

9TH MONITORING REPORT

THE STATUS OF PREY LANG FOREST

GOVERNMENT BAN ON FOREST PATROLS
FUELS DEFORESTATION

**LET PREY LANG COMMUNITY NETWORK
PATROL THE FOREST AGAIN!**

On behalf of Prey Lang Community Network (PLCN): D. Argyriou, P. Bori, I. Theilade¹

¹University of Copenhagen

INTRODUCTION

ANNUAL FOREST LOSS 2000-2019³

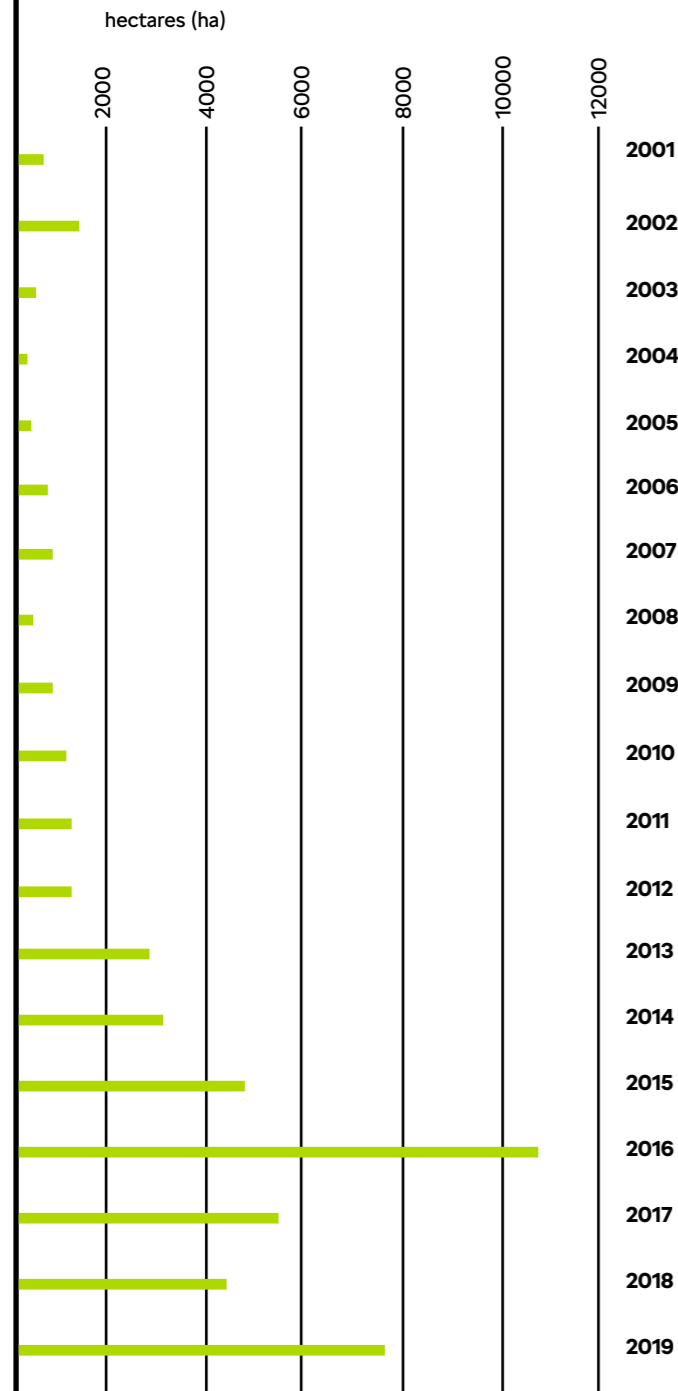


FIGURE 1

Tree Cover Loss (Global Forest Cover dataset)

The Prey Lang Wildlife Sanctuary, located in central Cambodia, covers approximately half a million hectares and supports a vast array of endemic plant and animal species. The forests of Prey Lang are some of the last remaining lowland evergreen rainforests in continental Southeast Asia. This biodiversity hotspot also plays an important role in the livelihoods of local Khmer and Kuy communities, who benefit from the sustainable use of both timber and non-timber forest products.

However, over the past decades, the precarious balance between the natural environment and local and indigenous populations has been significantly disturbed by large-scale, illegal logging activities. Between 2000 and 2019, some 103,000 hectares of rainforest – or 11 percent of its total forest cover – were lost through encroachment by logging operations from bordering concession areas.^{2,3} In 2019 alone, Prey Lang lost a total of 7,570 hectares – the equivalent of one Olympic-sized football pitch per hour – an alarming rate that calls for urgent action to halt this trend.⁴ Forest loss in 2019 was only superseded by the monumental forest destruction of 2016 (Fig. 1). A subsequent estimate of CO2 emissions based on the Global Forest Cover dataset shows an increase of 73% for 2019 compared to 2018.⁵ (See Table 1) The Prey Lang Community Network (PLCN) is a group of communities working together to protect the Prey Lang forest since the beginning of the 2000s. PLCN lobbies to prevent illegal logging and large-scale land grabs of ancestral lands for mining, agri-business and logging. Through non-violent action and peaceful dialogue, PLCN has engaged a range of stakeholders

to protect the forest and livelihoods of the approximately 200,000 people who rely on non-timber products from the forest.

