The current status of Prey Lang

3rd monitoring report
with information from PLCN patrolling

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THE CURRENT STATUS OF PREY LANG

Monitoring information from PLCN patrolling for the periods:

    i.   **July – November 2015**

    ii.   **February – November 2015**

On behalf of: Prey Lang Community Network (PLCN)

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Contents

Part One
Theoretical Framework

1. Introduction

Prey Lang Forest complex is situated in the northern part of Cambodia and spans 500.000 ha in the Cambodian lowlands, stretching four provinces - Kratie, Stung Treng, Kampong Thom and Preah Vihear. It is the largest remaining evergreen forest in Cambodia, and possibly all of Indochina, of a high biological value. Prey Lang supports seven distinct forest ecosystems, including swamp forests as well as evergreen, semi-evergreen and deciduous forests. Prey Lang has a high density of threatened timber trees and numerous other endangered plants and animal species [1]. Prey Lang is also a major watershed feeding into the Mekong River and Tonle Sap Lake supporting the fisheries, which provide much of the protein-intake in the country. The forest is of high importance to the local economies and households, as well as for the broader Cambodian public. More than 250,000 mainly indigenous people live in 340 villages in Prey Lang or within 10 kilometers from it. The forest is an irreplaceable part of the communities' culture and spirituality and they depend on it for their survival. Sustainable forest-related activities such as resin tapping, collecting food products and collecting wood for house construction are important for the every-day life of the local communities.

Despite the unique value of Prey Lang, illegal logging and forest destruction has intensified over the past decades. According to Open Development Cambodia, forests covered 72% of the country's territory in 1970, while in 2014 the forest cover was reduced to 48%, including plantations [2]. Forest loss in Cambodia between 2001 and 2014 accelerated at a faster rate than in any other country in the world, according to new global figures based on U.S. satellite data from the World Resources Institute and University of Maryland (Fig.1.1) [3] [4]. Over the last 20 years, land grabbing has emerged as a major threat to the forest and rural livelihoods in the area (see 5.1). Moreover, conflicts have emerged between the affected local communities and the authorities as well as within communities between local citizens engaged in forest protection and citizens involved in illegal logging. Prey Lang is an important ecological and economic resource and if it is managed in a sustainable way, it will be of considerable benefit to the country and contribute to national development.

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[1] Hayes et. al. 2015: Biodiversity assessment of Prey Lang

[2] Open Development Cambodia 2014: Forest Cover

[3] University of Maryland: Global forest Change

[4] Zsombor P. 2015: Cambodia Sees World's Fastest Acceleration of Forest Loss. Cambodia Daily.

1.1   Pray Lang Community Network (PLCN)

In the early 2000's, communities living within the Prey Lang area started advocating for the protection of their ancestral forest lands as a response to large scale illegal logging and land grabbing – activities that destroy the forest and affect the peoples' access to natural resources. Prey Lang Community Network (PLCN), as the group of communities is called, constitutes of villagers from the four provinces, united to fight for preservation of the forest. Through the years, PLCN became a well-organised group of indigenous environmental advocates, increasingly recognised both on the national and international level. Under their slogan "It's our forest too!", PLCN uses various forms of peaceful protest and advocacy to raise awareness about Prey Lang's preservation. They organise peaceful marches, demonstrations, petition writing and forest patrols to catch the loggers red-handed and cease their illegal activities.

Although PLCN constitutes of members mostly living in rural areas, engaged in traditional activities of rice farming and subsistence agriculture, the work of the organisation involves use of new technologies and modern-day ways of communication. A smartphone application has been developed, making it easy for the local patrols to geo-reference, document, and upload information. Thus, during the forest patrols, the villagers collect and share information about illegal activities and forest resources with the use of the specially designed smartphone application. Information collected this way is being automatically sent to a database, allowing a structured and systematised approach to data collection and analysis. Additionally, PLCN is active in social media, where they share news about the organisation's recent activities [5]. During the past months, PLCN appeared in the headlines of not only Cambodian, but also a number of foreign newspapers and magazines. These included publications in the UK [6], the US [7] [8], Sweden [9] and other countries.

The hard work and commitment of PLCN were also honoured with the prestigious Equator Prize, awarded by the United Nations Development Program. The Equator initiative seeks to award local sustainable development solutions, developed by indigenous communities. Apart from the financial prize, two representatives of PLCN were invited to attend the Sustainable Innovation Forum 2015, held alongside COP21 in Paris, where they could share their experiences with the international public and media.[10]

In spite of increased popularity, PLCN still struggles with the same problems it used to 15 years ago. Deforestation still remains on a large scale and the area is not under any form of legal protection

1.2   Objectives

This is the third monitoring report and is directed to the Prey Lang communities, the local monitors and the broader Cambodian public. It presents an analysis of the data that has been collected in Prey Lang by local PLCN monitors. The data is collected with a smartphone application. 35 smartphones, all equipped with a purposely-designed application, have been distributed to PLCN members living in the four aforementioned provinces of Prey Lang. The PLCN monitors were given the smartphones on the 4th of February 2015 after receiving training on the use of the application.

The overall aim with the present report is to analyse data collected on patrols carried out between the 22nd of July and the 30th of November 2015 and to summarise the main findings of the database in 2015.

The purpose of this third monitoring report is to:

1. Show PLCN, local monitors and the broader Cambodian public the results of the data collection.
2. Show how the smartphone application can support and strengthen the work that PLCN is already doing in Prey Lang.

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[5]Social media: Facebook page, Twitter
[6]Kronholm A. 2015: Cambodia forest communities confront illegal loggers as authorities look away. The Guardian.
[7]Belanger L. 2015: Meet the real climate warriors going to Paris. Huffington Post.
[8]Katz, J. M. 2015: Inside the Climate Conference's Indigenous Hut.
[9]Kronholm A. 2015: Kambodja: Högt spel när skogar skövlas. Kehityslehti
[10]Equator Prize: Awarding ceremony, Protecting forests video
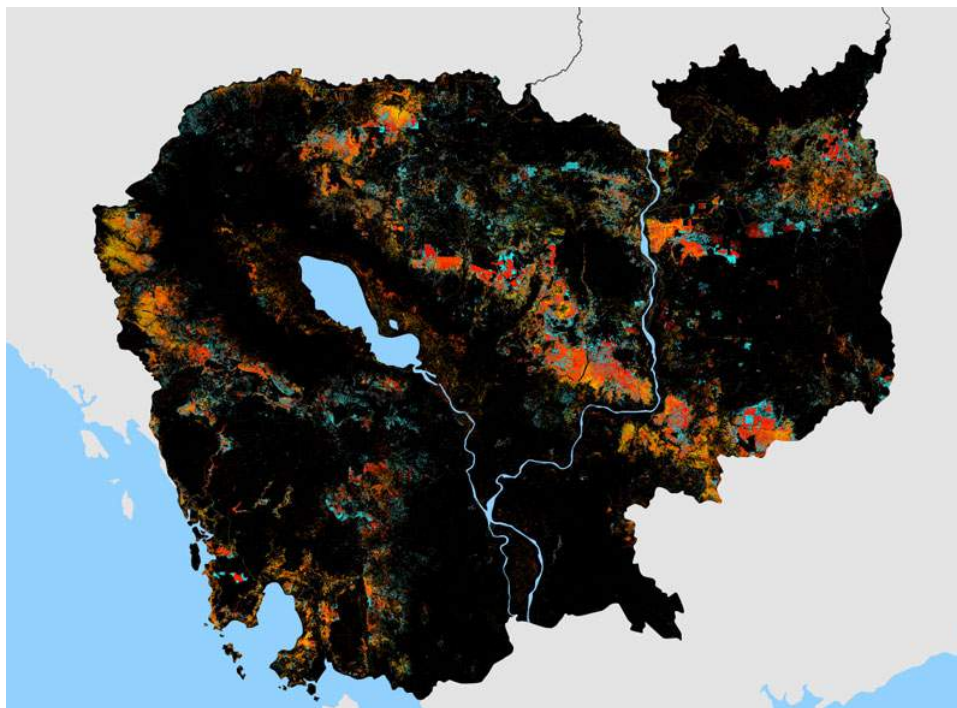
Figure 1.1: Tree cover loss in Cambodia. Blue spots show areas of tree cover loss in 2014. Yellow, orange and red spots show areas in which tree cover was lost between 2000 and 2013 (University of Maryland, 2015).3

