In Brief Report

On

Participatory Community-Based Natural Resource Mapping and Documentation of Phnom Namlea Wildlife Sanctuary, Mondulkiri Province

Date: July 2019
Community Empowerment and Development Team (CEDT)

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July, 2019

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1. **Community Empowerment and Development Team (CEDT)** for overall supervision, coordination, technical inputs and funding support in this documentation and mapping step and other efforts so far.

2. **Ministry of Environment and Provincial Department of Environment in Mondolkiri** for a warm and great collaboration with allowing rangers to support the research team to conduct field data collection.

3. **Local authorities** for strong cooperation by working closely and allowing the team to implement this activity.

4. **Local community** for actively participating in the processes such as planning management and implementation with the team very successfully even though the infrastructure accessing and the road condition is not good.

5. **Community Lawyering Team (CLT)** who had spent abundant effort to mobilize community people, meetings management and collect the primary information in community natural resources management.
Part 1: Community Empowerment and Development Team (CEDT)

1. Introduction
Community Empowerment and Development Team (CEDT) is a Cambodian non-government organization established in May 2009, working toward to strengthen poor communities in both urban and rural areas, to improve their housing conditions, the security of tenure and ultimately realize their housing rights including the community empowerment through awareness raising and participatory community planning. The process begins by creating a comprehensive sketch mapping, GIS mapping, collect relevant legal supporting documents, develop community profile, community empowerment, provide technical support for housing solutions; prepare the communities land use planning, and sustainable natural resource management.

So far, CEDT had provided the capacity building and training to the community people, local village together with commune authorities, and sanctuary rangers on the Geographic Information System (GIS), especially on how to gather Universal Transverse Mercator (UTM) at the land use in Pu Les, Pu Treng, and Pu Chop village of Dakdam commune, as well as in Lam Mes, Pu Luk village of Bousra commune, Pich chrea da district, Mondulkiri province. Remarkably, both 2 communities have requested to be a collaborative management area as part of Phnom Namlela Wildlife Sanctuary in order to improve the conservational effectiveness and to improve the livelihood of community based natural resource, community based non-timber resource, and community based eco-tourist. With these recent research activities, it is a second phase trying to identify potential zone for an eco-tourist so as to attract relevant investor groups to use those already identifying natural potentialities to create a co-natural resource management zone by the two communities.

In here, CEDT also organized workshop/meetings with participation of local commune and village authorities from Dakdam and Bousra commune, together with Rangers and local community Bousra and Dakdam commune. After workshop/meeting, all participants have to collect data about biodiversity, ecology system, water resources, and wildlife living zones of Namlela Wildlife Sanctuary. We noticed that, Mondulkiri is full of high potential areas for eco-tourism. In the province, there are 29 water falls, wildlife zones, spirit conservation forests by indigenous people, non-timber-forest products (NTFPs), and other mountainous areas – all of which are so potential for the communities to making tourist sites and attracting investments for businesses.
2. Target Geographic Information

The geographical areas which potential for a pilot collaborative management

![Map, reference data from Open Development Cambodia](image)

A. Phnom Namlea Wildlife Sanctuary, Mondulkiri consists of 5 villages with 5,196 villagers, whom 75% are Cham minority (Islam) and Bounorng Indigenous People, 15% are youth, and 59% are women (2,652 women). There are 3 community forestry. The requested collaborative management area is 24,548.16 hectares, which 21,240 hectares (inside of Phnom Namlea Wildlife Sanctuary, biodiversity corridor conservation area, Pu Les and Pu Treng Community Forestry), and having another 3,308.16 hectares (the overlapping with land concession by Mega First Plantation Cambodia Ltd.)

*Data about number of villagers from Pich chreada district, 2016-2017 of Lam Mes and Pu Luk community in Bousra commune; and Pu Treng, Pu Les, and Pu Chop in Dakdam commune, in Ou Reang district hall 2019 (the data inn 2019 has changed).*

3. Methodology

We have used multi methodologies to collect data, including field data collection, group discussion and the consultation on the community history of land uses, biodiversity areas, water resource areas, wildlife areas, non-timber extracting areas, and many other potential areas. After many times of researching with community people, we have organized workshop with community and local authorities in order to present the finding information to relevant stakeholders and also having draft the sketch map for those identified community areas. In the next phase, we have also organized 3-day training on using Global Positioning System (GPS)
device to the selected location, sketch mapping, photography skill, and other information to be collected with participation from community, rangers, and relevant local authorities. After the training, we have divided our participants into 4 groups to practice to collect data inside village, in order to ensure that they are able to use the trained knowledge to collect the data. The next phase is about data collection in real work. We did data collection for 2 times, by which we spent 8 days per one time. We had 4 groups, including 2 groups from Dakdam, and 2 groups from Bousra, which there are 3 representatives of community members, 1 village chief, 1 commune chief, 2 rangers, 4 community lawyers, and members from CEDT in each group.

GPS Training Activities

4. GPS Implementation Field and Data Collection in Phnom Namlea Wildlife Sanctuary, Mondulkiri province
The field data collection is started from 12\textsuperscript{th} to 15\textsuperscript{th} March 2019, with participation of community committee members, community members, youth, women, and ranger officers, all are in 4 groups from 2 communes, and total member is 29 people, including 3 females. The data and information we found are about social land concession for Cham minority, economic land concession, wildlife area, waterfall sites, old village sites, abstinence forest, and Phnom Yoak Yak landscape sites.

1. Community profile documentation
2. Information on land and natural resource uses
   - Potential sites for eco-tourist
   - Natural and cultural heritage: mountain, holy cave, and waterfall
   - Forest type, and wildlife and biodiversity area (hog deer, deer, civet, monkey, wild boar, mouse deer, … Forest types are evergreen forest, semi evergreen forest, deciduous forest, bamboo forest, buffer vegetation along water stream)
- Natural resource and non-timber extracting area
- Types of land uses (old village, abstinence forest, burial forest, cultivation land, shifting cultivation land, social land concession for village to Cham minority)

3. Information on economic land concession company and type of land concession

*Activities of community people using GPS*
Part 2: Summary on participatory community-based natural resource mapping and documentation of Phnom NamLea Wildlife Sanctuary, Mondulkiri Province

1. Introduction to the community

Indigenous People Community (Bounorng) is a collective of citizens, under the direct control of commune council, was officially registered with Ministry of Interior. By having nationality as Khmer, the community uses their Bounorng language for general communication inside their community, however, uses Khmer spoken and written language for official communication. Their occupations are rice farming, shifting cultivation, extracting of non-timber forest products and hunting, and traditionally fishing. The Bounorng indigenous community live traditionally in a collective manner, which means their houses are collectively closed built and they live as in their traditional way, under the control of the traditional authority (the Seniors), in order to solve any problem as per their old way practices. The community cultivate their farming as in shifting way, but also have their permanent rice farm lands and permanent vegetable farm lands as well as habitation lands, abstinence forest lands, burial forest lands, waterfalls, stream, and the holy mountains which are under their collective management. Inside their habitation area, there is always a praise hall and its premises of clear space for organizing any general events, including traditional art, dance, sing and for storage of their traditional stuffs. The community believe in ghost and spirits of mountain and forest; they do highly pray and immolating. All these identities are solely identified by their community and recognized by local authorities and other authorization body. The Bounorng indigenous community have the purpose to protect their cultural identity, traditional deeds, and natural resource conservation while improvement of their livelihood standard.

