Initial Assessment of Community Resource
Use in Royar Village

1. Background

1.1 General Situation

Royar Village is located in Koh Nhek District in Mondulkiri Province. It is about 8-10km from the district center. It is situated along the O Chbar River, which is the village's largest water source. Four small streams that are fed by water originating in Kroll Mountain feed the river. The village consists of agricultural land with large areas covered by the natural forest, with plentiful wildlife. There are Kroll, Phnong and Khmer ethnic groups living in the village.

1.2 Location

The village border is delineated as follows:
- in the north, by Sre Chrey Village;
- in the south, by the villages of Sre Sangkum and Sre Huy;
- in the west, by Trapeang Braket Village; and
- in the east, by Sre Sress Village (Kratie)

1.3 History

Royar Village or Phum Timouy was created in 1962, when three Kroll families moved from Royar Leu village to the O Chbar River bank. Royar Leu village is situated about 10-15km from present day Royar village.

According to Mrs. Sre Yeth, one of the eldest people living in the village and one of the original families, ethnic Phnong moved to live in this village in 1965. They merged the village land with O Cheung Chrey.

During 1975 (Pol Pot regime), ethnic Khmer were resettled in Royar Village from other areas. Nowadays, the village has all three ethnic groups present.

1.4 Population

There are 120 families living in the village. It consists of 68 Kroll families, 38 Phnong families and 14 Khmer families.

1.5 Occupation

1.5.1 Agriculture

Farming is the primary occupation of Royars villagers. They are dependent upon the weather (conventional cultivation), as they don't have alternative means of irrigating their crops. When there is adequate rainfall they the harvest is of high yield and conversely when there is inadequate rainfall they gather a low yield. This is one reason for their poor living standard.

Before 1975 the villagers cleared the land solely for swidden agriculture. But, during the Khmer Rouge Regime (1975-1979) they were forced to cultivate permanent paddy rice fields and they have continued this practice to the present. Part of this change can be attributed to the presence of the resettled people (ethnic Khmer) as well as the obvious advantages of a permanent cultivation site. The people start to plow in April, transplant in September and tend the field until December, after which they harvest. The harvesting is finished by the end of February. They farm only once a year as they
depend upon the rain.

Most families also cultivate chamkars to supplement their livelihoods. They grow crops (corn, been, root crop and vegetables) near to the village for family subsistence. In January and February they clear the forest, in March they rest, in April they burn the cut forest and in May they plant crops like corn, beans, root crops, pumpkin, gourd, egg plant and other vegetables. It is harvested in August.

The people raise pigs, chickens and ducks for sale as well as to use for their traditional beliefs other animals are cows and buffalo that are used for transportation as well as food and on some occasions, for sacrifice.

1.5.1 NTFPs

They collect a variety of NTFPs for household consumption including: bamboo, rattan, vines, grasses, etc. They also collect wild fruit and mushroom.

Resin collection is secondary after paddy rice cultivation in terms of contribution to family livelihoods. Before 1998, the villagers collected resin for household consumption only (the resin is used to produce torches for lighting in the night). After 1998, resin collection increased based on the high price in the market. There are two kind of resin: chorthuk and chorchong. The people can gather chorthuk from the Choeuteal tuk and Trach trees, which grow along the canal and in the hill forest. Chorchong can be gathered from Reang and Pcheck trees in the hill forest and in the old forest.

1.5.2 Hunting

Some people hunt only to feed the family, but others hunt for the income they can gain in the market.

1.5.3 Fishing

The people can fish the whole year in O Chbar River and in Boeung Lumkok. The villagers use traditional equipment such as nets like Samnann, mong, Chhneang, Santouch. Most fish are for household consumption and some limited selling in the village.

1.6 Income Generation and Expenditures

The main income of Royar villagers is from the rice yield. It fluctuates depending on the quantity, quality and market price. The villagers also earn money from collecting resin. Hunting as well earns some income as does fishing.