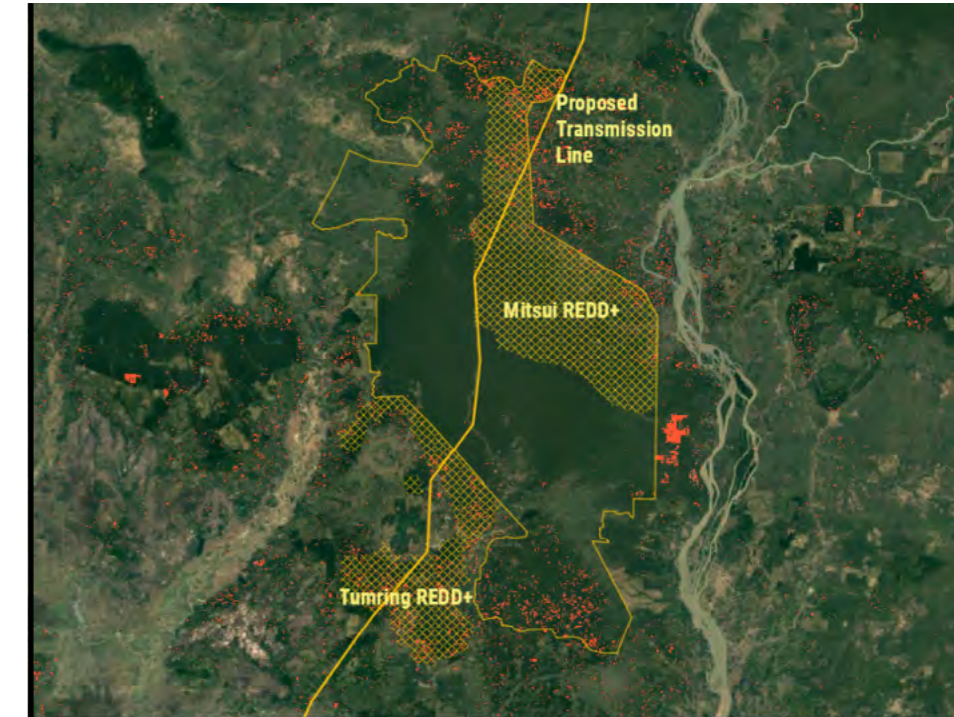
As a grassroots group, PLCN combines the use of a state-of-the-art phone application with forest patrols. The community network collects data on forest resources, biodiversity, illegal logging activities, climate change and interactions with authorities, including threats against its members. During their patrols, PLCN confiscates chainsaws from illegal loggers and signs thumbprint agreements with them to stop engaging in illegal activities. Confiscated equipment is handed over to Ministry of Environment ranger posts. However, PLCN has identified confiscated chainsaws being returned to illegal loggers.

PLCN have received numerous international awards for their efforts to protect the forest. Most recently, they were awarded the Global Landscape Forum 2020 Landscape Heroes award, which celebrates people taking action to safeguard the planet's biodiversity – often at great personal risk. The network was selected by a panel of experts from among 80 submissions from around the world, recognizing PLCN's continued level of dedication to conservation.

PLCN's ultimate goal is to unite communities in forest co-management. It is not PLCN's intention to act as a formal advocacy organization per se and it therefore remains an informal network.

While the increase in deforestation in Prey Lang over the last decade is well documented thanks to the community patrols, challenges in 2020 made on-

FIGURE 2



Proposed path of the transmission line. Orange dots mark deforestation in 2019 and 2020. Squared areas denote the Korea-backed Tumring REDD+ and Japanese conglomerate Mitsui REDD+ projects ((Danielle Keeton-Olsen/VOD)⁷

the-ground data collection difficult and, at times, impossible. Restrictions following the COVID-19 pandemic and, later, a Ministry of Environment ban on PLCN patrols entering the Prey Lang Wildlife Sanctuary resulted in a significant increase in logging activities throughout 2020.⁶

As PLCN forest patrols were barred from entering the forest, the use of satellite imagery and geographic information systems (GIS) were crucial in documenting the increase in deforestation and forest degradation in Prey Lang.

PLCN has ascertained from the media⁷ that there is a 200 km-long 500kV transmission line planned to connect Phnom Penh to the Cambodia-Lao border. The proposed route for the transmission line through Prey Lang Wildlife Sanctuary (Fig.2) will entail a loss of primary forest and natural

² Technical report on forest cover change detection in the Prey Lang protected area of Cambodia - JSC and CYN

³ For more information on Economic Land Concessions around the Prey Lang Forest, read Courtney Work & Ratha Thuon (2017) [Inside and outside the maps: mutual accommodation and forest destruction in Cambodia](#), *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, 38:3, 360-377, DOI: 10.1080/02255189.2017.1309313

⁴ Hansen, M.C., Potapov, P.V., Moore, R., Hancher, M., Turubanova, S.A., Tyukavina, A., Thau, D., Stehman, S.V., Goetz, S.J., Loveland, T.R., Kommareddy, A., Egorov, A., Chini, L., Justice, C.O., and Townshend, J.R.G., 2013, High-Resolution Global Maps of 21st Century Forest Cover Change: *Science*, v. 342, no. 6160, p. 850-853, at <http://www.sciencemag.org/content/342/6160/850.abstract>.