3. To inform the Cambodian government, the broader Cambodian public and communities in Prey Lang about the current status of Prey Lang and the threats it faces, to help inform future management decisions.

Over the coming years, as more data is gathered, we intend to publish regular reports based on the information collected by PLCN, to create a public record of the current status of Prey Lang, regarding biodiversity, natural resources, and illegal activities

1.3 Acknowledgments

We (PLCN) would like to express our sincere thanks to the monitors who have collected data in Prey Lang forest in order to make the present report. We would also like to thank all project partners and donors for their support in order to help us in our work and effort to protect the remaining forest of Prey Lang.

Figure 1.2: PLCN members during training.

2. Methodology

2.1 Community based monitoring

Despite previous work done by PLCN on patrolling Prey Lang forest, PLCN has identified a need for more systematic data collection to give a more complete picture of the effects of the pressures on the forest regarding both the biodiversity and the local livelihoods. Therefore they have been provided with knowledge and ICT tools to undertake community based monitoring of Prey Lang. The smartphone application will ensure that systematic and well-documented monitoring is conducted on these issues (Fig 2.1).

An important parameter has been to ensure long-term ownership that will support sustainable monitoring and patrolling independent of donor funding. Therefore emphasis has been on participation of community monitors and the building of their capacity. The compilation of data will take place on community forest patrols as well as through individual day-to-day collection.

Figure 2.1: Logging monitoring with the use of new technologies.

2.2 The Prey Lang smartphone application

35 monitors from PLCN compile data with a smartphone application. The data collection officially began the 4th of February 2015 and it is expected to be developed and expanded in the coming

years. The smartphone application (Fig. 2.2) is able to register three main variables - "Activities", "Resources" and "Reporting" - with further sub-categories. Accordingly:

- The variable Activities refers to extraction activities happening in the Prey Lang area, such as logging activities, illegal hunting and illegal fishing.
- The variable Resources refers to natural or cultural resources and sites found in the Prey Lang area. This includes resin trees, NTFPs, and high value timber species threatened by logging. Additionally, information on wildlife is also collected on an ad-hoc basis.
- The variable Reporting refers to any interaction with authorities regarding Prey Lang. Furthermore, this attribute is used when monitors submit reports and complaints to local authorities and forest administrations.

The collected data is uploaded to a database and handled by database managers. GPS-coordinates and photos substantiate all data. Moreover, audio files are frequently added to the data point in order to attach important information to the collected data.

We offer to provide documentation to anyone who wishes to investigate the correctness of our claims, but reserve the right to protect the identities of individual informants and specific locations of important natural resources.

Figure 2.2: The PL app starting screen.

II
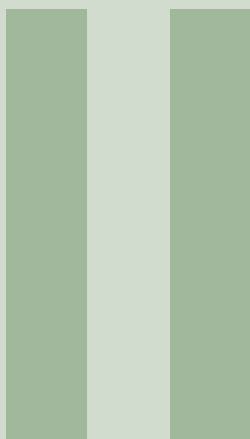
Part Two
Results

3. Results

The present report contains the data collected with the Prey Lang smartphone application by PLCN members from all four provinces – Kratie, Stung Treng, Preah Vihear and Kampong Thom. Taking into account the end of the year 2015 and the release of a new version of the app, this report will show:

1. Findings of the last reporting period **22nd of July – 30th of November** and
2. **Summarized general findings**, from the first version of the app (February – end of November), including previously unreported data from the two first reporting periods.

There are three types of forest patrols (Fig. 3.1), during which the information is collected. The first type is big patrols, happening a few times each year and involving numerous groups of people, from 30 to a few hundred patrollers. These big, organized patrols usually last between a few days and a week, and cover vast areas of the forest by motorbike. The second type of forest patrol is more spontaneous. It happens when villagers overhear sounds of nearby logging during NTFP collection - for instance resin tapping. Subsequently other patrollers are informed and the group musters up to intercept the logging. The last type of patrol, which is the most rare, happens when scientists, students or NGO workers perform research projects in the forest. These situations also often include data collection with the use of the Prey Lang application.

Figure 3.1: PLCN members while patrolling.

3.1 Reporting period 22nd July – 30th November 2015

3.1.1 General findings

Between July 22nd and November 30th 2015 the PLCN database has been enriched by 2529 new entries. Out of them, 695 were validated, resulting in a validation rate of 27.5%. Validated entries (cases) contain a picture and in some cases, an audio file documenting the event. They were subsequently analysed for the aim of this report. The number of entries uploaded differed between the provinces, and Kampong Thom province was the province with the most recorded valid entries (Fig. 3.2). The sign XX refers to other mobiles, destined mostly for testing purposes and not accounting for any specific province.
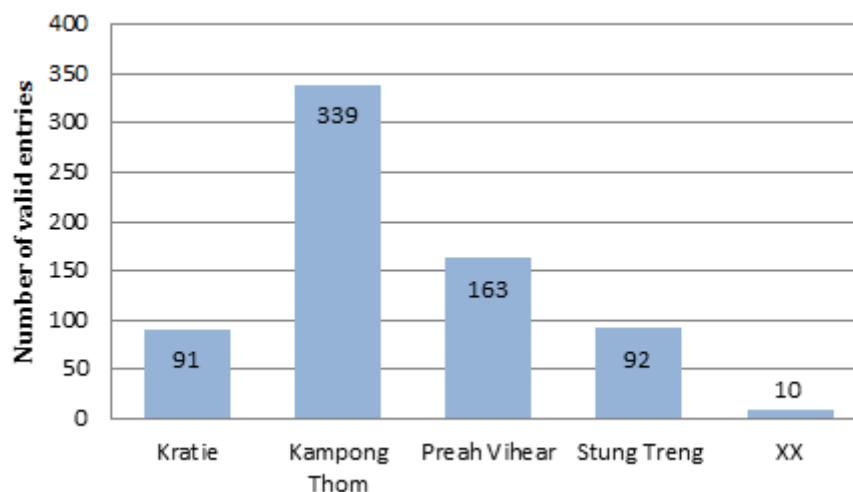

Figure 3.2: Distribution of valid entries, among the four provinces.