- Chhortuk resin (12,000-15,000 Riel/30 litters)
- Chorchung resin (500 riel/liters)
- Pongroul (pangolin) (70,000-140,000 riel/kg)

Expenditures are mostly for food and food ingredients (monosodium glutamate, salt, etc.) and for health care. They barter rice for food, tobacco and medicines (in the village there is no health center and the cost for travelling to the Koh Nek Health Center is not insignificant).

1.7 Traditional Belief and Religion

In the village the people practice three different kinds of religion, based on the ethnicity:

- Khmer practice Buddhism
- Kroll practice Buddhism and Animism (Prea Sen)
- Phnong practice Animism (Prea Sen)

Although they practice a variety of religions, the villagers respect each other's religious beliefs. In fact, there are three ceremonies celebrated by all three groups. These ceremonies ask the village spirit,
the Arak Nekta Phum, to protect the village.

**Senday Chan Day Krobey:**

This ceremony is organized from October to November. It asks forgiveness from the cattle and water buffalo for using them for the hard work.

In the ceremony they sacrifice a pig, chicken, or duck. The blood of these sacrificed animals is mixed and then spread on the head of the cattle and water buffalo.

Rice wine is drunk in respect of the village sprits.

The ceremony is organised by individual families.

**Sen Chonrock:**

This ceremony organized from January to February, after the farmers have completed harvesting the rice. They pray for the spirits to help keep the stored rice safe for next season’s planting and a high yield.

They sacrifice a pig, chicken or duck and drink rice wine. The blood from those animals is mixed together and then spread on the rice straw as a representation of rice yield and the rice storage.

The ceremony is organised by the individual families.

**Sen Phum- Sen Nekta**

The purpose of this ceremony is to ask for blessing from the Nekta (village spirit) for protecting the village and requesting good rainfall for agriculture.

They sacrifice a pig, chicken or duck and drink traditional rice wine.

Sen Phum organise together with other families in the village.

1.8 Marriage

Weddings are different, based on the ethnicity and culture. The Khmer wedding tradition has influenced both the Kroll and Phnong ethnic groups.

**Ethnic Kroll:**

The wedding style is the same as Khmer, but the man and woman may select their own spouse, whereas in the Khmer culture, the parents usually select the partner.

**Ethnic Phnong:**

The wedding culture is quite different from the Khmer and Kroll. When the man asks the bride to marry he has to offer a traditional necklace (*amkam*), a machete, 30 plates, 10-15 kilograms of salt in a basket, a pig and two chickens (one for the engagement ceremony-the other for the wedding) to the girl.

The wedding is organized after the girl and both sets of parents agree.

The bride has to organize two pillows for her mother and father-in-law and to offer food to the guests including traditional rice wine, pigs, chickens and ducks. Richer families use cattle.

1.9 Death
When someone in village dies, all villagers actively participate and contribute to the funeral ceremony. In the coffin, they put cash, clothes, pillow and mosquito net. The villagers are willing to help carry out the funeral ceremony, but the family members have to provide food and rice wine to the guests.

1.10 Education

During the Sangkum Reasr Niyum period and Khmer Republic regime, Royar Village had a school and teacher from Kratie, but only a few people learned to read and write. In the Pol Pot regime, there was no school and the children studied the lessons of the regime in the shade of the trees. From 1979-93 no classes were held. From 1993-99 the students again studied in the shade of the trees. Since 1999, Royar village has a school building (2 rooms) for the first and second grades and a teacher who comes from Koh Nhek District Town.

1.11 Health

The villagers are not aware of how hygiene and sanitation can affect their health. They don't boil their drinking water, use mosquito nets or latrines.

If they become ill they initially will use traditional medicines and make sacrifices asking the spirits to help them regain their health. If this is not successful, as a last resort they will go to see a nurse and if they have money to purchase it, use modem medicines.

1.12 Water Source

O Chbar River and in Boeung Lumkok are the main water sources for both domestic water supply and crop irrigation. During the rainy season four streams supply water for supplementary irrigation of the rice fields and chamkars. In the dry season this source of water disappears.