⁵ Carbon emissions from Gross Tree Cover Loss: Estimates are based on the co-location of above-ground live woody biomass density values for the year 2000 from [Baccini et al. 2015](#), with annual tree cover loss data from 2001 through 2019 based on the method of Hansen et al. (2013), both at approximately 30-meter spatial resolution. Emissions associated with other carbon pools, such as below-ground biomass and soil carbon, were excluded from country estimates at this time.

⁶ See textbox "Restrictions faced by PLCN in 2020", p.4

resources as well as displacement of wildlife. There is urgent need for an Environmental Impact Assessment (EIA) and a subsequent public consultation with the communities that live in the vicinity of Prey Lang Wildlife Sanctuary prior to the initiation of such a construction.

The following sections outline the forest loss analysed by combining data from the Forest Canopy Disturbance Monitoring (FCDM) tool and the Global Forest Cover dataset. The results of the PLCN patrols are presented, followed by a Discussion and Recommendations setting out crucial next steps to improve the protection of Prey Lang Wildlife Sanctuary.

⁷ <https://vodenglish.news/power-line-to-cut-through-prey-lang-troubling-conservation-partners/>
<https://phnompenhpost.com/business/govt-approves-over-830m-worth-electricity-projects>

⁸ Keeton-Olsen and Sirivadh, 2020
<https://vodenglish.news/new-trails-satellite-imagery-point-to-more-logging-inside-prey-lang/>

⁹ Khorn Savi, 2020
<https://www.phnompenhpost.com/national/forest-watch-dog-warned-against-satellite-imagery>

¹⁰ Personal communication, 2020

¹¹ <https://www.tetratech.com/en/projects/usaaid-greening-prey-lang-cambodia>

RESTRICTIONS FACED BY PLCN IN 2020

PLCN has been barred from entering Prey Lang Wildlife Sanctuary since February 2020 thereby greatly hindered the monitoring of illegal logging activities. In February, patrollers were prevented from entering under justification of COVID-19 restrictions on movement. Later that month, masked Ministry of Environment rangers prevented hundreds of community members, activists and monks from entering the forest during an annual tree-blessing ceremony.⁸

In March, Goldman prize-winning activist Ouch Leng, two PLCN members (Khem Soky and Srey Thei) and activist Men Mat were arrested and handed over to police by Think Biotech Company private security guards. The four were released after several days in detention but remain under investigation and barred from entering Prey Lang. Moreover, PLCN has been threatened with arrest if the satellite monitoring continues.⁹ Lastly, a PLCN member was harassed and threatened with arrest on trumped up charges and had to flee his house and now lives in self-exile.¹⁰ Most of the year saw continued restrictions on PLCN members entering the forest.

USAID “GREENING PREY LANG” EXCLUDES PLCN: A HARMFUL APPROACH

Throughout 2020, the Ministry of Environment increased restrictions on and incrimination of the PLCN. The ban on PLCN forest patrols happened simultaneously with the implementation of the USAID flagship project Greening Prey Lang aimed at “promoting conservation-friendly, resilient, and low-emission sustainable economic development”.¹¹

Before the start of the Greening Prey Lang project, the Ministry of Environment used to frequently invite PLCN to participate in workshops and the network was viewed as an important stakeholder in Prey Lang forest decision-making.

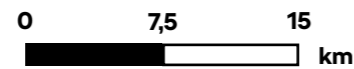
Through its multi-million-dollar support to the Ministry of Environment and exclusion of PLCN from forest protection activities, USAID and its implementing partner Tetra Tech are supporting a monopoly on “forest protection” under the Ministry of Environment. By silently approving the intimidation and de-legitimization of PLCN, USAID and Tetra Tech are sabotaging the efforts of existing local and indigenous grassroots groups to conduct crucial forest monitoring.

FIGURE 3

Luxury timber tree recorded on 15/10/2019 at Preah Vihear province



SATELLITE IMAGES COMBINED WITH LOCAL FOREST PATROLS: A POWERFUL MONITORING TOOL



- PLCN patrol data
- CLEARED AREAS
- PLANKS
- STUMP
- TRANSPORT
- SECONDARY ENTRIES
- FCDM DETECTIONS 06.19-06.20
- FCDM DETECTIONS 06.18-06.19
- FOREST LOSS 2000-18 (HANSEN ET AL)
- FOREST LOSS 2019 (HANSEN ET AL)
- PREY LANG WILDLIFE SANCTUARY