2. Target Communities

<table>
<thead>
<tr>
<th>No</th>
<th>Community Name</th>
<th>Household</th>
<th>Population</th>
<th>Female</th>
<th>Land Size/ha</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bounorng indigenous community of Pu Les village</td>
<td>340</td>
<td>1,297</td>
<td>668</td>
<td>2,911.23</td>
<td>Bounorng</td>
</tr>
<tr>
<td></td>
<td>Ping Brung Klung Pes Tho Community Forestry</td>
<td></td>
<td></td>
<td></td>
<td>1,573</td>
<td>Bounorng</td>
</tr>
<tr>
<td>2</td>
<td>Bounorng indigenous community of Pu Treng village</td>
<td>185</td>
<td>378</td>
<td>397</td>
<td>None</td>
<td>Bounorng</td>
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<td></td>
<td>Chba Tab KesKab Jong Long Community Forestry</td>
<td></td>
<td></td>
<td></td>
<td>2,000</td>
<td>Bounorng</td>
</tr>
<tr>
<td>3</td>
<td>Bounorng indigenous of Pu Chop village</td>
<td>162</td>
<td>620</td>
<td>307</td>
<td>1,954.23</td>
<td>Bounorng</td>
</tr>
</tbody>
</table>
3. Existing Natural Resources inside the communities (Communal Land Titling and Community Forestry)

3.1 Communal Land Titling of Indigenous People (Bounorng)

There are 5 communities are being in the process of communal land titling (Bounorng); however, they haven’t yet received the land title from the ministry. The 5 communities are 3 communities from Pu Treng village, Pu Les, Pu Chop of Dakdam commune, Ou Reang district, and another 2 communities from Lam Mes village and Pu Luk village of Bousra commune, Pech Chreada district. These communities already have relevant documents such as: 1). Internal Regulation, 2). By-Law, 3). Sketch Map and GPS map, and 4). Management Structure – all of these were facilitated by My Village Organization (MVI), GIZ, ADHOC, and CLEC, as well as the recognition as Bounorng communal land titling by the local authority (village and commune), Mondulkiri Provincial Department of Rural Development, Mondulkiri Provincial Department of Land Management, Urban Planning and Construction, Mondulkiri Provincial Governor and Ministry of Rural Development.

A. Pu Les Communal Land Titling: The community has been created since 2013, with the coordination support by My Village organization (MVI), and GIZ. This community has produced 1). Internal Regulation, 2). By-Law, 3). Initial Sketch Map and GPS map, and 4). Internal Management Structure – all of which are recognized as Bounorng Communal Land Titling by the local authority at the village, Dakdam commune, Ou Reang district, Provincial Department of Rural Development, and Modulkiri Provincial Governor; however, the community is not received land title certificate from ministry level yet. These are 6 types of land, including:

1. Habitation land for 2 plots, size of 11.8 hectares;
2. Farm land, being used all seasons of the year, for 13 plots, size 977.36 hectares;

<table>
<thead>
<tr>
<th>OuKley Community Forestry</th>
<th></th>
<th>904</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Bounorng indigenous of Pu Luk village</td>
<td>442</td>
<td>1,595</td>
</tr>
<tr>
<td>5 Bounorng indigenous of Lam Mes village</td>
<td>232</td>
<td>906</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,361</strong></td>
<td><strong>5,196</strong></td>
</tr>
</tbody>
</table>

*Data from the community (Pu Treng, Pu Les, and Pu Chop) from Ou Reang District Hall 2019, and from the community (Lam Mes, and Pu Luk) from Pech Chreada District Hall 2016-2017*
3. Farm land, located outside of the village, for 10 plots, size 390.84 hectares
4. Reserve land of shifting cultivation, for 11 plots, size 1,276.49 hectares
5. Abstinence forest, for 7 plots, size 41.45 hectares
6. Burial forest, for 7 plots, size 213.96 hectares

**Total land area of the community is 2,911.23 hectares**

![Map of the community](image)

*Source of map data from MVI and GIZ*

**B. Pu Chop Communal Land Titling:** The community has been created since 2014, with the coordination support by My Village organization (MVI) and GIZ. This community has produced 1). Internal Regulation, 2). By-Law, 3). Sketch map and GPS map, and 4). Internal Management Structure – all of which are recognized as Bounorng Communal Land Titling by the local authority at village, Dakdam commune, Ou Reang district, Mondulkiri Provincial Department of Rural Development, Mondulkiri Provincial Department of Land Management, Urban Planning and Construction, Mondulkiri Provincial Governor, and recognition letters from Ministry of Rural Development, and Ministry of Land Management, Urban Planning and Construction, however, they haven’t received land tittle certificate from ministry level yet. There are 6 types of land, including:

1. Habitation land for 2 plots, size of 3.81 hectares;
2. Farm land, being used all seasons of the year, for 13 plots, size 282.61 hectares;
3. Farm land, located outside of the village, for 27 plots, size 528.76 hectares
4. Reserve land of shifting cultivation, for 6 plots, size 297.78 hectares
5. Abstinence forest, for 4 plots, size 318.4 hectares
6. Burial forest, for 8 plots, size 523.27 hectares

Total community land is 59 plots with area of 1,964.63 hectares.

Source of map data from MVI and GIZ

C. Pu Treng Communal Land Titling: The community has been created since 2012, the community has produced 1). By-Law, 2). Internal Regulation, and 3). Internal Management Structure - all of which are recognized by local authority from village, Dakdam commune. Community map is supported by DPA. Therefore, there is no sketch map and GPS map yet. In the community, there are 6 types of land, including:
1. Habitation land;
2. Farm land for rice cultivation;
3. Farm land, located outside of the village;
4. Reserve land of shifting cultivation;
5. Abstinence forest; and
6. Burial forest;

D. Lam Mes Communal Land Titling: The community has been created since 2002, with the coordination support by CLEC organization, IMG, and ADHOC. The community has produced: 1). Internal Regulation, 2). By-Law, 3). Sketch map and GPS map, and 4). Internal Management Structure – all of which are recognized as Bounorng Communal Land Titling by the local authority of village, Bousra commune, Pech Chreada district, Provincial Department of Rural Development, Mondulkiri Provincial Governor, and having Indigenous Identity recognition letter
from Ministry of Rural Development since 06th October 2011. However, the community has not received land title certificate as communal land title from Ministry level yet. In 2016, the community have collected UTM and prepared sketch map by IMG, which 7 types of land, including:
1. Habitation land for 5 plots, size of 62.95 hectares;
2. Farm land for rice cultivation, for 8 plots, size 48.35 hectares;
3. Farm land, located outside of the village, for 27 plots, size 528.76 hectares;
4. Reserve land of shifting cultivation, for 11 plots, size 1,937.28 hectares;
5. Abstinence forest, for 5 plots, size 63.03 hectares;
6. Burial forest, for 5 plots, size 146.45 hectares; and
7. Cultivation land, being used all seasons of the year, for 64 plots, size 444.78 hectares.

Total community land is 98 plots with area of 2,701.82 hectares.

E. Pu Luk Communal Land Titling: The community has been created since 2006, with the coordination support by CLEC organization, IMG, and ADHOC. The community has produced 1). Internal Regulation, 2). By-Law, 3). Initial sketch map and GPS map, and 4). Internal Management Structure – all of which are recognized as Bounorng Communal Land Titling by local authority of Pu Luk village, Bousra commune, Pech Chreada district, Mondulkiri Provincial Department of Rural Development, Mondulkiri Provincial Department of Land Management, Urban Planning and Construction, Mondulkiri Provincial Governor, Ministry of Land
Management, Urban Planning and Construction, with UTM collected for sketch map in early 2016 throughout the coordination of IMG. The community so far have not yet received land title certificate for the communal land title from Ministry level yet. The community has 7 types of land, including:

1. Habitation land for 4 plots, size of 29.2 hectares;
2. Farm land for rice cultivation, for 3 plots, size 12.80 hectares;
3. Farm land, located outside of the village, for 51 plots, size 1,098.15 hectares;
4. Reserve land of shifting cultivation, for 9 plots, size 2,737.88 hectares;
5. Abstinence forest, for 15 plots, size 166 hectares;
6. Burial forest, for 5 plots, size 71.12 hectares; and
7. Cultivation land, being used all seasons of the year, for 51 plots, size 1,095.15 hectares.