1.13 Infrastructure

Access to the village by road is difficult year round. During the dry season, villagers travel along the O Chbar River, through the forest and rice fields to get to the district center or other nearby villages. During the rainy season, travel is extremely difficult.

1.14 Interaction with other Nearby Villages

There is a close relationship between Royar's villagers with other villagers. They travel by using ox-carts or walking with the purpose of bartering products and helping each other, especially in ceremonies. For example, the Kroll people invite the monks from other villages to participate in their ceremonies.

1.15 Other Employment Opportunities

The villagers can't sell their labor to other villages or other areas, because they too busy working in their own rice fields and chamkars. If a family lacks labor, they exchange among themselves.

1.16 Social Structure

Officially there is a Village Chief. The Provincial authorities appoint him. He is recognised by commune, district and provincial authorities and generally supported by the villagers. He helps to resolve disputes or arguments between villagers. There is also a Vice-Chief and he can make decisions on behalf of the Village Chief, when he is absent. There is also a Village Militia for law and order and security from outsiders.
Customarily, the village has also has a traditional village chief (Mei Kuntrin) as well as the official Village Chief. He is selected by consensus by the village elders for his traditional wisdom.

The village elders play an important role in resolving disputes or contradictions to the village's culture. In some cases where a wrong has occurred, the transgressor may have to pay a fine in cash, cows, buffalos, or pigs, based on the dispute's scale. In cases where the elders can't facilitate or solve the problem, it may be submitted to the village, commune or district authority.

In cases where the village has experienced particularly bad misfortune or a number of unexplained deaths have occurred, the village elders and traditional village chief may make a decision to move the village.

Nowadays, society has changed and people aren't so quick to move when they have invested in a permanent living site. Although village, commune and district authority can authorize newcomers to settle in the village, it needs to be first agreed by the village elders. If they don't agree, immigrants can't settle in the village.

1.17 Outside Support

There are no national or international organisations working in Royar's village because the village is far away from the Provincial Capital of Sen Monorom and difficult to access.

2. Land Use and Management

Generally, land use and management laws are not known in the remote areas. The land law is not practical in the remote areas. Implementation of the law itself suffers from lack of support and dissemination from the responsible technical department (Ministry of Land Management, Urbanization and Construction). Royar villagers are not aware of the legal instrument concerning the rights of land use and management. The people manage the land by the customary traditional system.

2.1 Land Use and Land Title

The people allocate the land based on six categories:

2.1.1 Village Area

Plots for house construction are marked by sticks, marks on trees or simply recognized by the owners of the adjacent plot. Parents bequeath the land to their children after they have married and local authorities at both village and commune level recognize this inheritance.

Other village land is used for schools and outlying buildings. Villagers customarily plant jackfruit, apple trees, mango, coconut, banana, lemon and papaya. Animal husbandry includes cattle, pigs, chickens and ducks.

2.1.2 Paddy Rice Field

Paddy rice fields are owned and managed by individual families and located along the river and Toul forest. According to the old Land Law, people have the right to use and manage a maximum of 5 hectares of land (the commune leader said). But, there is no clear boundary and villagers can clear additional forestland to their capacity (they must inform the village and commune authority about the location of the new land).

2.1.3 Off Village Area

The forestland is rich in biodiversity. The people use it for gathering timber and non-timber forest
products. If the land is on the plateau they may clear the land for a paddy rice field.

2.1.4 Unclassified Land

According to customary village practice, the people have the right to cut the forest to practice their agriculture, according to the family labor capacity and demand, but outsiders don't have rights to clear the forestland.

All new immigrants to the village must be authorized to settle there by the Village Chief, the commune and respected elders. They may be granted up to five hectares of village land (unused land) for agriculture crops.

2.1.5 Shifting Cultivation Area

Chamkar land is used for planting corn, root crops, eggplant, pumpkin, chilli, etc. In Royar Village there are many chamkars located along the O Chbar River.