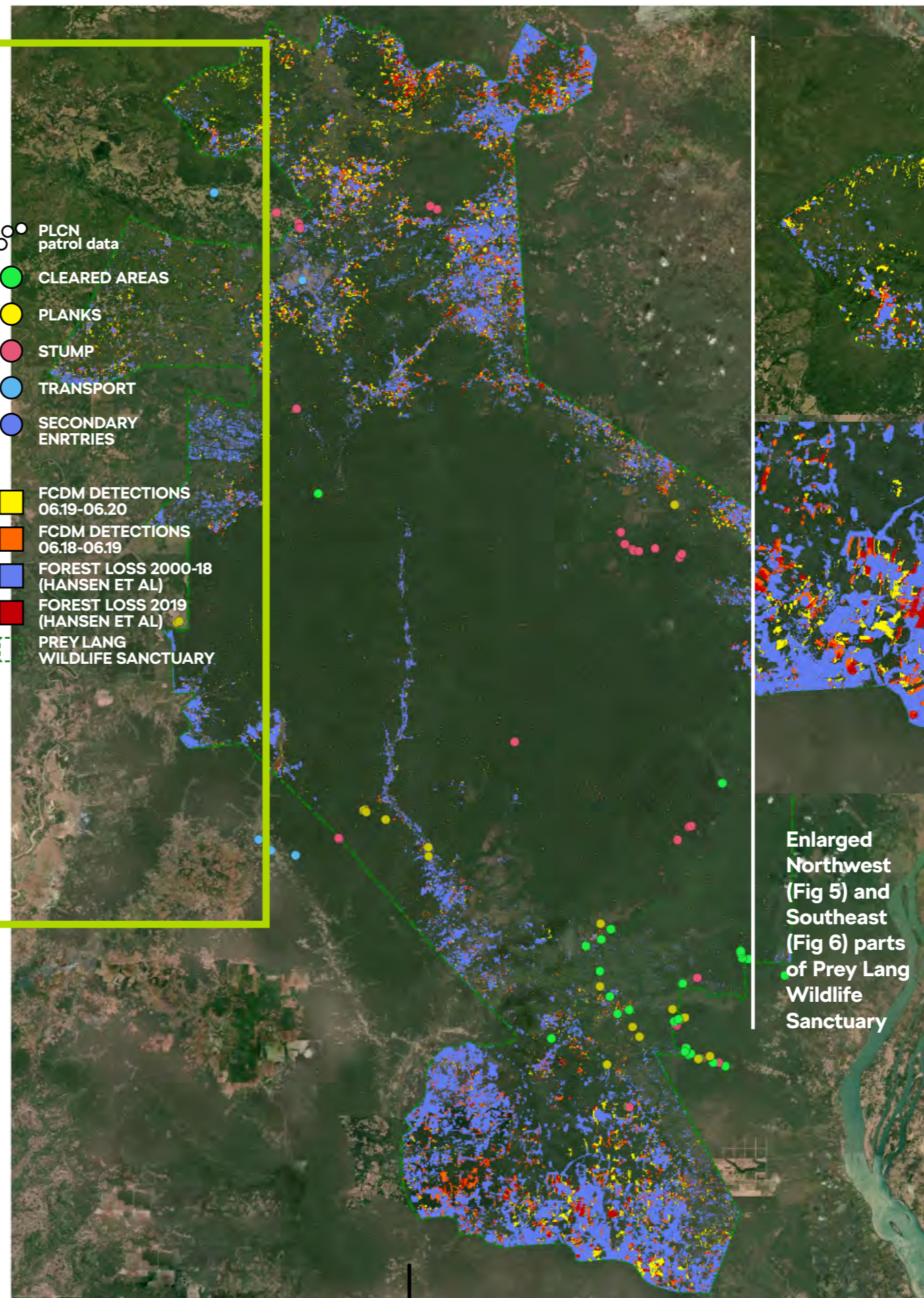


FIGURE 4

Forest canopy disturbances detected for the period June 2019-June 2020 superimposed on the Global Forest Cover mask 2019 (using 30% minimum canopy cover)

Enlarged Northwest (Fig 5) and Southeast (Fig 6) parts of Prey Lang Wildlife Sanctuary