During the patrols, PLCN members monitor activities, resources and interactions. (Fig. 3.3). Activities generally stand for illegal actions, like logging, hunting or fishing. In this category it is also possible to report Economic Land Concessions (ELCs) and the activities performed in these areas. There were 323 cases (46%) reporting activities. The monitoring of natural resources, which resulted in 304 cases (44%), mostly focuses on resin and luxury wood trees. The category "Reporting" contains information about PLCN's interactions with authorities or companies, including submitting official reports to authorities. Only seven cases were recorded which results in 1%. The "Other" category refers to important events, which do not suit the earlier categories, for example pictures documenting patrollers during forest walks, monk marches, documents or confiscated chainsaws. 61 cases (9%) were reported in this category.
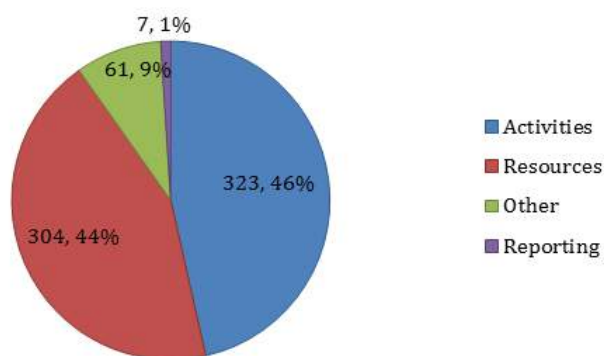

Figure 3.3: General monitoring activity.

3.1.2 Activities

Among the entries from July to December, 323 cases referred to activities. The vast majority of reported activities (98%) concerns logging, with illegal hunting (4 cases 1%), illegal fishing (1 case, 0%), and ELCs (3 cases, 1%) only rarely being documented (Fig. 3.4). The figure contains overall cases of activities, as well as the further classification of the category logging for easier understanding.
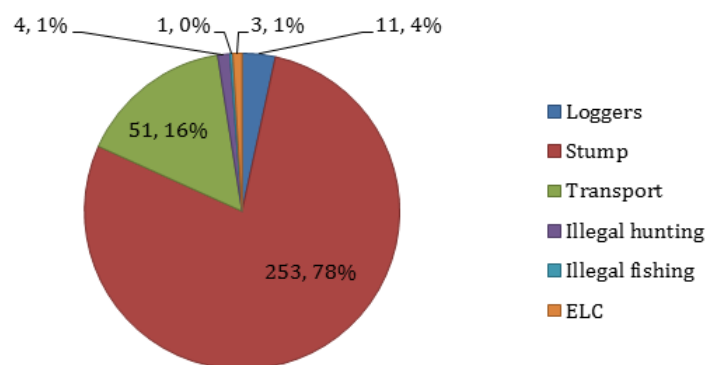
Figure 3.4: Recorded Activities.

Splitting the category logging into its sub components stump, transport and loggers, it can be understood that stump constitutes 78% and hence the majority of all recorded entries (253 cases). Transportation of timber has been documented 51 times (16%). Loggers are documented 11 times (4%) and in seven of these incidents there was some kind of interaction between the patrollers and the loggers. The few instances of reporting illegal hunting and fishing didn't catch the hunters red handed, but recorded pictures of wires and nets used to create traps for catching animals (Fig. 3.5). The category ELC documents the activities performed from Economic Land Concessions. Usually these are either large-scale clear cuts or establishing plantations of cash crops, such as rubber, sugar cane or cassava, or mining concessions.

Figure 3.5: Wires used for making animal traps.

During forest patrols the patrollers usually follow the omnipresent sounds of logging. In most cases the loggers manage to run away before the patrollers can catch them, but they often leave both the cut wood and chainsaws behind. (Fig.3.6) In these circumstances the chainsaws are being confiscated, but the wood is often impossible to transport. In case of encounter with the loggers, the patrollers check if they have logging permits. If they do not, which is usually the case, PLCN informs them about the destructive effects of intensive logging on the forest and communities and signs a contract with them, which states that the loggers will restrain from continuing the illegal activities in the future.

Figure 3.6: Reporting Stumps/Area that is missing

3.1.3 Natural Resources

Natural resources are frequently reported during the patrols, but also when patrollers are in the forest for other purposes than patrolling. Trees are the main resource documented (87%, 265 cases) followed by animals which are documented in 6% of the entries (17 cases) (Fig.3.7).
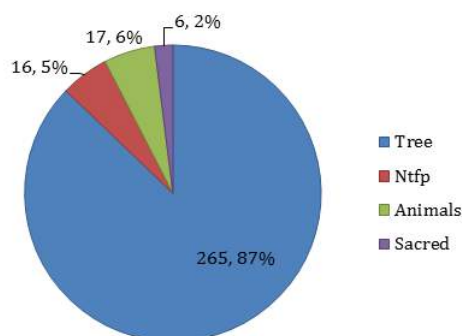
Figure 3.7: Natural Resources

Moreover, there are 16 cases (5%) of recording NTFPs , which include mostly rattan, mushrooms, chill (Fig. 3.8) and other plants that are not specified. Sacred places are documented in 2% of the entries (6 cases) and refer to burial sites, temples or sacred trees.

Figure 3.8: Reporting NTFP / Forest Chili.

Furthermore, as depicted in Fig. 3.9, the big majority of trees (62%, 157 cases) refer to current resin trees while together with the future resin trees (14%, 36 cases), and the unidentified resin trees (8%, 21 cases), they account for 214 cases (84%). The 41 remaining entries indicate other luxury trees (16%)

Figure 3.9: Trees

The most frequently mentioned luxury tree species were Doung Chem (*Heritiera sumatrana (Miq.) Kosterm. / H. javanica (Blume) Kosterm*) and Krolanh (*Dialium cochinchinense Pierre*) (F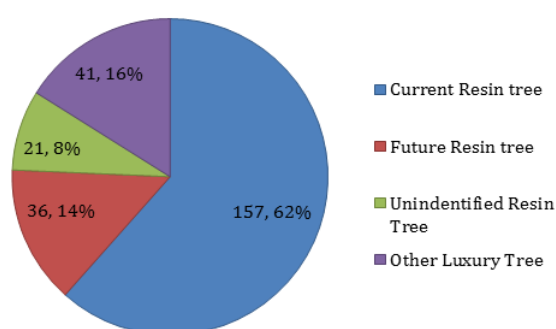ig. 3.10), which refer to tree species used for construction. The lives of many villagers depend on forest products, collected in small quantities for sale (rattan (Fig. 3.34), resin (Fig. 3.11) or for home consumption (food, medicine). Even though they often don't have formal education, they are real specialists of the forest and are able to recognize hundreds of species.