Total community land is 87 plots with area of 4,112.15 hectares.

3.2 Community Forestry

There are 3 community forestry, including Ping Brung Klung Pes Tho Community Forestry of Pu Les village, Chba Tab KesKab Jong Long Community Forestry of Pu Treng village, and OuKley Community Forestry of Pu Chop village, in Dakdam commune, which under the process to registering as Community Forestry. Ping Brung Klung Pes Tho Community Forestry of Pu Les village has already had agreement from Ministry of agriculture in 2018; however, other communities including those from Pu Luk and Lam Mes village of Bousra commune is not received agreement from ministry of agriculture as community forestry yet.
A. Ping Brung Klung Pes Tho Community Forestry of Pu Les village: Ping Brung Klung Pes Tho Community Forestry has land area of 1,573 hectares, were created in 2007, with approval letter from the Provincial Governor. They have documents such as: 1). By-Law, 2). Internal Regulation, 3). Internal Management Structure, 4). GIS map, and recognition letter from Ministry of Agriculture, and the by-law with recognition by Dakdam commune chief and Forestry administration, and having coordination support from Forestry Administration and MVI to get the agreement with Ministry of Agriculture in 2018.

B. Chba Tab KesKab Jong Long Community Forestry of Pu Treng Village: Chba Tab KesKab Jong Long Community Forestry has land size of 2,000 hectares, were created in 2008, with approval letter to create by Mondulkiri provincial Governor. The community has 1). By-law, 2). Internal regulation, 3). Management Structure, 4). Technical GIS map which recognized by Dakdam commune’s chief, Forestry Administration, with coordination of MVI and Forestry Administration. However, the community has no agreement from Ministry level yet.
Data source from MVI and Forestry Administration

C. OuKley Community Forestry of Pu Chop village: OuKley Community Forestry has land size of 904 hectares, were created in 2008 with approval letter by Mondulkiri Provincial Governor. The community has 1). By-law, 2). Internal regulation, 3). Management Structure, 4). Technical GIS map, with Deka recognition by Dakdam commune’s chief, Provincial Governor, and Forestry Administration under the coordination of MVI and Forest Administration. However, the community has no agreement from Ministry level yet.
Data source from MVI and Forestry Administration
Part 3: Collaborative Management in Natural Resource in Phnom Namlea Wildlife Sanctuary

1. The purpose of Collaborative Management
After doing the consultation workshops, meetings, other trainings with field data collections on natural resources use, which were participated by peoples from the 5 villages, including community chief and community committee members and community members, village senior, as well as local authorities such as village chief, commune chief, commune secretariat, and ranger, we found that they have similar objective which is to propose collaborative management in natural resources in Namlea Sanctuary and biodiversity conservation sites, such below:

1.1. History of conservation and use of natural resource
All communities from the total five villages in Dakdam and Bousra commune have long history in the collective conservation and access to natural resource in their community, even though they are living in different communes. The communities still continue the habits of going inside the forests in order to patrol, extracting timber and non-timber forest products for daily livelihood.

The use of land and other non-timber forest products is not limited to village or commune administration; they harvest timber and non-timber forest products with traditional harvesting without harming the environment and natural resources. There are also types of land use, such as land for village, abstinence forest land, burial forest land, cultivated farm land, and shifting cultivation farm land etc.

1.2. Potential sites for investment and livelihood improvement
- Those sites are Bunorng indigenous community’s historical and cultural sites, including abstinence forest, spiritual forest, burial forest, old village land, shifting cultivation land – all of these types of indicate and reflect the identity of (Bunorng) indigenous people.
- These sites have diversifying natural resources which significantly help the livelihoods of the local people as well as the (Bunorng) indigenous community since these sites have:
  1) High potential to create into eco-tourist because of waterfalls, mountains, wildlife habitation sites, and Peap leaves sites
  2) High potential to create into small, medium and large size enterprises and businesses out of non-timber forest products
3) High potential to become carbon forests and electricity powers from solar panel plant and small hydro-electrical power plant
4) High potential to attract more private sectors to invest in natural resource conservation industry (green business)

Therefore, these sites are main source of future income which will not only contribute to livelihood improvement and community development but also strengthen local natural resource management activities such as forest patrolling, local infrastructures and public service development, outsider investment to those existing community small size businesses, as well as community people capacity development via training courses for career and skill development.

1.3. Potential site for the purpose of collaborative management

The community have the purpose to request for collaborative management in natural resource on Phnom Namlea Wildlife Sanctuary and biodiversity conservation area with the total size of **24,548.16 hectares**, which consist of:

- Request to include Phnom Namlea Wildlife Sanctuary into collaborative management area which has the size of **21,240 hectares**, and request to include biodiversity conservation corridor sites and Phnom Namlea Wildlife Sanctuary area, Pu Les and Pu Treng community forestry into collaborative management area.
- Request to exclude those overlapping land between community’s land and the economic concession land of company Mega First Plantation (Cambodia) Ltd, size **3,308.16 hectares** (out of the total land size **9,477 hectares**) to give to the community.

The purposes are 1). Preventing forest logging, as well as to safeguarding natural resources and endangered wildlife in large scale manner, and in order do reforestation and improving soil fertility, increasing of rain chance, preventing soil erosion, maintaining moisture and water resource– which are the natural habitation of biodiversity.

2). In order to build a new structure collaborative management, enabling communities and authorities from different communes and districts able to work together smoothly.

3). In order to make an agreement of managing collaborative management which is longer than 15 years so as make more confidences for investors to invest with the communities.

4). In order to have official authority to fully manage and protect the whole landscape area rather than partially and mini manage and protect the area.
5). In order to protect and conserve the natural resources and endangered wildlife inside Phnom Namlea area from the deforestation and hunting by the outsiders and the land concession companies as well as by those who got the social land concession.

*Map indicates the area inside Phnom Namlea Wildlife Sanctuary for Natural Resource collaborative management*
Map indicates the natural resources in collaborative management area (Phnom Namlea Wildlife Sanctuary)
2. Description of route map to waterfalls and natural resources

Mondulkiri province consists of many beautiful natural landscape areas with naturally purified quality air which are very attractive to tourist to visiting this province. The province has so much of potentiality for tourism industry such as beautiful grassy mountains, pine plantations, forest, natural tourist sites, and indigenous people’s houses and cultivated farm lands as well as their cultures, and most especially, the province has so many waterfalls. Bousra waterfall is a very well-known waterfall of Mondulkiri. There a recent study by CEDT together with local communities, local village and commune authority and Provincial Department of Environment about the more potential tourist sites within the province. The study found that there are many waterfall sites with natural beauty for tourist visit. Sketch map shows that potential eco-tourist sites inside Phnom Namlea Wildlife Sanctuary, Biodiversity Conservation Corridor, and inside Communities Forestry.