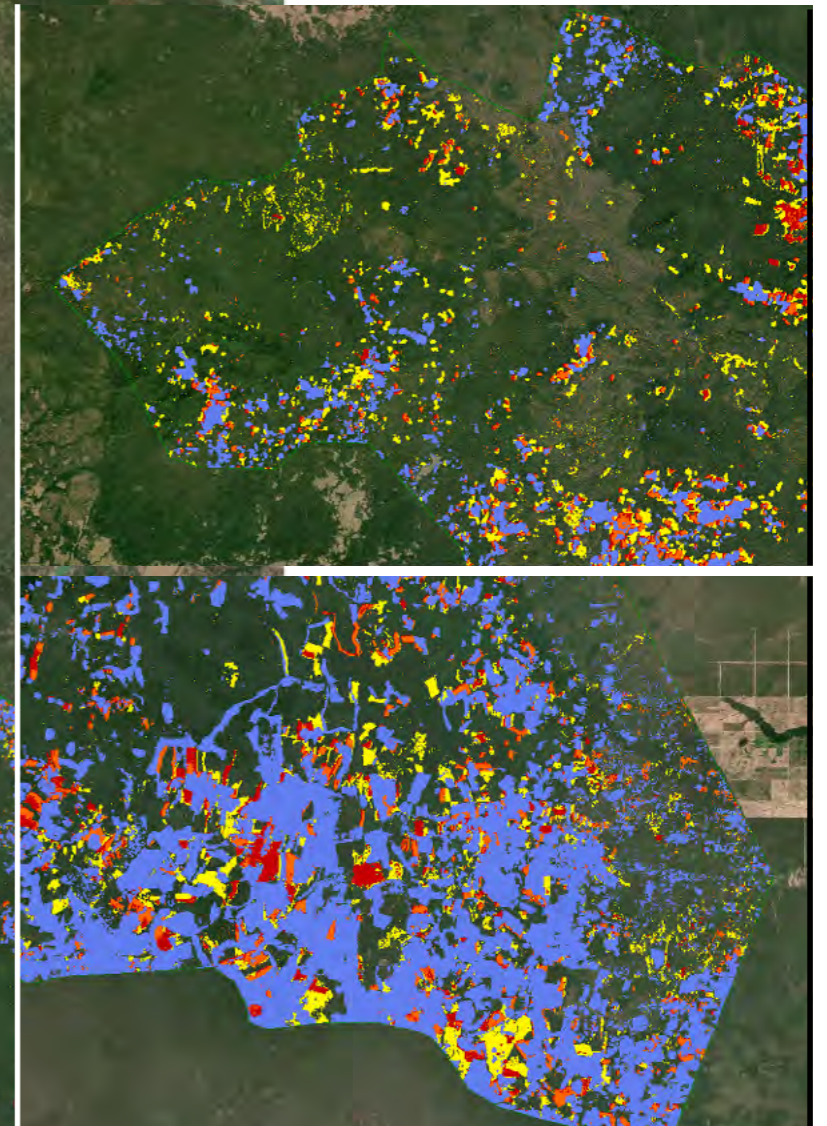


FIGURE 5

FIGURE 6

Forest canopy disturbances were detected using the FCDM tool developed by the Joint Research Centre (JRC) of the European Commission (EC).¹² The FCDM tool combines the (optical-based) Delta-rNBR methodology¹³ with the (radar-based) Delta-SPE methodology¹⁴ using satellite imagery from Sentinel-1, Sentinel-2 as well as Landsat 5, 7 and 8. The resulting map of forest canopy disturbances is based only on radar data and is considered conservative, meaning that it **shows too few rather than too many detections** (Figures 3-5). The forest disturbances detected in the period June 2019 - June 2020 affected an area of at least 10,233 hectares, which is comparable to the previous year.¹⁵ The maps in Figures 3-5 were overlaid with PLCN records of logging and climate change-related events in Prey Lang Wildlife Sanctuary and surrounding areas for the period June 2019 - June 2020. PLCN documented **152 events with GPS coordinates, mostly illegal logging**, while the rest refer to climate change observations (such as reduced water levels in rivers and lakes) and two cases of negative interactions with authorities.

¹² Langner A, Desclée B, Carboni S, Vancutsem C, Stibig H-J, Achard F, Theilade I, Forest encroachments and logging activities within the [Prey Lang Wildlife Sanctuary, Cambodia - Assessment of a new monitoring approach: radar-based Forest Canopy Disturbance Monitoring \(FCDM-radar\)](#), European Commission, Ispra, 2020, JRC122187.

¹³ Langner, A.; Miettinen, J.; Kukkonen, M.; Vancutsem, C.; Simonetti, D.; Vieilledent, G.; Verhegghen, A.; Gallego, J.; Stibig, H.-J. [Towards Operational Monitoring of Forest Canopy Disturbance in Evergreen Rain Forests: A Test Case in Continental Southeast Asia](#). *Remote Sens.* 2018, 10, 544

¹⁴ Langner, A., et al. Monitoring large- and small-scale changes in vegetation cover in the dry and humid domain using multi-temporal Sentinel-1 data, in preparation

¹⁵ FCDM datasets were post-processed using Hansen dataset forest masks. However, the masks refer to the situation at the end of a calendar year while the FCDM datasets were derived from June one year to June the following year. This means that the resulting areas of forest disturbance provided above are conservative and the actual numbers are likely to be much higher.

