATIONS

- Local authorities should assist the local community to construct a bridge so that the community is not so isolated during the rainy season;
- An Informal Education curriculum should be set up in places where they are living; particularly it should provide training to trainers;
- The Provincial Health Department should promote primary health care services and family planning to the local communities in remote areas;
- The Provincial Department of Agriculture, Forestry and Fisheries should disseminate information about extension agricultural technique practices and provide seed sources to local communities;
- The Land Use Management and Cadastral Department should have a clear policy to support local participation and management of natural resource in local communities;
- Local authorities should be more attentive in preventing outsiders from illegally extracting natural resources and encourage local people to participate in natural resource protection; and
- The Provincial Department of Agriculture, Forestry and Fisheries and the government should enact legislation that gives local communities the right to use and manage forestland as soon as possible and disseminate this information to local communities.