- If we travel from Modulkiri municipal town to Dakdam commune, we will notice the beautiful scenery along the road. After, we depart from Dakdam commune to Ping Brung Klung Pes Tho Community Forestry of Pu Les village, we will see the view of Chrey Thom waterfall. Once leaving that community forestry, we will have to go across the views of grass fields, pine plantations, and then we will be reaching into many fascinating waterfalls. There are definitely 12 waterfalls along the natural stream O’Pla-ay, with grass fields and pine tree plantations before reaching each one of those waterfalls. There are evergreen forests, natural water and wildlife habitation resources, and many natural resources for non-timber forestry extracting sites – all are located inside Pu Les Community Forestry. Now if we keep continue to go further by going across Mega First company area, we will arrive a small remote village which has around 30 to 40 family houses. This village is called O’ Pol village, and the villagers’ livelihoods here are relying on agricultural growing and non-timber extracting. Not really far from O’ Pol village, there are Peab Leaves trees where the Bou Norng indigenous people eat as their food.
- Before reaching O’Pol, we have already passed Kang Lang Environmental Protection Office, Mega First Company, Pu Les Community Forestry, bamboo forest, rubber plantations, and all-seasons vegetable farms belonging to O’Pol’s villagers which is located inside Mega First Economic Land Concession Company. For the tourist purpose, we can definitely stop by and stay overnight in this village.
Additionally, the water stream of O’Pol village has several waterfalls, very much matching for the kind of forest trekking tourist to pay their visits.

- If we depart from Dakdam commune to Pu Treng village Community Forestry, we will be surely going across grass fields, deciduous forests, bamboo forests, and water resources until we reach some waterfalls which are all linked to O’Pla-ay. This area has abstinence forest, burial forest, shifting cultivating lands, old village land, and non-timber extracting sites, too.

- If you depart from Bousra commune by bike or by car, we will be going across the villagers’ cultivation fields, then going across the gate to rubber plantations of (French) company, cassava plantations of Cham ethnic people, then we will be at Veal Yorng village Social Land Concession. After that, it is Socfin Company’s rubber plantation which also has community protected forest and indigenous community’s cultivation lands and then it is bamboo forest. By keep travelling on the route, not taking much time, we will get Toul Svay village of Cham ethnic which have about 200 to 300 family houses of Cham ethnic people in the land area of 2,000 hectares. Going further than that of Cham ethnic village, we will get Toul Svay Village Environmental Protection Office. After this office, there is an old Lam Mes village. At the old Lam Mes village, we will see very fascinating scenery of Yok Yak Mountain which is full of thickest forest, which is the natural habitation to many kinds of wildlife. This area lies inside a biodiversity conservation corridor which links Phnom NamLea Wildlife Sanctuary together with Mega First Company, Pu Les Community Forestry, and Pu Treng Community Forestry.
Sketch map, showing natural resources in collaborative management area
3. Potential Sites for Ecological Tourist

3.1 Existing Community’s Eco-Tourist Sites

a. Chrey Thom Waterfall: The community people in DakDam commune already been created as an Eco-tourist Community since 2016 which provides tourist service such as service for accommodation with homestay, visiting service, guiding service, and food service. The most important point and service of this eco-tourist community is Chrey Thom Waterfall which is not far from their village. However, forest trekking is not the main purpose, but this eco-tourist community is to improve livelihood for the local by bringing the tourist to trekking and visiting inside the 3 villages and community’s cultivation lands in DakDam commune.

b. Phnom Namlea: The community in Bousra commune has already initiated the idea for more than 2 years to create an Eco-tourist community in Lam Mes village and Pu Luk village of Bousra commune; however, not yet having any management structure were created. Currently there is a team who provides guiding service for forest trekking, and going up to Namlea once in a while as per request from any interest tourist. Both communities are well aware about the significances of Eco-tourist-based community and they have strong willingness to become an Eco-tourist community in order to create more income for livelihoods improvement.

3.2 Potential Sites for Eco-tourist in Future

The requested area for collaborative management has 2 main water sources: O’ Pla-ay and O’ Pol which are natural water streams having its sizes bigger than other water streams that link from Koh Nhek River to Srae Pok River. Important natural streams that the community is using are including O’ Pla-ay and O’ Pol stream; these two streams lie across 2 districts: Pech Chreada district and Ou Reang district which have 4 communes: BouSra, Srae Ampoum, Krang Teh, and DakDam commune, and then to Vietnam and the end border of Mega First (Cambodia) Co., Ltd. These 2 natural streams are so important for all biodiversity along it and it is the main water sources for agriculture cultivation, animal raising, forest protection, reducing soil erosion, and creating many waterfalls for tourist industry. Beside this, the two streams create into many other annex streams such as O’ Kuos, O’ Touy, O’ Ankal, O’ Cheung Trou, O’ Rachouy, O’ Anroung, O’ Pu Let, O’ Trouk, O’ Cheung Ben, O’ Ranoun, O’ Klas, O’ Teel, O’ Ralam, O’ Rakang, O’ Long Mang, O’ Nol, O’ Cheung Kreng, O’ Ret, O’ Cheng Touy, O’ Dam Dek (O’ Tangkorn), O’ Tamae, Prek Koun Pong stream, O’ Bel, and O’ Kat Put, …etc.

3.3 Landscape Site

York Yak Mountain, is the top mountain which has very fascinating views. Once at there, we can see beautiful scenery surrounding the mountain is all about forest which has many types of endangered plants inside the very thickness of evergreen forest, home to endangered wildlife. That’s why it is found that there are so many of wildlife there. Additionally, the waterfall there falls down beautifully in slides from the top to the bottom, until reaching down
nearby water steam where there are full of natural resources, biodiversity, non-timber resources, together with wild vegetation for fruits and vegetables, including wild coconut, wild bamboo, and many huge trees. We can prepare this site to be core zone because mountainous area is the holy prohibit area that of the community will not dare to extract no-timber forest products or dare to do rice farming there at all since they believe that tiger is living the cave there.

3.4 Water Sources, Water Tributary and Waterfalls in Phnom Namlea Wildlife Sanctuary Mondulkiri

Mondulkiri province is so potential for natural tourist industry. Beside the very well-known Bou sra waterfall, there are many other waterfalls which are so closed to the municipal town for the tourist to visit too. Furthermore, the community has already recognized so many other waterfalls located inside Phnom Namlea Wildlife Sanctuary area, Pu Les and Pu Treng Community Forestry, Biodiversity Conservation Corridor, and inside Mega First Economic Land Concession Company.

a. O’ Pla-ay waterfall: Waterfalls in O’ Pla-ay have in total 12 spots along the same one stream, located in Pu Les Community Forestry, such as Mlek Waterfall, Klaing Chun Waterfall, Leng Kapal Waterfall, Leng Chul Waterfall, Leng Kapi Waterfall, Leng Chrypoum Waterfall, Leng Nouk Waterfall, Leng Chry Waterfall, Leng Tou Waterfall, Roneal Waterfall, Leng Por Waterfall, and Leng Prak Waterfall—all of which including some big, small, high fall, and short fall. Amongst these waterfalls, the most beautiful ones are Leng Kapal Waterfall, Leng Chul Waterfall Roneal Waterfall. All these 12 natural waterfalls lie in the length of 1 kilometers along based on natural water stream. And there also another 3 different waterfalls that have water source as the annex water streams from O’ Pla-ay stream. It is Tring Waterfalls, Cheung Trom Waterfall, and Chrey Thom Waterfall. Beside all of these, there are 5 more mini waterfalls, including Leng Nem Waterfalls, Leng Ngal Waterfalls, Leng Kul Waterfalls, Leng Pel Waterfall, and Leng Kit Waterfall, which are located along O’ Pla-ay stream inside Pu Treng Community Forestry.

b. O’ Pol waterfall: Waterfalls in O’ Pol have in total 9 spots, including those waterfalls at the annex streams to the main O’ Pol steam. There are Leng Pang Nhek Waterfall, Leng Hot Pang Waterfall, Leng Hu Waterfall, O’ Cheung Krench Waterfall, O’ Pel Waterfall, Leng Mlum 1 Waterfall, Leng Mlum 2 Waterfall, Leng Lout Waterfall, and Leng Angkrang Waterfall. Based direct observation, we found that Leng Pang Nhek Waterfall, Leng Hot Pang, and Leng Mlum 1&2 have beautiful sceneries which can attract tourist for the visiting and bathing.