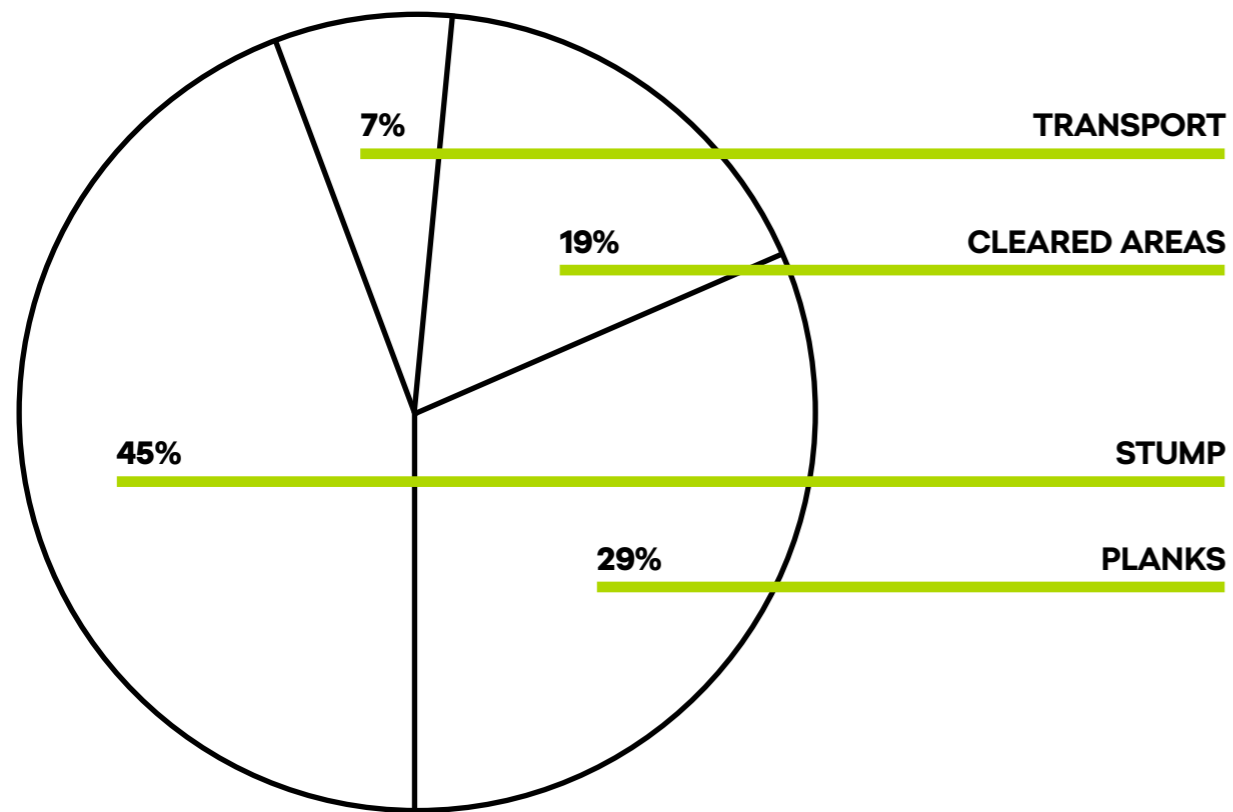


FIGURE 7

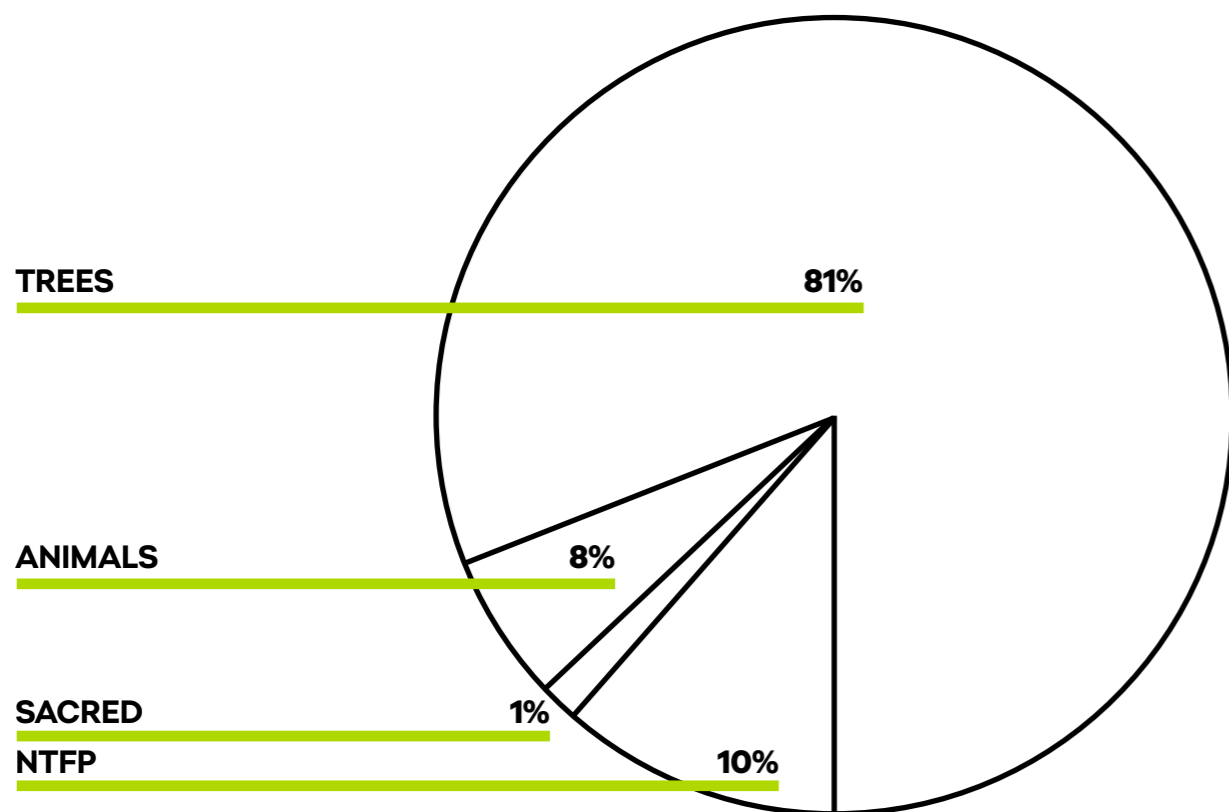
Illegal logging documented by PLCN June 2019 - June 2020

DOCUMENTATION OF ILLEGAL LOGGING

FIGURE 8

Natural resources documented June 2019 - June 2020

DOCUMENTATION OF BIODIVERSITY AND SACRED SITES



MONITORING BY PLCN

PLCN recorded 602 events between 30 June 2019 and 30 June 2020¹⁶. The validated entries fell into two main categories: Illegal activities and natural resources. A total of 296 entries documented illegal activities inside Prey Lang Wildlife Sanctuary (48%) and 280 reported valuable resources (46%). The remaining 5% were distributed between climate observations and interactions with authorities (graph not shown). Almost all illegal activities referred to illegal logging (99%) (graph not shown). Most entries refer to logging of single valuable trees (Stumps 45%) and planks left on site (29%). Nineteen percent (19%) of the entries refer to cleared areas while the transport of illegally logged timber accounts for 7%. Illegal logging entries June 2019 to June 2020 are shown in Figure 6.