Royar's villagers have the right to use chamkar land and give it to their children. However, they can't sell this land. If they sell the land, the Village Chief, commune and respected elders can fine the seller an amount equal to the price of the land. The fine may be in the form of cows, buffalos or pigs.

2.1.6 Burial Land

The Burial Forest is managed by the respected elders and villagers. All villagers have rights to use the land for burying their families. Other villages can't use it.

2.1.7 Conflict in Land Use Management

Generally, the villagers clear forestland for new cropland, which contradicts the national laws. The people have the customary right only to gather timber and non-timber forest products. They have the rights to manage the paddy rice fields only.

Chamkar land is not a land classification contained in the Land Law for user rights. At present, it is managed by a traditional system.

3. Ethnobotany (relationship between community & forest resource)

3.1 Forest Sector

Before 1962, Royar's village was covered by evergreen forest and many tree species:

- Neang nuon
- Beng
- Thnong
- Sralao
- Krakas
- Sokram
- Pchek

Wildlife was plentiful with:

- Tiger
- Elephant
- Banteng
- Gaur
- Monkeys
- Other species
After 1962, clearing for agricultural crops decreased the forestland. During 1975-79, the Pol Pot regime moved people into this area and the forestland was again cut for agriculture crops. During 1979-93, forest encroachment increased because of the civil war and some powerful individuals benefited from cutting the forest. Since 1993 to the present the cutting of the forest areas has continued, especially by the power men from outside. Also, as the population (natural expansion of the original population as well as newcomers from other provinces such as Takeo, Svay Rieng, Prey Veng) has increased, the forestland along the river and Toul forest has been cut to keep up with their increased needs for agricultural land.

3.1.1 Forest as a System

The forest is a major ecology system that preserves the earth and helps provide a source for human and animal food. The forest has the following advantages:

- Water source (rain)
- Protect from natural disasters (storm, flood)
- Soil fertilizer
- Contains rich biodiversity
- Contains and stocks water underground
- Food source (for humans and animals)
- Rich wildlife

3.1.2 Scientific View of the Forest

Scientists classify the forest as follows:

- Evergreen forest
- Semi evergreen forest
- Deciduous forest
- Degraded forest

3.1.3 Local Community View of the Forest

For the local community the forest is a main source of income generation for family subsistence. Local communities classify the forest slightly differently than the scientists. They classify the forest based on the location and utilization:

The local community classifies the forest as follows:

**Old Forest:** This is far away from the village. This area consists of a lot of tree species that are old and large in diameter:

- Neang nuon
- Beng
- Thnong
- Sralao
- Krakas
- Sokram
- Pchek

**Toul Forest:** This is on the high land. It consists of:

- Khlong
- Thbeng
- Sokram
- Koki
- Choeuteal tuk
- Trach

**Forest cemetery:** This is the forest adjacent to the village. The tree species found in this area are:

- Khlong
3.2 Forest Resource Use

3.2.1 NTFPs

People collect bamboo shoots, mushrooms, wild fruits and vegetables for family nourishment. Most of the non-timber forest products are collected from the Toul forest, Old forest and Village forest. Most NTFPs are collected by women.

**Bamboo**

Bamboo is a significant non-timber forest product for Royar's villagers. It is collected only for home consumption. They use it for home construction, animal cages and fishing materials, handles for knives and basket weaving. The men collect bamboo along the streams and in the Old Forest. The bamboo species most commonly found is Russey prich (Arundianaria pusil/a) and Russey Khley (Oxytenanthera). It is collected as needed, especially in dry season.

**Fuel wood**

Fuel wood is collected daily but the people do not concentrate on this activity because it is easy to find around the village or nearby. Women and children are responsible for firewood collection.

**Resin**

In previous times the indigenous ethnic minorities collected resin for home use only, especially for lighting in the night. But by 1998, resin became a major source of income, because of market demand. Middlemen come to the village to buy directly from the villagers.