Therefore, based on the data collection by community and authority in DakDam and Bou Sra Commune, rangers, and CEDT for 3 times at all area of the above 2 natural streams, we found 22 waterfalls in GPS; however, only 18 waterfalls were
reached and taken photos. The community has told that there are totally 29 waterfalls. All the data found as following.

Map shows the waterfalls in natural resource collaborative management
Map shows the waterfalls in natural resources collaborative management
1. Leng Lout Waterfall

This waterfall is the closest one to Bousra commune because it is connected to cultivation lands of the community. In order to get to this waterfall, we need to go by bike, across the rubber plantation of Cham ethnic people, and cultivated lands of the community, taking about 90 minutes since the route is going up and down. This waterfall is kind of slide water stream with shallow depth (0.2 – 0.3 meters) which allow passenger to go across. By going across this slide water, we can go to many other waterfalls and Peap Leave Tree Conservation Forest, too. The distance from Bousra Commune to this waterfall is 21 Kilometers. General features of the waterfall

- 3 slides waterfall, 4 meters height (1\textsuperscript{st} slide), and 1 meter (2\textsuperscript{nd} slide, 3\textsuperscript{rd} slide)
- The depth at each level of slide rank between 1 – 2 meters, and the gap between each slide is about 10 meters
- The width of the waterfall is 5 – 6 meters, and up to 7 meters in rainy season
- With many of big stones, the water direction is from West to the East
- Surrounding area is very thick buffer bamboo forest, and Casava farm land
- The origin of the water is from Vietnam border (told by farmer closed there).
2. Leng Pang Nhek Waterfall

Depart from Leng Lout Waterfall for about 40 minutes, by going across community cultivated land, bamboo forest, evergreen forest, Peab Leaves Tree Coservation Forest. This waterfall is deep inside very thick forest with bamboo buffer forest, located along the valley. Because the waterfall feature does not so vertically oriented and the water flow is in slow motion, which is so potential for the tourist at both upper level and lower level. At the East, is a hill covered by grass and with a good height that allow people on top of it to see the surrounding view as well as able to see sun set view too. However, surrounding area is consisted of deer, wild pig, and jungle based on its footprints and shit during observation. This waterfall is so closed, about 2 kilometers only to Economic Land Concession Mega First. The distance from Leng Lout Waterfall to Leng Pang Nhek Waterfall is 8 Kilometers. General features of the waterfall

- Two parallel waterfalls, with distance about 5 meters from one another, but in rainy season, it will merge into each other and become one line with size of about 20 meters in width
- The water direction is from West to the North
- In dry season, the first line waterfall is 8 meters in width, and the second one is 6 meters in width
- It is 10 – 12 meters in height
- The is no reservoir for the lower level, which means the water at down level then flow down, too
- It is 0.5 meters depth with 5 meters in width
- The upper level is full of huge and big stones while the lower level is full small gravels and rocky at where good for swimming and bathing
- There are big vine plants growing across the lower level
3. Leng Hot Pang Waterfall

It is waterfall which located down below Leng Pang Nhek Waterfall, with the distance about only 1 Kilometer. In order to get there, it takes about 30 minutes to go trekking across the forest. At the West of this waterfall is full of very thick buffer bamboo vegetation, which cause difficulty to get access to this waterfall. The distance to this Leng Hot Pang is 8.6 Kilometers, similar to the distance to Leng Pang Nhek since it is so closed to each other. General features of the waterfall

- The water direction is from West at upper level to the North lower level
- 10 – 12 meters in width
- 8 – 10 meters in depth
- Reservoir’s deep is about 1.5 – 2 meter depth, with 20 – 25 meter width
- Lower level is full of huge stones
- Lower level is about 10 meters width, with 0.2 – 0.5 meters
4. Leng Mlum 1 Waterfall

This waterfall located along the valley, so the route to it is so vertically oriented and requires to travel by walk in order to get access, and will spend about 30 minutes (from Lum Road, across the valley forest). The distance to this waterfall from O’ Pol village is 9 Kilometers.

General features of the waterfall:
- There are 3 levels of waterfalls (40 meters from first level to second level, and 10 meters from second one to third one), with 0.3 – 0.5 meters in water depth
- Waterfall is about 8 – 9 meters height
- Waterfall is about 10 meters width
- 2 meters depth reservoir, with 15 – 20 meters in width
- Down to the lowest level thereafter, it is full of wild coconut tree, with average size stones
- The waterfall is fully surrounded by very thick evergreen forest.
5. Leng Mlum 2 Waterfall

Located down below Leng Mlum 1 waterfall about 500 meters only, with very thick evergreen forest surrounded, and it also lies on even more vertical oriented than that of Leng Mlum 1. But it also has higher waterfall than Leng Mlum 1; with narrower waterfall’s width alongside by wild coconut. The distance from O’Pol Vilage to this waterfall is 9 Kilometers. General features of the waterfall:

- Waterfall is 12 meters in height
- And waterfall’s width is 7 meters
- Reservoir’s width is 10 meters and 0.5 meters in depth
- Lower level is about 2 meters in width and 0.5 meters in depth
6. Chrey Thom Waterfall

Chrey Thom Waterfall located about 1 Kilometer only from Pu Les village, DakDam commune. This waterfall’s height is 10 meters, surrounded by big tree. This Waterfall has many tourists come to visit with entrance ticketing fee for 2,000 Riel for a foreign tourist, and 1,000 Riel for a local tourist. This waterfall has been successfully created into Tourist Community by My Village Organization (MVI), and with the delegation for tourist with site management by Young Eco Ambassador (YEA). General features of the waterfall

- Waterfall is 10 meters in height
- And waterfall’s width is 5 meters
- Reservoir’s width is 5 meters and 0.5 – 2.0 meters in depth
7. Leng Ka Pal Waterfall

In order to get Leng Kapal Waterfall, if we depart from DakDam commune, we will need to go across Chrey Thom Waterfall, Pine Plantation, Por Mountain, O’ Cheung Chok stream and grass field, Community’s preserved area for bamboo reforestation, honey harvesting area, and deciduous forest and so on. Leng Ka Pang waterfall is one amongst many other waterfalls located long O’ Pla-ay stream. This waterfall is about 11 Kilometers from Pu Les Village, having the waterfall’s height about 7 meters, and it situates on the upper stream level of Leng Ka Pi waterfall. This waterfall has very unique identity of its look -- more alike to the face of King Jayavaraman VII, if making the side view, and more alike to Naga head, if making the front view. The very beautiful view surrounding this waterfall, for there is huge trees, wild banana, flooded trees, vine trees, while there are 3 lines at the lower level from this waterfall. General features of the waterfall

- Waterfall is about 7 meters in height
- And waterfall’s width is 10 meters
- Reservoir’s width is 12 meters and 1.0 – 2.0 meters in depth
- There are many big stones which are able to allow tourist to sit on
- There is one island in the middle of water flow, with big vine trees
8. Leng Chul Waterfall

Leng Chul waterfall is the down waterfall from Leng Ka Pal Waterfall with is about only 500 meters in distance from one another. Surrounding its area is full of vegetation such as wild coconut, wild banana, and other wild tree …etc. The distance from DakDam to this waterfall is almost the distance to Leng Ka Pang – 11 Kilometers. General features of the waterfall:

- Waterfall is about 4 meters in height
- And waterfall’s width is 8 meters
- Reservoir’s width is 12 meters and 1.5 – 2.0 meters in depth, depending on seasons
- There are many big stones which are able to allow tourist to sit on
- There is clear wide space surrounding and tourist can swim
9. Leng Ka Pi or Leng Le