PLCN members state: “We want to preserve Prey Lang for future generations.” The beauty of Prey Lang forest is vividly documented by PLCN entries on natural resources and sacred sites. Trees were the most reported (81%) - mainly luxury trees, followed by non-timber forest products (10%), animals (8%) and sacred places (1%) (Fig. 7).

¹⁶ The records taken by the PLCN members were not evenly distributed across time

FIGURE 9

Cleared area reported in Kratie province on 24/11/2019

	JUNE 2018-19	JUNE 2019-20
Global Forest Cover Dataset*	4.373 ha	7.573 ha
CO2 emissions from biomass loss⁵*	2.03 Mt	3.52 Mt
FCDM detections	10.062 ha	10.233 ha
PLCN patrols' illegal activities entries	1080	296**

* Period 1 January 2019 - 31 December 2019
 ** PLCN banned from entering the forest since February 2020

SUMMARY



Single stump recorded in Kratie province 28/04/2020

FIGURE 10

Satellite data shows a significant increase in forest loss compared to the preceding year. The accelerated loss of biomass has resulted in a concomitant increase in CO2 emissions (Table 1). Forest canopy disturbances detected by the FCDM tool increased only marginally over the same period presumably due to the forest masks applied; i.e. the Global Forest Cover data, which already accounted for the larger-scale deforestation patches. Since February 2020, PLCN and other forest defenders have been prevented from entering the forest to monitor illegal logging. While local and indigenous people are excluded from the forest, eye-witnesses describe how illegal loggers are entering and trucks transporting timber are leaving. Combined with satellite images showing vast forest degradation and deforestation events, these reports suggest that:

The government ban on forest patrols has led to a significant increase in forest loss.

Satellite data on forest loss has revealed a correlation between the ban on PLCN patrols and the increase in illegal logging activities by timber companies operating in the vicinity of Prey Lang.

This year has demonstrated that the presence of PLCN patrols does deter illegal loggers. The lack of community forest patrols has provided the perfect setting for unabated and uncontrolled deforestation and forest degradation. Furthermore, reliable and transparent on-the-ground information is lacking on the current status of biodiversity, the nature of illegal logging activities, and responsible companies.

Allowing deforestation to continue is detrimental to the protection of Cambodia's natural heritage and the communities relying on this heritage for their livelihoods. It also significantly impedes the nation's ability to mitigate the effects of climate change. Protecting the natural forest ecosystems of Prey Lang is an important cornerstone in the nation's efforts to reduce its CO2 emissions.

RECOMMENDATIONS

Planks from Chkrom left on site, recorded 28/05/2020 in Kratie province

FIGURE 12

PLCN STATEMENT

WE THE PLCN WISH TO MAKE A NUMBER OF RECOMMENDATIONS

ILLEGAL DEFORESTATION IN PREY LANG WILDLIFE SANCTUARY CONTINUES UNABATED

FIGURE 11

Cleared area with planks left on site, recorded in Kratie province 29/08/2019



SPECIFIC RECOMMENDATIONS:

1. We urge the Cambodian government - and specifically the Ministry of Environment - to recognize the important role PLCN plays in protecting Prey Lang forest and lift the ban on PLCN and other forest defenders conducting patrols.
2. We urge the Cambodian government to cease the judicial persecution of PLCN members and other activists. Local and indigenous community members are legitimate key stakeholders in the protection of the forest and derive large parts of their livelihood directly or indirectly from the forest. As such, the protection of the forest is a key priority for PLCN.
3. We urge the Ministry of Environment to conduct an Environmental Impact Assessment (EIA) and a public consultation before the construction of any transmission line and make the results available to the public.

GENERAL RECOMMENDATIONS¹⁷:

1. Governments should recognize the value of geographic citizen science in monitoring forest crimes. Local forest patrols using information and communication technology are cheaper and more effective than patrols by government rangers. Geographic citizen science is inclusive and community members can use the Prey Lang App regardless of age or gender.
2. Donors should increase their funding to geographic citizen science. The Prey Lang App has facilitated the use of results in advocacy, on social media, and to petition relevant government authorities. Ownership of the data collected empowers the communities involved and increases their sense of responsibility and rights.
3. Environmental agencies should encourage the use of citizen science in environmental monitoring. It is cost-effective, reliable, leads to action on the ground and empowers civil society. It is therefore highly valuable for environmental protection throughout the tropics and for global conservation and climate change mitigation.



We, the **Prey Lang Community Network (PLCN)** of Kratie, Steung Treng, Preah Vihear, and Kampong Thom, have voluntarily protected the Prey Lang Wildlife Sanctuary for more than 20 years and are monitoring illegal logging, timber transportation, and wildlife poaching, even though we have been banned from patrolling in the Prey Lang Wildlife Sanctuary since February 2020 by the Ministry of Environment. When Prey Lang forest was placed under the control of the Ministry of Environment, we observed that the illegal deforestation rate increased in relation to when it was under the authority of the Forestry Administration. Since the Ministry of Environment banned PLCN from patrolling, loggers are freely entering the forest to cut down luxury trees and transport timber out of the forest by paying a commission fee to the rangers at the checkpoints (in exchange for permission to commit crimes in Prey Lang Wildlife Sanctuary).