Generally, resin can be collected in the old forest, along streams and in the Toule forest. Most of the men and children and a few women collect resin. Resin collection is most active in the dry season. There are two types of resin: Chhortuk and Chhorchung.

Chhortuk is collected from Pchek Reang (Shorea obtusa) and Pchek Phnom (Penteame siamensis). Chhorchung is collected from Choeuteal tuk (Dipterocarpus alatus) and Trach (Dipterocarpus intricatus).

Chhortuk resin is collected by cutting a hole in the tree and placing a small fire in the hole. Trees used by one person cannot be used by others. When they collect resin from 100-200 trees, they treat this as individual property or they rotate resin collection amongst friends.

**How to collect Resin**

The tree is slashed by a cut about 2.5-3.5 centimetres wide (according to the size of the tree) and 2-3 centimetres high. Then they clean out the cut hole and bum it about a minute. After that they cover it...
and leave 2-3 days. They place a container to collect the resin.

**Hunting**

Hunting is a secondary occupation of Royar's ethnic minorities after they finish work in their rice field, and chamkars. The men do most of the hunting. They customarily horn in Toul forest, forest and old forest. The old forest is far away from the village and is rich in big wildlife. They go there on foot and spend 2-3 days hunting. The traditional equipment used for hunting is traps, bows, crossbows, axes, knives, drums and dogs.

They hunt for:
- Gaur
- Sambar
- Northern Tree Shrew
- Banteng
- Sun Bear
- Wild Pig, Wild Boar

Nowadays, the quantity of wildlife has decreased making it more difficult to find wildlife. The animal, killed by hunting are both for household and market (the middleman come, from Koh Nhet)

### 3.2.2 Forest Products

Generally the highland ethnic minorities do not use large timbers for home construction, like the Khmer. Usually, they use pole trees. They collect these poles from the Toul forest and the River forest. They spend 2-3 days to cut big trees from the old forest for ox-cart materials and coffins. The men are most active to collect forest products in the dry season. They use adzes, long handled knives, axes and handsaws.

Trees used in the construction of Traditional Highland Ethnic Minority Houses:
- Pchek Reang
- Pchek Phnom
- Khlong
- Thbeng

### 3.2.3 Forest Management

There are no clear guidelines provided by government agencies for forest use and management. It has significant impact to natural resources management and the livelihoods of local communities. The old Forest Law does not include customary use and management of natural resources by local communities. According to this study, user rights can be distinguished by two different frameworks: customary rights and legal rights.

**Customary Rights**

The customary use and management of forest resources is based on centuries of tradition and a religious belief (Animism) that recognizes forest spirits. Traditionally, local communities recognize the rights of other community members to use the land, especially in clearing the forestland for cultivation; burning forest for hunting and access; to collect mushrooms; collect rattan and bamboo for construction materials and other materials. This customary use has no limit and open use of timber and non-timber forest products is permitted, within the confines of the traditional system. People can collect timber and non-timber forest products, vegetables, wild fruits trees, bamboo shoots, mushrooms, resin, fish etc. without authorization from village, commune or district authorities.

Population growth and immigration from outsiders has negatively impacted the ability of local communities to customarily use and manage natural resources. In the past, the indigenous highland ethnic minorities have customarily tended the forest by protecting the spirit forests "Prey Toam".
They prohibited insiders and outsiders alike from collecting timbers, non-timber forest products and some species of wildlife. If they were collected in violation of customary usage, they were afraid of angering the spirits that reside in the forest, the "Arak" and they would get sick and die. If bad things (sicknesses) happened in the village, those who had cut the trees would be fined.

At present, the increasing population and pressure from other communities are negatively affecting the customary usage and management of the forest in Royar Village and some of the old rules have disappeared. However, Royar's villagers still manage the forest for resin collection.

**Legal Forest Use Rights**
The forest management sub-decree clarified:

- **Chapter 1, Article 1 and Paragraph 2**: Forest resources in forest areas are the State property and managed by the State.

- **Chapter 1, Article 8**: The people, armed forces and local authorities at all levels have the duty to tend and protect forests, prevent forest fires and be involved in reforestation.

- **Chapter 2, Article 9 and Paragraph 3**: Cutting or collecting timber and non-timber forest products for household and public consumption requires an authorization letter, but local communities do not have to pay royalties or premiums for forest use.

- **Chapter 2, Article 18, Paragraph 1**: Cutting trees, clearing forest for cultivation; mining stones, sand and minerals in forest areas; harvesting trees that people extract resin from shall be prohibited, except with authorization from the Ministry of Agriculture.

- **Chapter 4, Article 22 and Paragraph 1**: Hunting mammals, birds and reptiles shall be prohibited until it is replaced by new regulation.

- **Chapter 6, Article 30**: shall be warned and evidence confiscated any person that:
  a) Cuts trees or transports timber and non-timber forest products for Household and public consumption without authorization letter.
  b) Sells or uses timber and non-timber forest products for household and public consumption for any other purpose.

If any of the above offences are committed in a protected forest the evidentiary materials will be confiscated and the transgressor fined equal to the value of the damage caused.

4. **Conclusion**

There are three different ethnicities living in the village Phnong Kroll and Khme. They rely on agriculture, animal raising, collecting timber, and non-timber forest products hunting and fishing for their livelihoods.

Timber and non-timber forest products collection areas are rich in biodiversity and wildlife and help store water for both domestic consumption as well as agriculture. These areas are managed in a traditional way.

Resin collection is the second most important occupation for livelihood subsistence for Royar's villagers. It can be collected easily in the Toul Forest and in forests along the streams. It brings a high price in the market. The community management of the resin producing trees is a good example of community-based forest management.

Population growth, especially from newcomers, has increased pressure to clear forestland for agriculture crops. Market demands have increased the extraction of forest and NTFPs.
Burning the forest for hunting has contributed to the decreasing quantity and diversity of wildlife. Although, generally speaking, the traditionally used hunting methods of the ethnic minorities for family hunting have not a significant effect. That which has had a serious impact is the hunting for sale, particularly of large mammals.

Access to the village is difficult, especially in the rainy season. The local community is isolated from the rest of Cambodian society. There is no national media and the education system is very weak and as a result, most of the people are illiterate. The health service is very weak and people lack information about hygiene and sanitation. Incidence of malaria and other communicable diseases is high. At times during the year there is a food shortage affecting nutritional intakes. The local community is not aware of the national Forest Law or Land Law and they use and manage forest resource in customary traditional ways.

5. Recommendations

- Department of Agriculture, Forest and Fisheries and local authority should make efforts to inform the local community about the disadvantages of forest fires that reduce the natural forest;

- Technical departments should cooperate with local authority for dissemination of information and prohibit the local community from hunting and trading endangered wildlife;

- Relevant departments and local authorities should encourage the people to repair the road and bridge based on their own ability and labor;

- The Department of Education should cooperate with local authorities to build a school and provide teachers;

- The Department of Health should cooperate with local authority to build a health center and provide primary health care services to the community;

- The Department of Agriculture, Forestry and Fisheries should provide agriculture technology to the community;

- The Cadastral Department and Department of Agriculture, Forestry and Fisheries should be develop land use planning (including forestland) urgently I that involves natural forest conservation;

- The Department of Agriculture, Forestry and Fisheries should provide extension information about improved agriculture technology and dry season rice production for increasing rice yields;

- The local people can harvest rice two times per year (rainy and dry season) if they do paddy rice fields adjacent to Lumkok Lake, which has enough water for irrigation in the dry season; and

- People can make *chamkars* along the O Chbar River, which has enough water for irrigation and can grow multiple crops such salad, tomato, eggplant, corn, beans, root crops, cabbage, papaya, lemon and bananas, etc. It is located near the village, easy to tend and harvest.