Leng Ka Pi is the down waterfall from Leng Chul Waterfall, and still on the same O’ Pla-ay stream which is about 20 meters from the above Leng Chul Waterfall. This waterfall is full of deciduous forest surrounding the side of the waterway. There is also wild coconut trees, wild banana and buffer bamboo. General features of the waterfall

- Waterfall is 10 meters in height
- And waterfall’s width is 6 meters
- Reservoir’s width is 10 meters and 1.5 – 2.0 meters in depth, depending on seasons
- There are many big stones and vine tree which are able to allow tourist to sit on
10. Ro Neal Waterfall

This Roneal Waterfall situates down below Leng Chul Waterfall, in the same O’ Pla-ay steam. This waterfall is about 15 meters in height, having a very big reservoir with about 15 meters depth. If we depart from O’ Koun Angkrang to waterfall, we will be going across grass field, deciduous forest and evergreen forest, and need to go up and down the mountains with bamboo forest. Once we go up to top of mountain, we will notice that the down below water after Roneal Waterfall is divided into two small streams all of which are surrounded by huge trees and vine trees. We will also have to go across those 2 small streams and go up to the mountain, then we will reach O’ Roneal Waterfall, and also see that there a huge cave and many of huge stone full of mosses. At there, the weather is quite cold for there is water condense spray all over the area like drizzle. It is very think vegetation with mosse stones, along with huge tree all along the waterway down. At the lower level, there are wild coconut, wild banana, vine trees and many other wild trees… etc. It is to mention that Roneal Waterfall has very huge cave for water drop with cold weather full water spray. It is 1 Kilometer distance from Leng Ka Pal, but 9 Kilometers from O’ Pol Village, through Pu Les Village Community Forestry. General features of the waterfall

- Waterfall is 15 meters in height
- And waterfall’s width is 7 meters
- Reservoir’s width is 15 meters with 15 meters in depth
- There are many big stones and vine trees which allow tourist to enjoy with
- From the top down to lowest waterway is about 100 meters
11. O’ Koun Angkrang Waterfall

O’ Koun Angkrang Waterfall is about 27 Kilometers from DakDam Commune, with the travelling across of grass fields, deciduous forest, bamboo forest, and so on. This waterfall is in the waterline of O’ Pol stream which has indigenous Bounorng people for about 30 to 40 families living along by growing ginger, coffee tree, black pepper, and cassava, … etc. This waterfall situates next to O’ Pol Village where the villagers use water source daily. General features of the waterfall

- Waterfall is 2 meters in height
- And waterfall’s width is 5 meters
- Reservoir’s width is 6 meters with 0.5 – 1.0 meter in depth
- There are big stones and vine trees which allow tourist to enjoy with
- The 3 slides of waters, about 8 to 10 meters from one another
12. O’ Treng Waterfall

This O’ Treng Waterfall is having the most beautiful with freshly natural air for the visit. Distance from DakDam is about 13 Kilometers, by going to across pine plantation, grass field, and bamboo reforestation area, located in between Pu Treng Community Forestry and Pu Les Community Forestry. This waterfall is originated from O’ Pla’ay having general feature as following:

- Waterfall’s width is 12 meters
- Waterfall is 2 meters in height
- It is about 1 – 2 meters depth, depending on seasons
- Waterfall for visit is 15 meters
13. Leng Prak Waterfall

Leng Prak Waterfall is the 12th waterfall of O Pla-ay stream’s waterline, located in between Pu Les Village Community Forestry and Pu Treng Community Forestry, about 14 kilometers from Dak Dam Commune, by travelling across grass field, forest and bamboo forest. General features of the waterfall

- Waterfall is 2 meters in height
- And waterfall’s width is 5 meters
- 0.5 – 1.0 meter in depth
- There are big stones which allow tourist to enjoy with
- The water flows as lines, surrounded by deciduous forest with distance about 10 Kilometers from Kong Mountain
14. Leng Kit Waterfall

This Leng Kit Waterfall has very attractive view for its many sides of water for only 1 meter height. This waterfall located along O’ Num stream water line, in Pu Treng Community Forestry.
15. Leng Nim Waterfall

Leng Nim waterfall is a waterfall after Leng Kit waterfall, it is located in same stream in the forest community of Pu Treng village and is about 20 kilometers from Pu Treng village. General features of the waterfall:

- Waterfall is 5 meters in high
- Waterfall’s width is 4 meters
- Pool width is 10 meters
- The basin is 2 to 3 deeps in both dry and rainy seasons
- There is a rock bottom for guests to hang out and visiting.
16. Leng Ngal waterfall

Leng Ngal waterfall is a waterfall located in the forest community of Pu Treng village. It is beautiful for tourists to visit. General features of the waterfall:

- The waterfall is about 4 meters high
- Waterfall width 5 meters in the dry season and more than 10 meters in the rainy season
- Pool width is about 12 meters
- The basin is 1-2 meters in season
- Rock and bamboo will allow guests to hang out.
17. Leng Kol waterfall

The Leng Kol waterfall is an attractive and there is a large pool for tourists to swim. It is connected to underwater of O’Tung and Chrey Thom waterfall in the forest community of Pu Treng village, about 20 km from Pu Treng village. General features of the waterfall:

- The falls are about 5 meters high
- The width of the pool area is about 12 meters
- Basin depths of 2 - 4 m depending on seasons
- Stones, trees and vines allow guests to hang out.
18. **Leng Peal waterfall**

The Leang Peal water is split in two waterfalls, with a big boulder in the middle that causes two separate streams. This waterfall is in Pu Treng community forestry, about 20 km from Pu Treng village. General features of the waterfall:

- The waterfall is about 6 meters in height
- The width of the waterfall is divided into sections about 20 meters, each waterfall is only about 4 meters. In the rainy season the two streams meet one another.
- The water falls on the rock and we cannot see the reservoir. It runs along the stream
- There are rocks on the winter for guests to enjoy.
3.5 Type of forests

For the forest cover in Phnom Namlea Wildlife Sanctuary and the biodiversity corridor riches of semi-evergreen forest, according to land use survey 2016 of JICA, there are agricultural land, grasslands, water sources and forest cover. According to the data of the Ministry of Environment has classified forest types as deciduous forest, raining forest, natural reforestation, mixed forest, bamboo and green forest. However, a large areas of forest cover are also threatened by economic land concessions, social land concessions and plantations of people along the border. Forests in this area include, Chheuteal (Dipterocarpus), Trach (Dipterocarpus intricatus Dyer), Koki (Hopea), Sra-lau (Lagerstroemia calyculata Kurz), Thnong (Pterocarpus macrocarpus Kurz), Chhlik (Terminalia tomentosa), Tbeng (Dipterocarpus obtusifolius), Raing (Barringtonia), Pring (Jambolan Plum, Java Plum) and wild mango…etc. Endangered species are including Kra nhoung (Ibergia cochinchinensis Pierre), Beng (Afzelia xylocarpa), Neang nuon (Dalbergia bariensis Pierre) and Thnong (Pterocarpus macrocarpus Kurz).

- The remaining type of tree are: Chheuteal (Dipterocarpus), Trach (Dipterocarpus intricatus Dyer), Koki (Hopea), Sra-lau (Lagerstroemia calyculata Kurz), Thnong (Pterocarpus macrocarpus Kurz), Chhlik (Terminalia tomentosa), Raing (Barringtonia), Pring (Jambolan Plum, Java Plum), wild mango and Tla-an Ning.