Figure 3.10: Reporting Other luxury wood / Krolanh [kh.] (*Dialium Cochinchinense*)

Figure 3.11: Reporting Current Resin tree (resin ready for collection)

3.1.4 Characteristic cases
Characteristic case 1

On 28th October 2015, during a regular forest patrol PLCN members saw five ox-carts, prepared to transport 15 m^2 of illegally cut wood from Prey Lang. The patrollers prevented the loggers from taking the wood. The event took place at the Tro Preang Yeay Morn in Kampong Thom province. The loggers were not locals, but immigrants from different regions of Cambodia, led by job opportunities in illegal wood logging and trade. (Fig 3.12, 3.13)

Ox-carts are rarely used for transportation of tree logs. As seen in the Fig. 3.14, the most commonly used vehicles are local tractors (Goh yun), (59%), followed by motorbikes (17%), ox carts (14%) and boats (6%). There were also two cases where the patrollers did not define the

Figure 3.12: Reporting Transportation with ox cart

Figure 3.13: Reporting Transportation with ox cart

means of transport (4%), while big trucks were not reported at all. This finding can be explained, as in the dense forest of Prey Lang, big roads are rare.
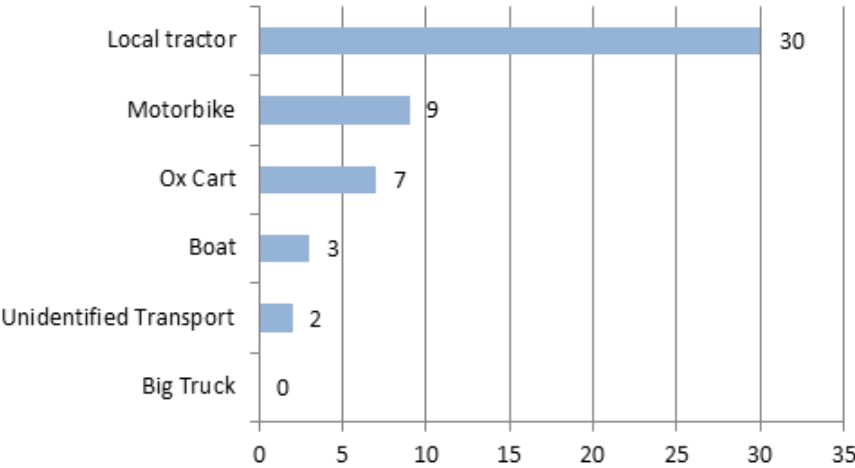

Figure 3.14: Reporting Transport

Characteristic case 2

On 13th November 2015, PLCN members noticed an illegal wood transport in the Tha La Borivat, Stung Treng province. Luxury wood was attached to the motorbikes, on which the logger carried it from the forest. As the PLCN members do not confiscate wood outside the forest, they could not prevent the loggers from taking the wood to a contracted buyer (Fig 3.15, 3.16).

Figure 3.15: Reporting Transportation with motorbike

Figure 3.16: Reporting Transportation with motorbike

Characteristic case 3

On 6th August 2015, the local representatives of PLCN met with the governor of Chay San District, Preah Vihear Province, Mr. Tong Sakheoun. The aim of the meeting was to discuss further cooperation between local authorities and the communities involved in forest protection (Fig. 3.17).

The PLCN members present at the meeting report it as "pleasant and welcoming". The district governor expressed his concern about the condition of Prey Lang and the dangers of forest destruction. He announced his support for the cause and underlined that PLCN and the authorities must cooperate more closely in future. He promised that he would help as much as he can in the fight for the communities' access to natural resources and forest preservation.

Figure 3.17: Reporting Positive interaction with the authorities

Characteristic case 4

On October 30th at 11:23, during the patrol in Kampong Thom province, in Kbal Prech Bey Area, the patrollers noticed an illegal logging site, with 20 pieces of Pdeak, a luxury wood species still quite common in Prey Lang. After a few minutes they discovered further logging sites and in half an hour they found 52 pieces of Pdeak wood scattered around the area. Illegal loggers often leave the planks of the cut wood behind, and return to take it at an appropriate time. Sometimes the planks lie undisturbed for weeks before the loggers come to collect it. Regarding the report of Stumps, 93% of the incidents (235 cases) report single stumps, while 7% (18 entries) represent entire areas that are missing (Fig. 3.18).
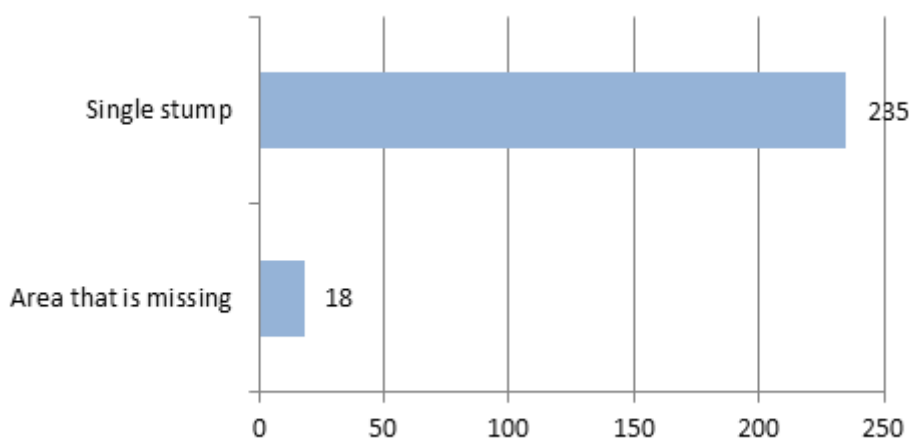
Figure 3.18: Reporting stump

Pdeak, a Khmer name for *Anisoptera Costata Korth*, from the family *Dipterocarpaceae*, is known as a second quality luxury wood species. This is the reason for its relatively high abundance in Prey Lang, compared to other luxury wood species. Still, the species is under continuous pressure from logging across its natural habitats - the evergreen and semi-evergreen lowland forests of Indo-Burma. As a result it received an "Endangered" status on the IUCN Red List of Threatened

Species. Together with Krolanh, (*Dialium cochinchinense Pierre*) [1] (Fig. 3.10) Pdeak is one of the total 13 tree species in Prey Lang listed on the IUCN's Red List[2] (Fig. 3.19).

Figure 3.19: Planks of Pdeak

Characteristic case 5

This butterfly (Fig. 3.20, the size of a human's head, was found on 25th November 2015, during an MSc thesis related forest patrol in Kampong Thom province. It was identified as an Atlas Moth (*Attacus atlas*), the second biggest species of moths in the world, with the wingspan reaching 25 cm. The butterfly amazed not only with its great size, but also with its adaptation to resemble a poisonous snake - a trick that, it turned out, at least Danish students fall for. This form of disguise, known as *Batesian mimicry*, happens when a harmless species has evolved to imitate warning signals of the dangerous species. On the upper edges of the butterfly's wings two heads of snakes in profile are visible.

Figure 3.20: Reporting Animals/Butterfly

In May 2015, the Conservation International in cooperation with the Forestry Administration of Cambodia published a Biodiversity Assessment of Prey Lang [3]. The research focused on vegetation, mammals (including a specific study of bats), birds, amphibians and reptiles. The study concluded that Prey Lang supports nationally and regionally important populations of 55 globally threatened

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[1]World Conservation Monitoring Centre. 1998: Dialium cochinchinense. The IUCN Red List of Threatened Species
[2]Ashton P. 1998: Anisoptera costata. The IUCN Red List of Threatened Species
[3]Hayes et. al. 2015: Biodiversity assessment of Prey Lang

animals. In particular it is a hugely important place for the conservation of Cambodia's birds, home to 44% of all species. Still, research on insects has not yet been done to reveal the diversity of, for example, butterfly species. There were 17 cases recording animal activity in the area of Prey Lang, few of them recording of elephant activity (Fig. 3.21).

Figure 3.21: Recording Animals/Elephant activity (feces)

Other interesting animal records include turtles (Fig. 3.22) and woolly necked storks (Fig. 3.23).

Figure 3.22: Recording Animal activity/ Asian Leaf Turtle

Figure 3.23: Woolly-necked storcks (*Ciconia episcopus*), IUCN conservation status - Vulnerable. The picture was taken during a forest patrol in Kampong Thom province.

3.2   Reporting period 4th February – 30th November 2015

This section of the report will function as an overall assessment of the entries from the beginning of the reporting period (February) until the end of the year 2015. During these 10 months a total of 7954 entries were reported, out of which 1321 cases were validated, resulting in a validation rate of 16.6%. As it can be seen in Fig. 3.24, most of the cases were recorded in Kampong Thom province (KT), followed by Kratie province (KT). Lower reporting rates were documented in Preah Vihear (PV) and Stung Treng (ST). The remaining XX code denotes smartphones that have been used mostly for testing purposes, but generated some valid entries as well.
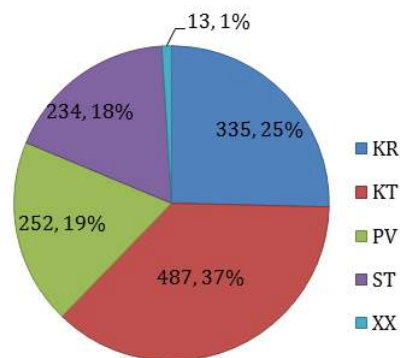

Figure 3.24: Cases recorded in each province (Feb-Dec)

The general findings of this period are summarized in Fig. 3.25 Activities were reported in 50% of the cases, while 42% were related to resources.
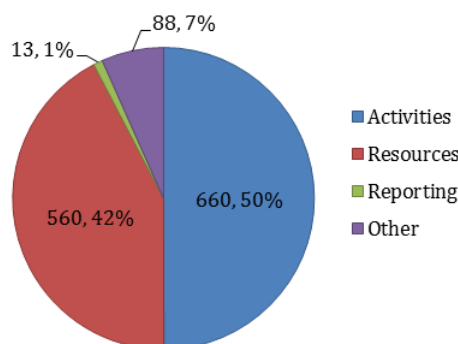

Figure 3.25: General findings (Feb – Dec)

In this least used category – Reporting - 11 out of 13 cases related to a positive interaction with the authorities, while there was one case of negative interaction with the authorities, as well as one case of interaction with business people conducting illegal logging. It is evident that under-reporting is a limitation to a proper analysis of this category. The PLCN patrollers have only received limited training on using the "reporting" function of the app, and many interactions with authorities still go undocumented. It is an objective of the coming monitoring period to remedy this. To the contrary, patrollers were more enthusiastic about reporting "Other" cases, summed up in the following Fig. 3.26

Most cases present the pictures of patrols (28) and chainsaws (17) confiscated during the patrols. The monks' march, which happened in the beginning of July, for the ordaining of the sacred trees, gained the attention of patrollers with 14 cases recorded. There were also seven cases depicting documents, usually signed with illegal loggers. The subcategory other contains 22 cases of various interests, such as, photos of workshops, land markers, student interviews etc.
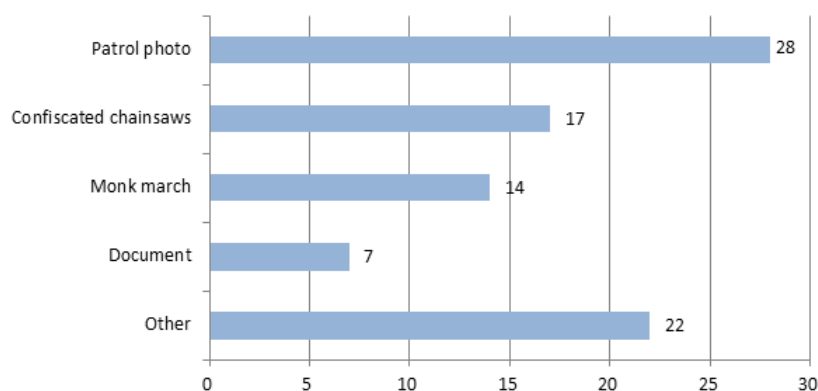
Figure 3.26: Other cases (Feb – Dec)

The findings under the category Activities are presented in Fig. 3.27 The vast majority (650 cases, 98%) were reports of logging, while there were few cases of illegal hunting (4 cases, 1%), ELCs (4 cases, 1%) and illegal fishing (2 cases, ≈ 0%). This fits with the generally held perception of the PLCN monitors that logging is the biggest issue in Prey Lang. However, it has to be emphasized that patrollers mostly focus on reporting loggers; therefore not all the signs of other illegal activities are recorded.
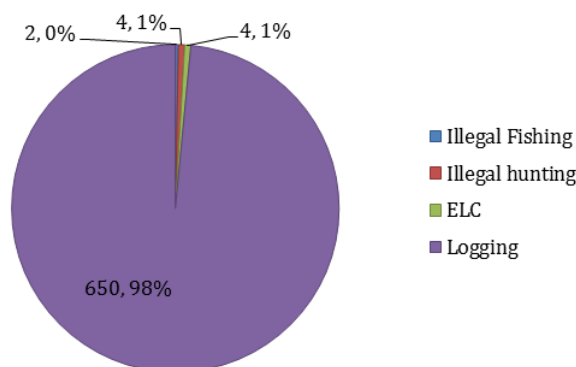

Figure 3.27: Activities recorded cases (Feb – Dec)

Furthermore, the sub-categorization of reported logging shows that the majority of submitted entries referred to stumps (480 cases, 74%), followed by transport (128 cases, 20%) and loggers (42 cases, 6%) (Fig. 3.28).
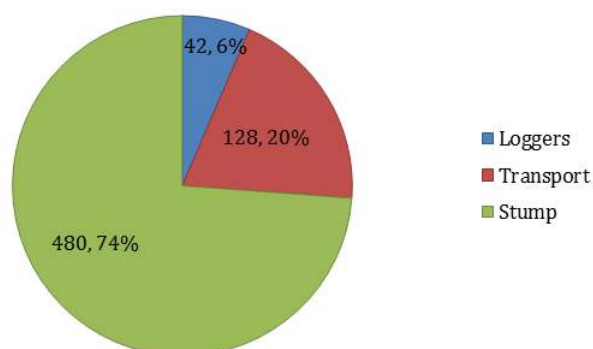

Figure 3.28: Logging recorded cases (Feb – Dec)

Single stumps are usually timber logs of high economic value, while logged areas (Fig. 3.30) predominantly indicate the establishment of plantations or cultivation of land. 362 cases of single stumps were reported (75%), while there were 118 cases reporting cleared areas (Fig. 3.29). While there are more reported cases of single stumps, cleared areas are more devastating events in relation to the overall forest ecosystem. Therefore, despite the differences in their frequency, both events contribute to the progressive forest degradation.
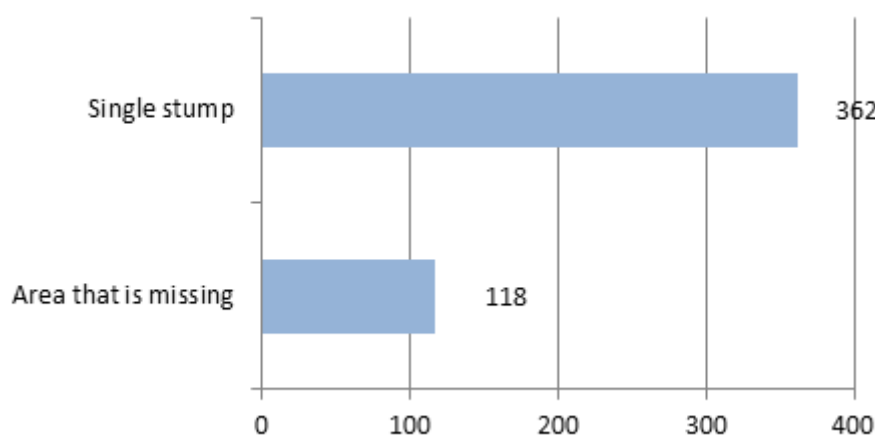
Figure 3.29: Stump recorded cases (Feb – Dec)

Figure 3.30: Patrollers reporting area that is cleared in Kratie province.

The cases that reported transport can be seen in Fig. 3.31 The predominant means for transporting timber out of the forest is the local tractor (Goh Yun) with 74 cases, followed by motorbikes that can transfer considerably smaller amounts (24 cases). Other cases include ox carts (12 cases), big trucks (9 cases), boats (7 cases) as well as two unidentified cases.

Figure 3.31: Transport recorded cases (Feb – Dec)

The second most recorded category (Fig. 3.25) was Resources with 560 cases. Specifically, as presented in Fig. 3.32, the vast majority of the reported cases referred to trees (495 cases, 88%), while smaller percentages of cases reported NTFPs (32 cases, 6%), animals (20 cases, 4%), and sacred resources (13 cases, 2%) such as temples, burial sites or sacred trees.
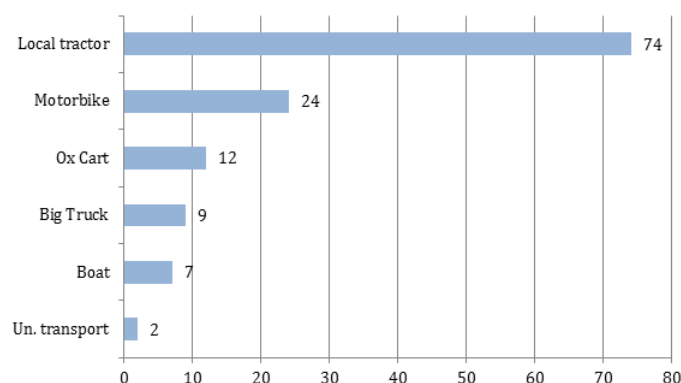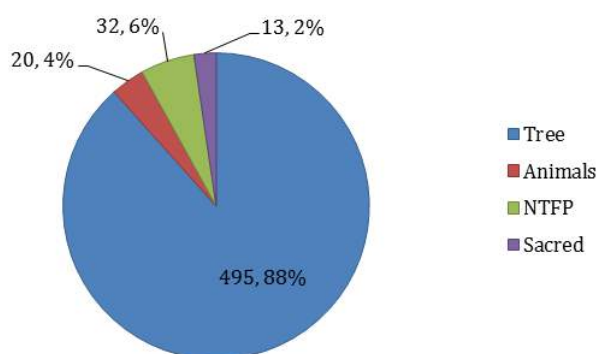

Figure 3.32: Recorded cases of Natural resources (Feb – Dec))

There have been 413 cases reporting current or future resin trees (Fig. 3.33). Many families base their main income on resin tree tapping and hence it is of major importance among the Prey Lang communities. There were considerably fewer cases reporting other luxury wood such as Doung Chem and Krolanh (54 cases), while there were some cases when patrollers did not specify the reported tree type (22 cases).
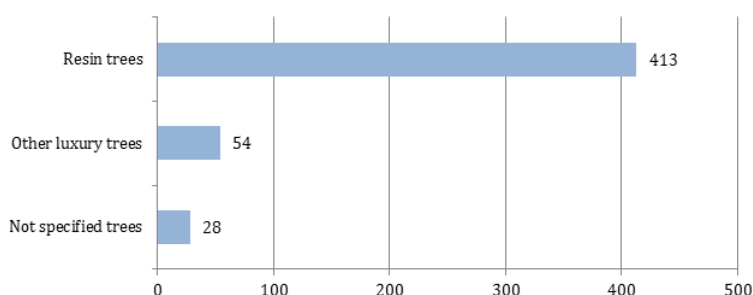
Figure 3.33: Recorded cases of Trees (Feb – Dec)

The last two categories regarding animals and NTFP were under-reported, however they shouldn't be underestimated. The most reported animal species were elephants and butterflies, while the most reported NTFPs were rattan (Fig. 3.34) and mushrooms (Fig. 3.35). The density of natural resources in Prey Lang is very high, making it very difficult to record all the resources. The

resources that the patrollers have recorded are not to be taken as an estimation of the biodiversity of Prey Lang, but as a representation of what kind of resources are important to be monitored. The patrollers lately received training and support for recording these categories and their usage of this category is expected to rise in the future. Furthermore the new version of the app is going to give them the possibility to record NTFP and animals in more detail.

Figure 3.34: Patrollers reporting Rattan

Figure 3.35: Patrollers reporting mushrooms

3.3 Preliminary map of PLCN's monitoring activity

Figure 18 is a visual representation of what has been monitored in Prey Long between February and December 2015. The map is called "preliminary", as it only consists of 222 validated entries with GPS coordinates. The entries were categorised as follows:

1. Natural resources: includes resin trees, luxury trees, other trees, NTFPs and animals
2. Illegal logging activities: includes logging, chainsaws, stumps and clear cut areas
3. Transportation of wood: includes ox cart, tractor, motorbike and local tractors (goh yun)
4. ELC activities: includes loggers, transportation of wood and clear cut area from an ELC
5. Illegal hunting
6. Sacred sites

The following entries were excluded from the map: patrol photos (11), blanks (3), national workshop in Prey Long (1), documents (1), interview (1), positive interaction with authorities (1) and monks march (1).
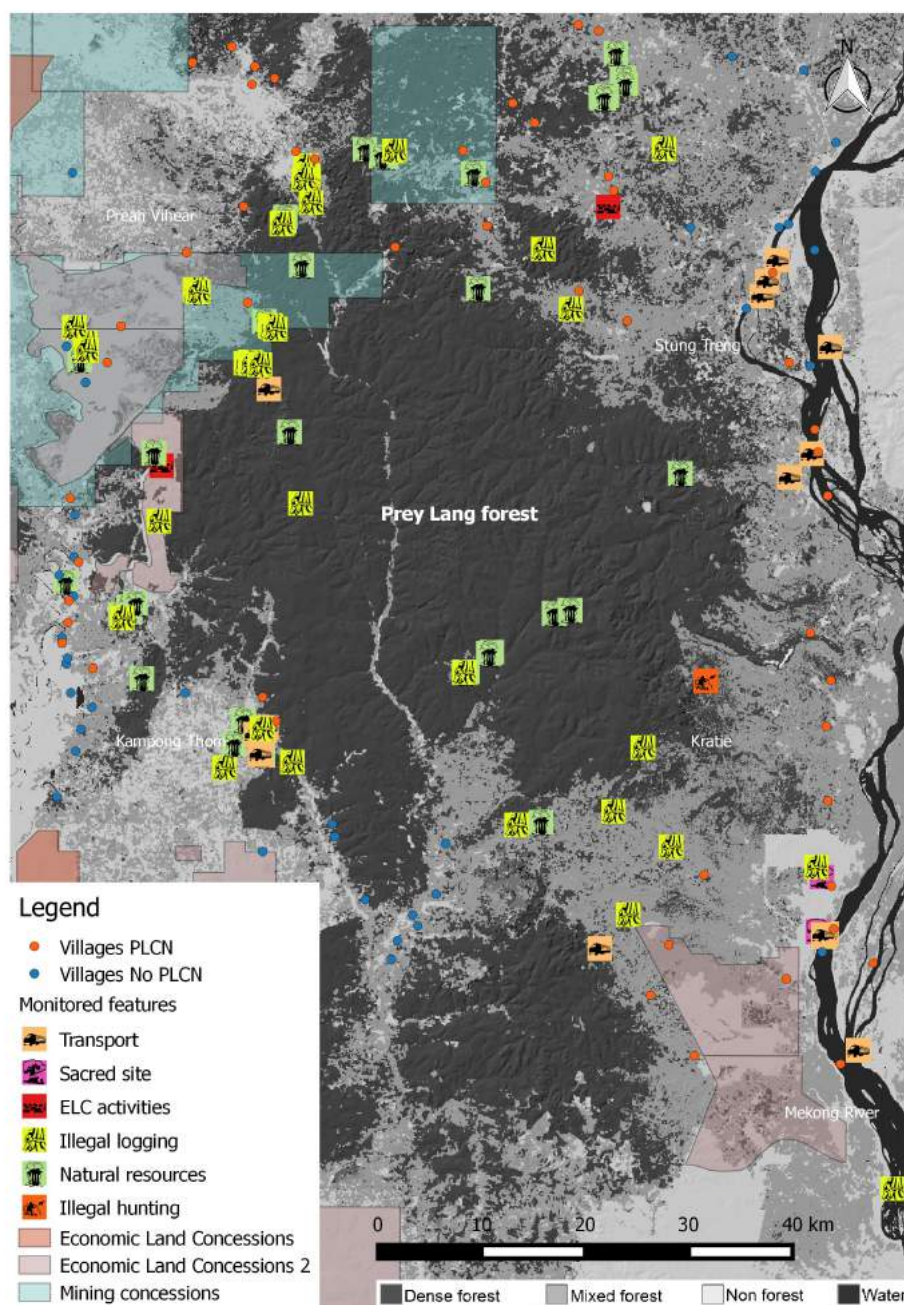
Figure 3.36: Map of Prey Lang with the monitored activities. The map is a spatial representation of the georeferenced monitored data. Forest cover map modified from Open Development Cambodia (ODC, 2014). Economic land concessions and mining licenses data was taken from ODC. Map generated using QGIS Brighton 2.6.0

The map shows that most of the entries were recorded in the periphery of the dense forest, not too far from populated areas. The majority of records were resin trees and other natural resources (100 entries), spread along the edge of the dense forest and few located within. The next most recorded category was single stumps (62 entries) and other activities related to illegal logging (22 entries), also spread around the territory. There were 30 wood transportation records, most of them along the Mekong River and in Kampong Thom; few observations were recorded in Preah Vihear (3). The cluster of transportation related observations in Kampong Thom couldn't be distinguished in the map; however, there were 11 observations of illegally-cut log transportation in this area. Along the Mekong River and in Kampong Thom the road infrastructure is better than in other areas of Prey Long. As denoted in Forest Trends (2015), the wood transportation from ELCs often

masquerades illegally-cut log transportation. This suggests that new road construction can trigger further illegal logging. There were four ELC related activities, three sacred sites and one record of illegal hunting. However, it has to be taken into account that these were only the entries that had GPS points, for the total number of entries for each kind of observation see previous section.

4. Recommendations

We hope that the present report will draw more attention to the last large intact lowland evergreen rain forest in Indochina and to its economic importance for the communities living in and around Prey Lang and the Cambodian public. We (PLCN) would like to express our great interest in working with the Royal Government of Cambodia in order to protect the future of Prey Lang. We would like to reiterate the joint statement of 26th of May 2015, to which we (the Prey Lang Community Network) are a signatory (annex 2).

We do not object to development, but we would like to request that proper legal procedures be followed, equity of development projects be assured, and environmental and social impacts be minimized. We, therefore, would like to submit the following requests to the Government, MAFF and FA:

1. Take measures and intervene immediately to prevent forestry offenses in the Prey Lang forestry areas.
2. Intervene to have the draft Sub-Decree on Prey Lang Forestry Protected and Biodiversity Areas be disclosed for public consultations with the Prey Lang communities and other stakeholders.
3. Include Prey Lang Community Network in the four provinces as co-managers of the Prey Lang Landscape through inserting the rights and roles of Prey Lang Community Network in the Sub-Decree on Establishment of "Prey Lang" Forestry Protected and Biodiversity Conservation Areas.
4. Intervene through investigations by government officials at all levels at the Prey Lang areas and ensure effective enforcement of laws related to the forestry sector, environmental impact assessment, granting of social land concessions, and illegal land grabbing by migrants.
5. Take legal actions against those officials and local authorities involved in the timber business and illegal logging in the Prey Lang areas.
6. Stop all forms of intimidation by courts and armed forces against Prey Lang forestry activists.
7. Preserve the Prey Lang area as an academic and research zone for training of human resources in enhancing the environment, natural resources and eco-tourism.
8. Review the use of saw machines to ensure compliance with legal requirements as stipulated under Article 70, Chapter 13, Forestry Law, on Measures Governing Forestry Activities. If the governing is not effective, please suspend or stop imports of saw machines into Cambodia.

Part Three
Additional information

5. Annexes

5.1 Annex (1) – Baseline Study

A baseline survey was carried out in Prey Lang area in 2014 by a CPN consultant in collaboration with local informants from the four provinces that stretch the Prey Lang landscape. The data was collected through interviews and focus group discussions. Furthermore, relevant documents from local authorities, village leaders and NGOs have been collected in order to contribute to the present baseline survey. The baseline survey encompasses data on demographics, human and natural resources and identification of key challenges related to natural resources. It constitutes an accurate current picture of the threats to Prey Lang and its' importance to the local livelihoods. Main findings The baseline survey was carried out in 69 villages, 14 communes and seven districts across Kratie, Stung Treng, Preah Vihear and Kampong Thom provinces. The main conclusions from the baseline study are listed below:

- The main occupation in the Prey Lang area is farming, resin collection, NTFP collection and fishing. An increasing number of people leave the Prey Lang area in order to get cash income.
- Communities are facing challenges from mining, illegal logging, logging concessions, migration and illegal fishery.
- Villagers cannot afford and do not have enough time to go patrol the forest with the PLCN, because they need to take care of their families.
- There is a lack of participation and engagement from provincial and local authorities as well as the forest administration (FA) regarding protection of natural resources in Prey Lang.
- No participation is offered to the local communities in managing Prey Lang, in spite of a wish to engage.
- Up to the baseline survey in 2014, there were 33 private companies with economic land concessions (ELCs) operating in Prey Lang. These are companies working with agro-industry (plantations). These companies create conflicts with the local communities.
- The biggest companies are CRCK in Kampong Thom, PNT company in Preah Vihear and Chhun Hong Rubber and Think Biotic Co. Ltd. in Kratie. There are five mining companies in Prey Lang in Preah Vihear province.
- Community forests are not well protected and are currently facing logging problems.
- Labour companies hunt wildlife with guns and electrical traps and sell them on the markets. Especially monkeys. (Illegal hunting)
- Local communities wish to manage the forest through traditional methods.

- Resin trees are a major part of the local economy.
- Resin trees are lost every day. In the present study, there were 17,010 lost among the 483,756 that are tapped in Prey Lang.
- Increasing migration issues.
- Since 2007 150-250 migrant families moved to Preah Vihear. In Kampong Thom it is 150-300 families since 2005. In Stung Treng and Kratie 200-300 families since 2007.
- Immigrants created conflicts in local communities because of robberies, harassment, immorality and destruction of natural resources.
- Most of the families are migrants from Kampong Cham, Kandal, Prey Veng and Svay Reang provinces. They create problems for local people who protect land and forests. Some reported that migrants are hired by companies to slash and clear forest for land plantation. And some reported that migrants are hired by companies to cut down luxury wood.
- Communities in the Prey Lang area are facing increasing poverty issues, because of decreasing occupation options. More people are selling trees to logging companies because they have no choice.
- Remote and isolated communities have to pay a high cost of traveling to attend community gatherings/trainings. Lack of communication to remote villages (limited network coverage). These communities get excluded from patrol events and NGO trainings etc.
- Only more expensive phone companies have antennas in Prey Lang. This makes it harder to communicate among villages and with NGOs.
- It was reported that local authorities and the FA do not support Prey Lang communities. Also, the police are supporting illegal loggers and often corruption occurs.
- ELCs and mining companies cause forest degradation, loss of land, loss of rural livelihoods and loss of income.
- PLCN communities would like to strengthen the capacity of local governments in order to recognize and respect traditional management and use of natural resources and respect the communities' property that they rely on for their livelihoods.
- The communities wish to encourage local governments to uphold and support traditional job and income practices/possibilities.
- The communities also wish to implement a community investment plan (CIP) to protect Prey Lang. The CIP should encompass patrolling events, biodiversity studies, NTFP studies as well as a monitoring plan through consultation and participation of Prey Lang communities.

5.2   Annex (2) – The Joint Statement

**KINGDOM OF CAMBODIA
NATION RELIGION KING**

Phnom Penh, 26 May 2015

**JOINT STATEMENT
A MARCH TOWARDS THE DISASTER OF PREY LANG**

We, monks; Prey Lang Community Networks; students; youth networks; Indigenous Peoples and Forestry Network (IPFN); and civil society organizations (CSOs), are gravely concerned over the status of intense destruction of the Prey Lang forest during the last few years, which march towards the disaster of Prey Lang forest in the near future.

Although the Royal Government of the Kingdom of Cambodia has adopted the Forestry Law, the Law on Environmental Protection and Natural Resource Management and other important regulations to protect forestry, natural resources and the environment. However, illegal logging activities have continued along with logging under the disguise of granting of economic land concessions, mining concessions, social concessions, and forestry concessions. These concessions have been seriously threatening Cambodia's forestry, in particular, the Prey Lang , the last lowland forest of Cambodia and in the Indochina subcontinent.

For the past 10 years, Prey Lang has been destroyed and cleared by concession companies and exploration activities of mining companies in the area. Hundreds of thousands of hectares of jungles have been cleared and replaced with rubber trees, tapioca, and mining of metal and other materials. A commune-level quantitative research report of the Prey Lang Community Networks published in April 2015 suggests that in 33 communes within Prey Lang forest and other communes bordering the 33 communes there are 53 concession companies in total, which have been operating in the area as of end 2013. The total concession land areas include 234,784.08 ha of economic land concessions, 264,693.23 ha of mining concessions, 932,434.20 ha of forestry concessions and 4,000.00 ha of social land concessions.

At present, besides land concession projects, we have found that loggings of forest for business and clearance of forested land for private ownership are increasing significantly. In this regard, communities claim that some government officials and local authorities have been involved. To date, tens of thousands of cubic meters of logs have been transported out of Prey Lang, hundreds of thousands of community resin trees have been felled, and hundreds of thousands of hectares of forested land have been cleared into deserts in a rampant manner without any or little control by technical officials and relevant authorities. Seeing such disaster occurring to Prey Lang, communities have been trying to protect it and prevent forestry offenses and illegal encroachment, but in return they have been subjected to killing and/or intimidation from perpetrators, technical officials, and local authorities.

For many years now, the Prey Lang Community Networks, youths, and CSO networks have submitted petitions, complaints, and request for intervention to the Royal Government and technical agencies for establishment of a Prey Lang forestry protection legal mechanism, collaboration and cooperation to protect and jointly manage the forest in a sustainable manner. For instance, on 27 April 2015, 34 Prey Lang representatives submitted a petition to seek interventions from the National Assembly, Government agencies, and the two major political parties with seats at the National Assembly, but as of now, there has been no response.

We, monks; Prey Lang Community Networks; students; youth networks; Indigenous Peoples and Forestry Network (IPFN); and civil society organizations (CSOs), are seriously worried about the losses of forestry, forested land, biodiversity and aquatic resources in the near future if no timely interventions are made. This would affect the forestry coverage restoration program, the carbon credit program, and in particular, the maintenance of water equilibrium and water supply to the Tonle Sap during rainy seasons, leading to underground water imbalance. If the Prey Lang forest disappeared, what would happen to the Tonle Sap, Cambodia's heart? Moreover, this would affect or cause losses of wildlife habitats, fish spawning grounds, and occupations of tens of thousands of

community people and households who depend on forestry products, non-timber forestry products, fisheries, and especially, water source for agriculture and daily consumption for the people around the area. The loss of Prey Lang forest, in particular, would affect 1.5 million of fishing people who are benefiting directly from the Tonle Sap.

We do not object to development, but would like to request that proper legal procedures be followed, equity of development projects be assured, and environmental and social impacts be minimized.

We, therefore, would like to submit the following requests to Government, MAFF, and FA:

1. Take measures and intervene immediately to prevent forestry offenses in the Prey Lang forestry areas.
2. Intervene to have the draft Sub-Decree on Prey Lang Forestry Protected and Biodiversity Areas be disclosed for public consultations with the Prey Lang communities and other stakeholders.
3. Include Prey Lang Community Network in the four provinces as co-managers of the Prey Lang Landscape through inserting the rights and roles of Prey Lang Community Network in the Sub-Decree on Establishment of "Prey Lang" Forestry Protected and Biodiversity Conservation Areas.
4. Intervene to government officials at all levels to carry out investigation at the Prey Lang areas and ensure effective enforcement of laws related to the forestry sector, environmental impact assessment, granting of social land concessions, and illegal land grabbing by migrants.
5. Take legal actions against those officials and local authorities involved in timber business and illegal logging in Prey Lang areas.
6. Stop all forms of intimidation from the court and armed forces against Prey Lang forestry activists.
7. Preserve the Prey Lang areas as an academic and research zone for training of human resources in enhancing the environment, natural resources and eco-tourism.
8. Review the use of saw machines to ensure compliance with legal requirements as stipulated under Article 70, Chapter 13, Forestry Law, on Measures Governing Forestry Activities. If the governing is not effective, please suspend or stop imports of saw machines into Cambodia.

5.3 Annex (3) – Additional uploaded pictures

Figure 5.1: Reporting Single stump

Figure 5.2: Reporting confiscated chainsaws

Figure 5.3: Reporting transport

Figure 5.4: Confiscating chainsaws

Index