Since February 2020, we have observed an increasing intensity of forest crimes in four provinces, including:

- 1) The cutting of resin trees and other large trees in Prey Lang forest by Think Biotech Co. Ltd., Thy Nha Co. Ltd., Development and Investment and PNT.
- 2) Timber transportation using many cow machines, and logging equipment crossing rangers' checkpoints every day.
- 3) Forest clearings in the buffer zone and in the core area of Prey Lang Wildlife Sanctuary undertaken by high-ranking officials and immigrants from other regions.
- 4) The use of hand-made guns and traps around Prey Lang forest for the purpose of hunting wild animals.

No action has been taken by officials to prevent these forest crimes. We, the PLCN call on the Royal Government of Cambodia, the Ministry of Environment, and relevant authorities at all levels to please take action:

1. We request that the Royal Government monitor and remove from their role any Ministry of Environment rangers involved in forest crimes or a failure to perform their duties.
2. We ask that the transport of timber, chainsaws, and other equipment for deforestation purposes not be permitted across Ministry of Environment ranger checkpoints.
3. We request that the Ministry of Environment develop a specific strategic plan to combat deforestation and forest clearance for agriculture, hand-made guns, hunting, and other equipment for deforestation purposes.
4. We request that the Royal Government take action to confiscate all chainsaws from villages, communes, districts, provinces, and business shops around Prey Lang forest in the four provinces and to halt their import.
5. The Royal Government must enforce the regulations and laws on forest protection.
6. We call on and encourage the people of Cambodia and of the world to actively participate and work together to protect natural resources.
7. We suggest that major international actors pay attention to the allocation of resources to Cambodia and the countries affected by deforestation and natural resources.

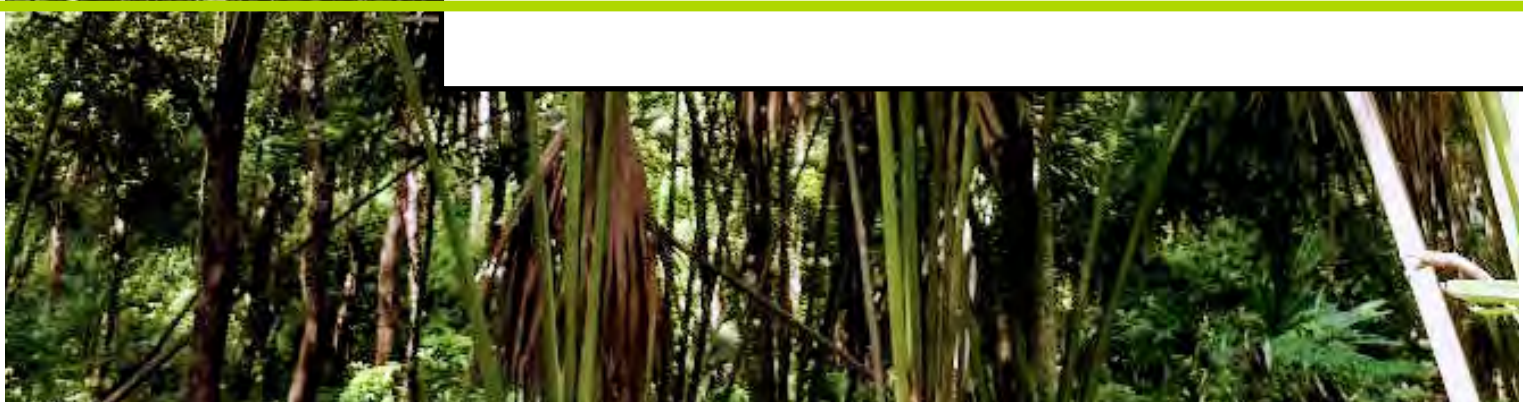
FOR MORE INFORMATIONS, PLEASE CONTACT THE PLCN MEMBERS BELOW:

Mr. Sovanna Ek 097 644 9998 | **Mr. Svay Song** 071 451 9465 | **Mr. Srey Thei** 089 986 520 | **Mr. Khem Sokhey** 085 473 157 | **Mr. Menh Ny** 096 300 2762 | **Mr. Hoewn Sopheap** 012 373 441 | **Miss Cheang Ly** 096 668 0673 | **Mr. Kheng Khou** 071 451 9463

¹⁷ Bori, P. J., Argyriou, D., & Theilade, I. (2020). [Geographic citizen science for forest monitoring and conservation](#). Policy Briefs (Copenhagen Centre for Development Research), 2020(2), 1-6.



PREY LANG, IT'S OUR FOREST TOO. LET'S PROTECT PREY LANG TOGETHER.



<https://preylang.net/>

The information contained in this document is the intellectual property of PLCN. You are welcome to use, print and redistribute this document provided the source is referenced. University of Copenhagen invited the Ministry of Environment to comment on the report and did not receive any response.

PLCN wishes to thank the Joint Research Centre (JRC of the European Commission) that provided technical support to deliver forest canopy disturbances using the FCDM tool, interns of the Copenhagen University and all the people that offered their help voluntarily. This report wouldn't be possible without them.

The [Prey Lang app](#) was built based on Sapelli: an open-source project that facilitates data collection across language or literacy barriers through highly configurable icon-driven user interfaces. For more info: <http://www.sapelli.org/>

All photos are intellectual property of PLCN. All maps were made with QGIS.3.6.2 Noosa.

The graphic design and all infographics were designed by Carolina Salassa (carolina.salassa@outlook.it)

This document is protected under Creative Commons (CC BY-NC 4.0) license.

Supported in part by a grant from the Alexander Soros Foundation. First edition January 2021.