- The Endangered speies are: Kra nhoung (Ibergia cochinchinensis Pierre), Beng (Afzelia xylocarpa), Neang nuon (Dalbergia bariensis Pierre) and Thnong (Pterocarpus macrocarpus Kurz).
a) **Evergreen Forest:** In the areas of Phnom Namlea, there is almost no evergreen forest. The type of evergreen forest that communities and authorities refer to as evergreen forest is the raining forest along the O’Pol and O’Pla-ay. The site is located in the draft collaborative management area in between Pu Treng and Pu Chop Community Forestry is considered as biodiversity conservation area. Potentially, the area is full of evergreen forest, with dense forest and large trees. Especially in the area, there are many beers which special non-time forest products for the community to extract.
b) **Semi Evergreen Forest**: There are many semi evergreen forests such as Community Forestry in Pu Les village, corridor conservation area, and in the Phnom Namlea Wildlife Sanctuary. Those forests are protected by the community, local authority, Ministry of Environment and Ministry of Agriculture. This type of forest is when we go in, it is dark and difficult to see the sunlight. The trees are big and small, close-knit and dense which suitable for living of animals.
c) Deciduous Forest: This type of forest is a forest land area that is used by the community for shifting cultivation farming, actual plantations and the remained area from the concession company. These forests are located in the biodiversity corridor conservation area, Phnom Namlea Wildlife Sanctuary and in the community forestry for a daily use of community.
d) **Bamboo Forest**: Due to the area of the O’Pla-ay waterfall, it is surrounded by biodiversity conservation areas, thus making the area rich in bamboo. There are so many kinds of bamboo species, we don’t know in details. It is a good land for growing bamboo. Bamboo forest is abundant in many areas, and from our observation that near O’Pla-ay and O’Pol, where are sufficient water sources and constant wetlands.
a) **Type of wildlife:** Wildlife species present in the forest include wild boar, mouse deer, gibbon, civet, hornbill, jungle fowl, guinea fowl, mountain goat, deer, long-tailed macaque monkey, owl, Porcupine, otter, cheetah, python, black bear, black-shanked douc, red snake, hare, peacock, etc.

b) **Wildlife Habitat:** The habitat of animals seen by many villagers in the biodiversity conservation corridor up to the boundaries of Pu Les and Pu Treng Community Forestry, along the O’Pla-ay and economic land concession of Mega First company. The reason why animals prefer to live there is because the area is rich in large ponds and streams such as Trapeang Lach, Trapeang Vell, Trapeang Pich Pong, Trapeang Trak, Trapeang Chri, Trapeang Koes, Trapeang Lor, and Trapeang Kaeng, and semi-evergreen forests, including the main streams (O’Pha-ay and O’Pol). They used to be housed in Phnom Namlea Wildlife Sanctuary, however, with the disruption of logging through economic land concessions, social land concessions, and plantation farming at the border.

c) **Moving Area:** The present animal site is between O’Pla-ay and O’Pol, within the biodiversity conservation corridor. The animals move in and out between the corridor and Phnom Namlea Wildlife Sanctuary through O’Pla-ay and O’Pol.

d) **Living Area:** Most of the animals live in the Biodiversity Conservation Corridor. They are travels to Phnom Namlea Wildlife Sanctuary, Pu Les community forestry, and the
areas of Mega First Plantation (Cambodia) Ltd. There are species such as rose deer, barking deer, wild boar, gaur, monkey, jungle fowl, mouse deer, and civet etc. The track of animal footprints is included wild boar, jungle fowl, monkey, rose deer, deer etc.
The map shows the co-located animal areas.
3.7 Natural Resources and Non-Timber Forest Products Sites

A. Type of NTFPs

Community is extracting NTFPs along the local steams. Most of NTFPs are included:

- At O’Taoy, Krong Yorng, Tam Korn, and Kbal O’Toy: There are Leap leaves, Chong Dambong, Chong Ksae and other species including beer, fruit of forest product (Kuy-Willughbeia edulis and Pa-aev prey fruit-Rambai Lutqua)
- At O’Katput: There are leap leaves, Ra Taunh, different type of rattan, Bamboo, Bamboo Shoot, and beer.
- At O’Ta Taunh: There are Resin, Rattan, beer, fish, and mashroom.
- At O’Pol: There are Leap leaves, Resin, Rattan, beer, fruit of forest product (Kuy, Jambolan Plum, Wild mango tree).
- O’Pla-ay: Traditional medicine, beer, rattan, mashroom, and bamboo.
B. NTFPs Extracting

There are 3 types of NTFPs are mostly extracted by community people, those are Peap leaves, Ra Taunh and rattan which we can find it at O’Katput, O’Taoy, O’Pol and Tam Korn. Cham village (Toul Svay) is the most extracting places for community. Peap leaves is a concern products for extracting while Cham villagers clearing land for housing and setting up the village.

There are 7 sites of NTFPs with total land size is 3384 hectare for two communities (Dakdam and Bousra).

<table>
<thead>
<tr>
<th>No</th>
<th>Location</th>
<th>Type of NTF</th>
<th>Hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>O’Ra Taunh, O’Youpon, O’Kul and O’Phoeung Ngaey</td>
<td>Peap leaves, rattan, Ra Taunh, Dambong, bamboo, Kuy, resin</td>
<td>263</td>
</tr>
<tr>
<td>2</td>
<td>O’Pol, O’Toy, and O’Koeuch Tay</td>
<td>Peap leaves, resin, rattan, beer, fruit of forest products</td>
<td>1065</td>
</tr>
<tr>
<td>3</td>
<td>O’Plaey, O’Touch, O’Tol, and Pu Les community forestry</td>
<td>Beer, Kuy, traditional medicine, mushroom, bamboo</td>
<td>204</td>
</tr>
<tr>
<td>4</td>
<td>O’Pol, O’Plaey, O’Boum, O’Trot</td>
<td>Beer, Kuy, traditional medicine, rattan, wild vegetable</td>
<td>664</td>
</tr>
<tr>
<td>5</td>
<td>Pu Treng community forestry</td>
<td>Rattan, Luck flower, fish, and beer</td>
<td>769</td>
</tr>
<tr>
<td>6</td>
<td>In between Pu Treng and Pu Les community forestry</td>
<td>Saom rattan, beer, mushroom, Pa-aev prey fruit-Rambai Lutqua, Passion Flower, Kuy</td>
<td>137</td>
</tr>
<tr>
<td>7</td>
<td>In between Pu Treng and Pu Les community forestry</td>
<td>Rattan, bamboo, mushroom</td>
<td>282</td>
</tr>
</tbody>
</table>

| Total | 3384 |

- **NTFPs extracting of Pu Luk community**: This community extracting the NTFPs which including Peap leaves, rattan, Ra Taunh, Dambong, bamboo and Kuy etc. The extracting size is 263 hectares, located at O’Youpon, O’Phoeung Ngaey and O’Ra Taunh.

- **NTFPs extracting of Lam Mes community**: Peap leaves is the most extracting NTFPs products of La Mes community. The extracting size is 1065 hectares, located at O’Chong Pol, O’Toy, the grave forest O’Koeuch Tay, and waterfall Laet Haurt, Pang, O’Pol.

- **NTFTPs extracting of Pu Treng community**: The extracting of NTFPs of Pu Treng are including beer, Kuy fruit, traditional medicine, mushroom, and bamboo. The extracting size is 204 hectares, located at O’Plaey, O’Touch, O’Tol, and Pu Les community forestry.
Moreover, in between O’Pol and O’Plaey, O’Boum, O’Trot are the extracting sites such as beer, Kuy fruit, traditional medicine, rattan, wild vegetable, on the size of 664 hectares.

Photos of Non-Timber Forest Products
Map showing the NTFPs harvesting in the collaborative management sites
3.8 The type of land uses

In the two communes of Phnom Namlea Wildlife Sanctuary, Dakdam and Bousra commune practicing the traditional way of land use such as shifting cultivation, farm land, old villages land, abstinence forest, burial forest, and the where no longer uses. The land uses type are functions as below:

a. Old villages land:

Old villages land is the habitat land being used since ancestors, where Indigenous People recognized as traditional believe sites. Recently, Indigenous People who living the in the old village uses this land sites for farming. There are 7 old villages with 775 hectares size shown as old villages in the map. They are Pu Proeung, Pu Chry, Pu Chraeng, Krong Yorn and Lam Mes.

Lum Boek old village size of 266 hectares (Lam Mes and Pu Luk), where located in the land concession of Mega First Plantation (Cambodia) Ltd, was verified by community in 2018. Another site with 1623.54 hectares of old village of Lam Mes and Pu Luk (Bousra commune) was verified by community in 2017. The total size is 1889.54 hectares of the two sites of old villages are in the Mega First company.
b. **Non-use of old village land:**

This is the land where no longer use since antiquity, due to a history of serious death. People believe that when there is a serious death, it will be unlucky and terrible to others, therefore, Indigenous People will give up such of village land and moving to new place to setting up a new village. There is a non-use of old villages, called O’Choeung Trom with 41 hectares size shown in the map.

c. **Shifting cultivation farming land:**

Indigenous People (Bunorng) in the two communes’ experiences in shifting cultivation farming following their ancestors. The shifting cultivation is for the traditional plantation such as rice, corn, banana etc. They are shifting in between 6 to 8 years and then returned to the old farm. Sometime, they wait until a big grow of trees in the old farm. According to the community identification in the map, there are 3 shifting cultivation farm with along the corridor sites of the O’Pol in the Pu Treng community forestry.

In the 718 hectares size of land concession of Mega First Plantation (Cambodia) Ltd. The shifting cultivation land of Pu Les village which were verified by community in 2017, there are 2 land sites with 626.76 hectares are belonging to Mega First land Concession Company.
d. The actual farming land:

People in the two communes, regularly farm in the dry season and raining. In the map, there are two sites with 1198.92 hectares of actual farming land is located in the Mega First Plantation (Cambodia) Ltd. The actual farming land is uses for:

- In the dry season: coffee, pepper, cassava or sweet potato, pineapple, cashews, passion and Plukenetia. Mostly, they are started in April and some of them can be harvested in the end of the year.
- In the raining season: corn, banana, bean, sugar can, rice, and multi-vegetables. They are started in June onward.
e. The Abstinence Forest Land:

This is kind of spiritual forest or the forest land sites which worship of the Indigenous People (Bunorng). There are 5 burial forest lands with 590 hectares shown in the map including O’Rala, O’Trum, Veal Loo Kach, Phnom Yoeuk Yark, Yoeuk Yark sites closed to Pu Treng Community Forestry.

There is one spiritual forest land with 194.92 hectares in Pu Les village was verified in 2017 by community people, which is in the land concession of Mega First Plantation (Cambodia) Ltd.
f. The Burial Forest Land:

The kind of forest land for abstinence of the Indigenous People (Bunorng). In the map where community recorded, abstinence forest land is outside the Mega First Company. The total size of abstinence forest land is 76.57 hectares with 4 sites including Krong Yorn, O’Kun, O’Tol, O’Choeung Trum, and other 2 sites is nearby Pu Treng community forestry.

There is one site of abstinence forest land in Pu Les village which verified by community in 2017 as located in the land concession of Mega First Plantation (Cambodia) Ltd. In 2018, community found 6 abstinence forest land including Yov Vay, York Chill, O’Choeung Kor 1, Koeuk Tay, O’Choeung Kor 2, and O’Peal which is located in the Mega First Plantation (Cambodia) Ltd with total size of 142.77 hectares.
Map showing the land use collaborative management of community
3.9 The information about the location of company and type of land concession

Pointed by community and local authority, Indigenous People is facing land dispute issues of one case with Economic Land Concession of the Mega Frist Plantation (Cambodia) Ltd and two cases with Social Land Concession granted by Cham minority.

Comparing and verifying on the affected land and natural resource cases between community in the 5 villages of Dakdam and Bousra commune with Mega First Plantation (Cambodia) Ltd, which was grated for economic land concession to invest on agriculture and industry, the area is overlapped with sustainable land use of Phnom Namlea Wildlife Sanctuary. Referring to the master plan of Mega First Plantation (Cambodia) Ltd in 2014 and the letter of Mondulkiri Governor No. 105.14/BS.MKR dated 9 September 2014 on point No.9 annex 2, the geography of Dakdam and Bousra commune, Ou Reang district, Mondulkiri province is size on 9477 hectares. The master plan of Mega First Plantation (Cambodia) Ltd in 2014, descript as below:

The total size of economic land concession (ELC) is 9477 hectares. The granted sized was deducted 259.51 hectares to avoid the overlapped area with community and land sites along the border of Cambodia–Vietnam and 835.13 hectares for the community forestry (Cambodia–Vietnam) and 19.6 hectares for police office.
Map on the overlapped community land with Mega First Company
Later, in 2017, the master plan of Mega First Company described on the following information:

With referring to the state land map, registered at Ministry of Agriculture, Forestry and Fisheries (MAFF) in the purpose of granting the Economic Land Concession of Mega First Plantation (Cambodia) Ltd on 17 March 2017: Mondulkiri province, Ou Reang district, Dakdam commune, Pu Les village No.11030102, the total UTM size is 9,745.39 hectares, which divided into:

- Registering economic land concession is 6,428.39 hectares
- Related community land is 1,284.43 hectares (housing/community farm is 1,274.65 hectares and abstinence forest is 9.78 hectares)
- Reserving for bordering land is 259.51 hectares
- Reserving for local stream 1,772.47 hectares (see annex 3 of the state land map registered in 2017)
Photos took by community, described about the state land map registered by MAFF
However, with following to the research study, the validation workshop and the land use planning map prepared by community in February 2017, we found that 3308.16 hectares of community land affected by Mega First Plantation (Cambodia) Ltd, which detail as below:

- Old villages land = 1,623.54 hectares
- Actual farming land = 888.4 hectares
- Land reserving for shifting cultivation farming = 612.62 hectares
- Spiritual forest land = 182.83 hectares
- Abstinence forest land = 0.77 hectares
Map showing the plot of community land use in the Mega First company
a. Rubber Economics Land Concession

There is 5345 hectares size of land granted to invest on rubber plantation as economic land concession (Covyphama Co, Ltd in MAFF statistic_08.06.2012.pdf; Covyphama _21.06.2011.pdf). This company is called Socfin. Bousra community informed that the company has changed the name for many times and lastly, they still called Socfin Rubber Company. (Source: research statistics of Open Development Cambodia).
b. Social Land Concession in Cham Veal Yorng village

There are 5 to 6 families of Islamic people who have been living in the social land concession from 2010 to 2011. Recently, there are 163 families. The concession, with an area of 3,000 hectares, giving 600 hectares for Bunorng indigenous community from La Mes, Pu Luk, Krang Tes… etc. however, there are no indigenous people living in the area yet. Living of Cham people, clearing the forest to farm at between O’Rat, O’Naol, O’Touy, and Veal Yoeung in Bousra commune, Pich Chreada district and between the economic land concession of Barang Rubber Plantation and Socfin Company in the Phnom Namlea Wildlife Sanctuary. Below is a picture of Cham village:
c. Cham Toul Svay village

Cham people have migrated from other provinces to live in Toul Svay village since 2014. There were about 10 families came since the first migration and up to now there are about 200 to 300 families and they have more than 2,000 hectares of land. Cham and Khmer people in the area are clearing the forests for farming with no bordering, which is affecting the forests, biodiversity and the wildlife sanctuary etc. Previously, there was a dense forest, but now it is a wilderness. The location is in Dakdam commune, Ou Reang district, and closed to border of Cambodia and Vietnam of Phnom Namlea Wildlife Sanctuary. Below is a picture of Cham village: