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**PENYELAMATAN DAN KONSERVASI HARIMAU SUMATERA (PKHS)/  
THE SUMATRAN TIGER CONSERVATION PROGRAMM  
IN THE SUMATRA ISLAND - INDONESIA**

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**ANNUAL REPORT OF 2022**

*Project Sites :*

- 1. Bukit Tiga Puluh National Park, Riau & Jambi Province**
- 2. Way Kambas National Park, Lampung Prvince**

*Cooperation Program Between:*



**Bukit Tiga Puluh National Park Officer  
Way Kambas National Park Officer**

**Yayasan Penyelamatan dan Konservasi Harimau Sumatera (PKHS Foundation)**

*Funded By :*



**The Bioparc Conservation, Bioparc Zoo De Doue-La-Fontaine – France**

**The Tropical Forest Conservation Action for Sumatera (TFCA – Sumatera)**

**Yayasan Penyelamatan dan Konservasi Harimau Sumatera (PKHS Foundation)**

## I. INTRODUCTION

During year of 2022, Penyelamatan dan Konservasi Harimau Sumatera (PKHS) carried out field activities in 2 conservation areas that are in the Bukit Tiga Puluh National Park (BTNP), in the Riau and Jambi Province; and in the Way Kambas National Park (WKNP), in the Lampung Province.

The activities was done are;

1. Bukit Tiga Puluh National Park;
  - 1) Survey, patrol and monitoring of tiger population, prey animals and habits.
  - 2) Given education (elementary school level) for children in the deep of the BTNP forest.
  - 3) Training on Patrol Techniques and Snare Sweep for the PKHS and BTNP Patrol Teams.
  - 4) Supporting conservation campaign activities for the community led by the BTNP officer through run competition "THE GRANIT MARATHON 10K".
  
2. Way Kambas National Park;
  - 1) Survey, patrol and monitoring of tiger population, prey animals and habits.
  - 2) Training on patrol techniques and snare sweep for the PKHS and WKNP patrol teams.
  - 3) Monitoring of wildlifes in the sampling plot of grazing area of animal prey in Kali Biru swamp.
  - 4) The research facilitation for master's degree students.
  - 5) Conducting guidance to undergraduate students who are doing conservation practical work in the WKNP.

## II. IMPLEMENTATION AND RESULTS OF ACTIVITIES

### II.1. BUKIT TIGA PULUH NATIONAL PARK (BTNP)

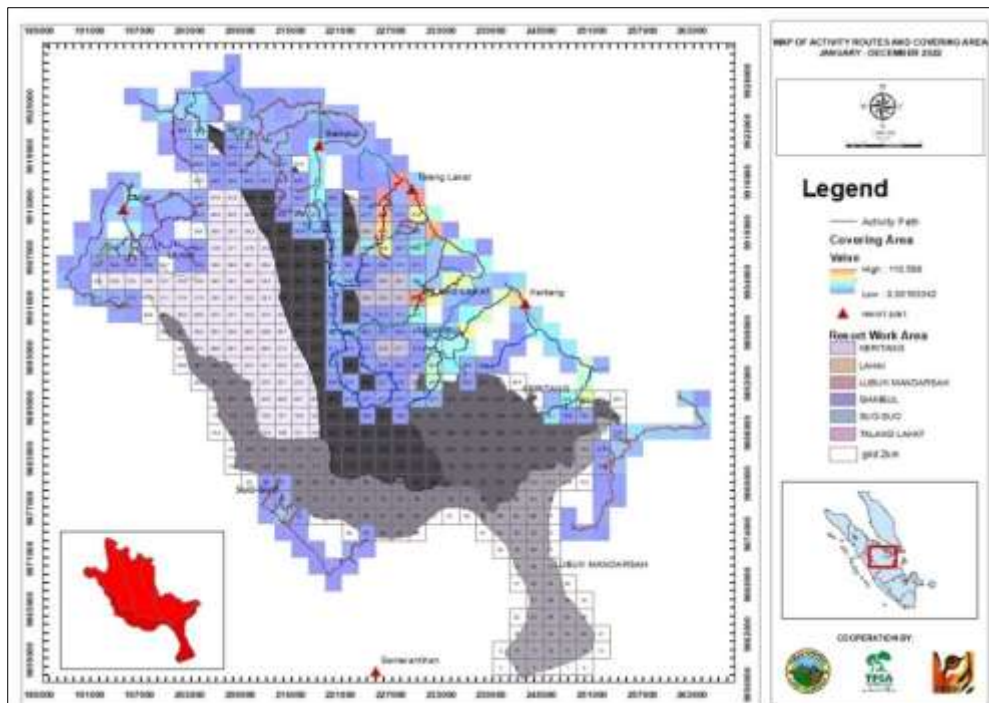
#### II.1.1. SURVEY, PATROL AND MONITORING POPULATION OF SUMATRAN TIGER, PREYS AND HABITS

##### A. EFFORTS OF ACTIVITIES

PKHS field team (two teams) was done 14 trips or as long 77 days (or total are 28 trips and 144 days) for patrol and monitoring tigers, preys and their habits in the all resort areas BTNP that are Lahai, Siambul, Keritang, Talang Lakat (Riau); Lubuk Mandarsah and Suo-Suo (Jambi). Distance of patrol track (by footwalk) are 472 km. Coverage area of activities are 169 grids (measure of grids are 2x2 km = 4 km), so the coverage area are 67.600 hectares. Number of camera trap are used are 20 units and installed in 15 locations. The camera trap installed in the field as long 1.483 *trap night*.

**Table 1.** Effort of Sumatran tiger patrol and monitoring activities at BTNP in 2022.

Description	Number	Information
Number of trips	14 trips	77 days
The length of the land vehicle patrol lane	44 track	2.232 km
The length of the river vehicle patrol lane	2 track	60 km
The length of patrol path on foot	54 track	272 Km
<b>Total length of patrol</b>		<b>2.564 km</b>
Coverage area of patrol path on foot		169 grids 2x2 km/67.600 ha
Members of patrol teams from PKHS (8 staffs)		Sumarto, Febriansyah, Wijayanto, Panji Buono, , Hoyri Fadli, Hengki Irawan, Abdul Yosep dan Raja Parianto
Members of patrol teams from BTNP (16 rangers)		Deni Rio Syahputra, Muji Santoso, Sabarman, Abrari Syahputra, Ronny N.G, Najarlagu Sinaga, Poltak A.H, MB Irhasy. R.S, Sondang Hutasoit, Muhammad Fauzan R, Bawok Supriono, Abdul Hamid, Andi Moenandar, Lancar, Misri Candra, Edi Padhli



**Figure 1.** Map of patrol track and coverage area in 2022.

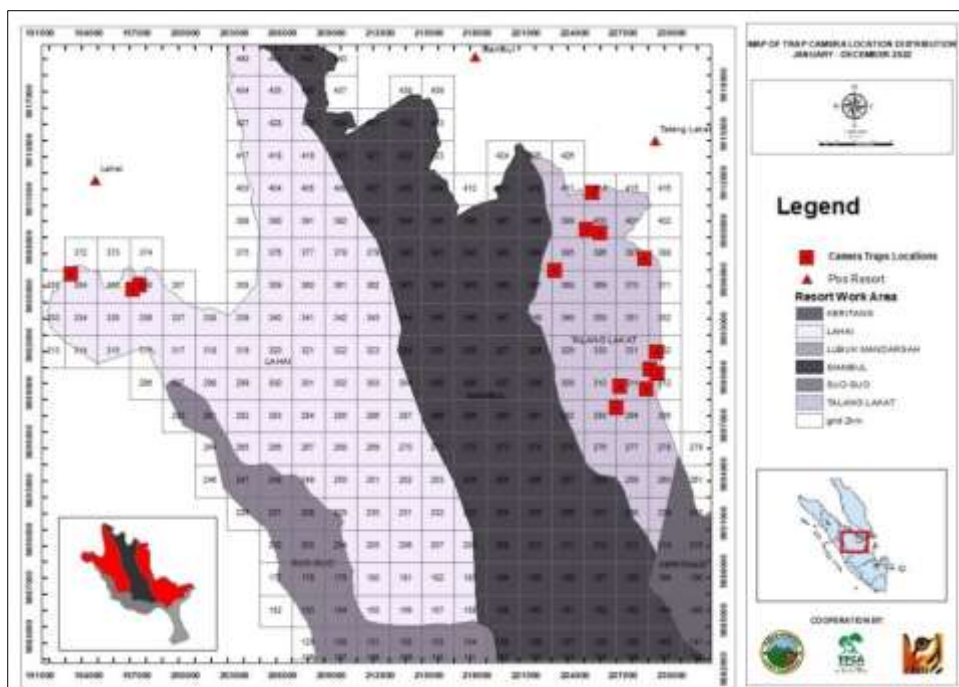


Figure 2. Map of camera trap distribution in 2022.

## B. RESULT OF ACTIVITIES

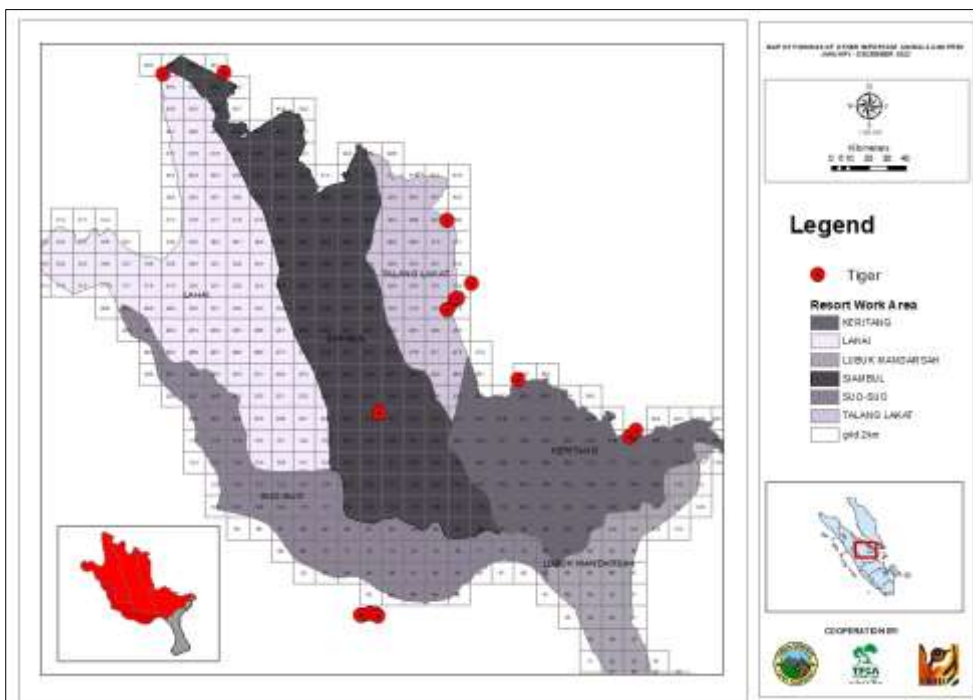
### B.1. Survey and Patrol Results

#### *Data findings for Sumatran tigers and Others Wildlifes*

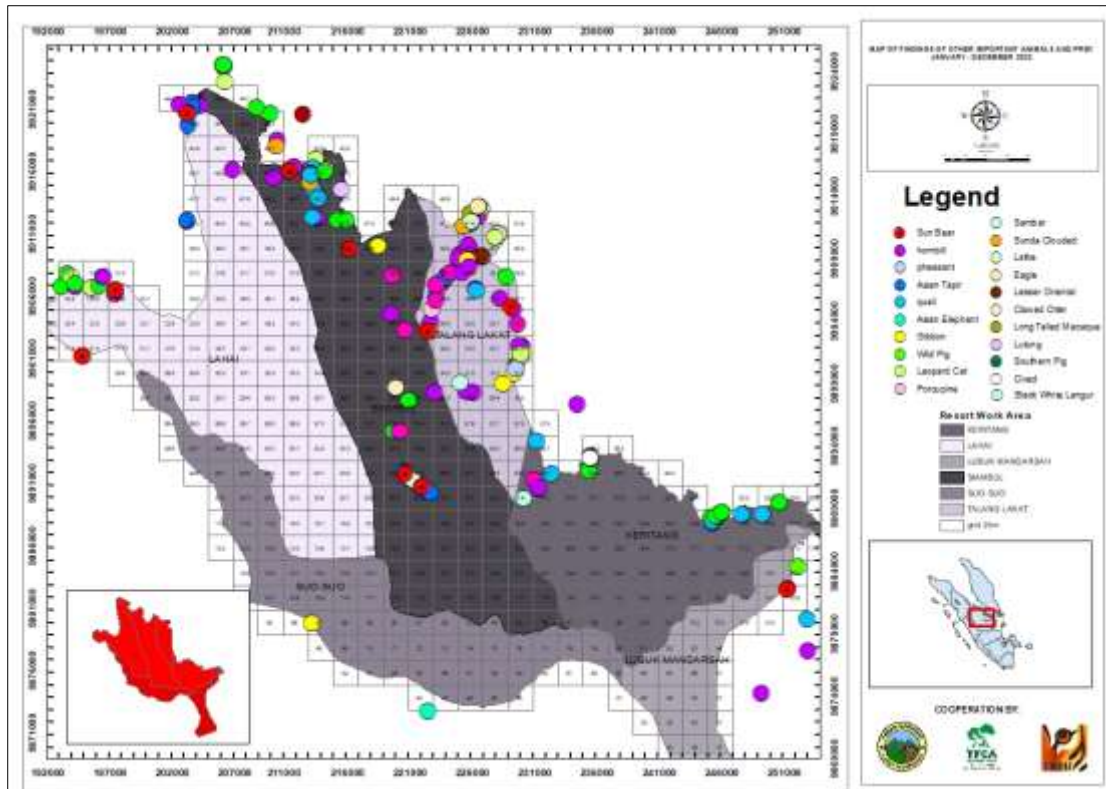
During this year's activities, 20 secondary tiger markings were found. As for other wildlife findings data are ;

No	Species	Number of Finding	Description
<b>The important wildlifes</b>			
1	Sumatran tiger	20	9 footprints, 1 scratches, 4 feces, 6 scrapes
2	Tapir	17	11 footprints, 2 feces, 3 scrapes
3	Wild cats	16	13 footprints, 3 feces
4	Sun bear	16	10 footprints, 5 scratches, 1 feces
5	Sumatran elephant	7	4 footprints, 3 feces
Sub total		76	
<b>Sumatran tiger potential preys</b>			
1	Barking deer	27	19 footprints, 3 feces, 5 voices
2	Sambar deer	13	8 footprints, 5 feces
3	Wild pig	79	49 footprints, 20 feces, 6 puddles, 3 nests, 1 skull
4	Mouse deer	4	Footprints
5	Siamang	9	6 voices, 3 watching

6	Pig tailed macaque	9	Watching
7	Long tailed macaque	7	5 watching, 2 voices
8	Gibbon	6	4 voices, 2 watching
9	Mitred Leaf monkey	4	Watching
Sub total		149	
<b>Others wildlifes</b>			
1	Hornbill	37	21 watching, 16 voices
2	Great argus	18	11 voices, 7 displayed place
3	Civet	4	3 feces, 1 watching
4	Otter	3	2 feces, 1 watching
5	Javan Coucal	1	Watching
6	Crested Goshawk	1	Watching
7	Malayan pangolin	2	Footprints
8	Crested fireback	1	Watching
Sub total		83	83
<b>Total</b>		<b>212</b>	<b>212</b>



**Figure 3.** Map of distribution of sumatran tiger presence found in 2022.



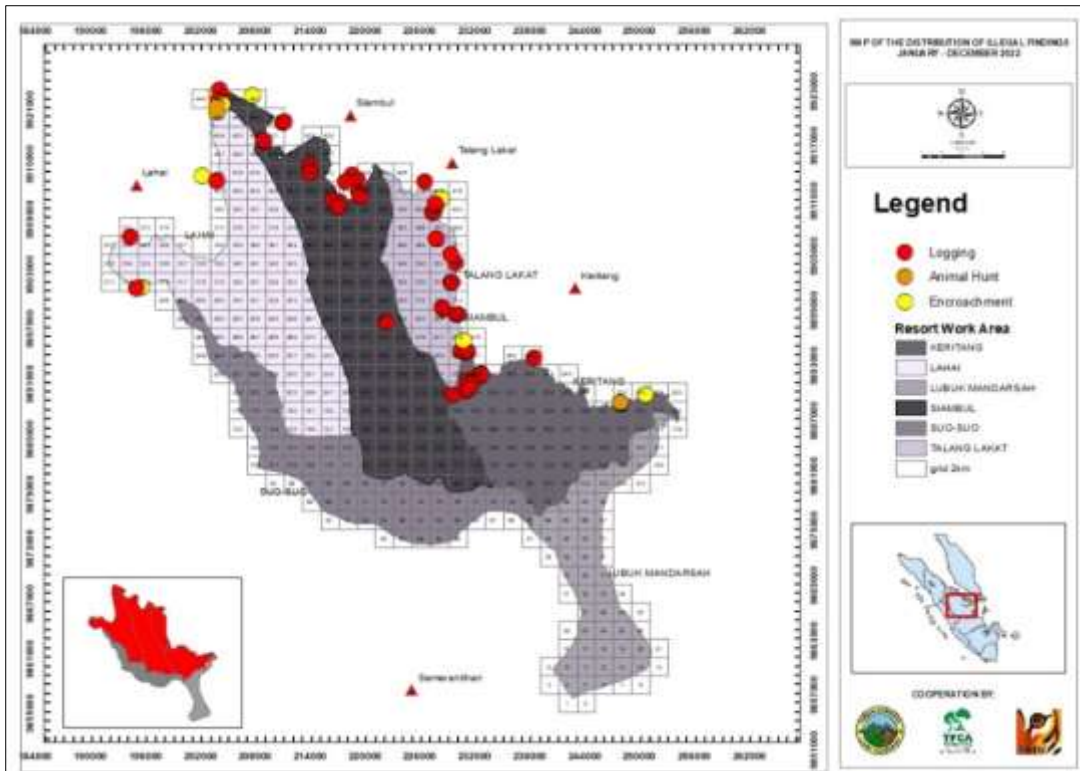
**Figure 3.** Map of distribution of others wildlifes presence found in 2022.

### Finding of Forestry Crime Activities

Was found 3 types of forestry crimes that are illegal logging, wildlifes snares, and forest encroachment. Descriptions of the findings is presented in table 2 below ;

**Table 2.** List of findings on forestry crimes activities at BTNP in 2022.

No	Kind of Forest Crime	Number of Location	Number of Evidence	Keterangan
1	Illegal logging	69	74	36 cubic meters of processed wood, 3 chainsaws, 2 motorbikes, 16 stumps, 2 perpetrator camps. The findings are scattered in Resort Lahai, Siambul, Talang Langkat, Keritang.
2	Forest encroachment	9	9	Forest that has just been cleared and has been planted with oil palm with an area of around 30 ha. Spread in Resort Lahai, Siambul, Talang Langkat, Keritang.
3	Wildlife snare	8	8	The 8 points found consisted of 1 active tiger trap, 4 inactive tiger traps, 2 inactive prey animal traps, and 2 active bird traps. The snares were found in the resorts of Lahai, Siambul and Keritang.
<b>Total</b>		<b>86</b>	<b>91</b>	



**Figure 5.** Map of forestry crimes activities is found in 2022.

The actions we took against the findings of the forestry crime were;

- 1) Recording data.
- 2) Documenting findings.
- 3) Confiscate evidences.
- 4) Doing the destroying and destruction of evidences.

**Figure 6.** Photographs of actions taken against the case of forestry crime activities.



Destroying evidence of processed wood resulting from illegal logging



Chainsaws used for illegal logging activities were confiscated



The motorbikes of the illegal loggers were confiscated

## B.2. The Camera Trap Results

### *The Wildlifes*

Number of wildlifes video are recorded are 428 videos with 414 independent videos. Identified 25 species consistig of 22 mammals species and 3 aves species. Class of mammals consisting of 5 ordo with *carnivora* are most species that are consisting of 9 species. 5 species with highest encounter rate (ER) and relative abundance index (RAI) are malayan pangolin, pig tailed macaque, mouse deer, bat, and mouse.

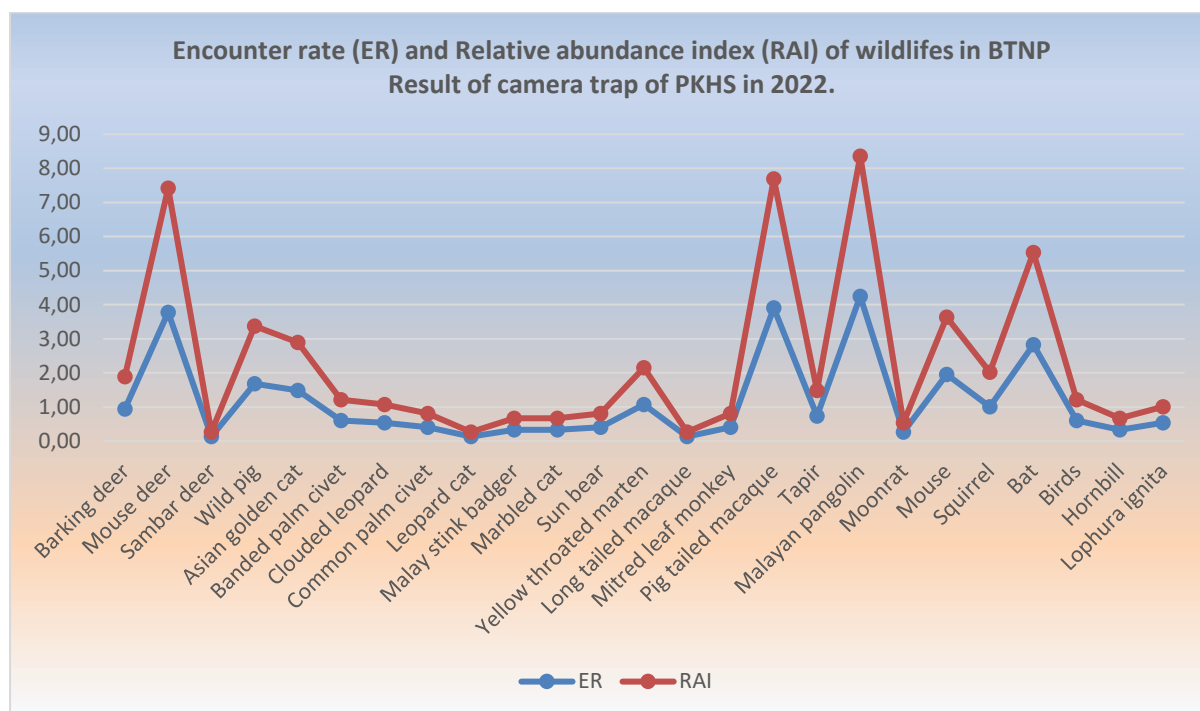
**Table 3.** Biodiversity, encounter rate (ER), and relative abundance index (RAI) of wildlifes in BTNP are recorded camera trap in 2022.

Kelas/Ordo	Species	N	IV	Percent	ER	RAI
<b><u>Mamalia</u></b>						
<i>Artiodactyla</i>	Barking deer	14	14	3,3	0,94	0,944
	Mouse deer	56	54	13,1	3,78	3,641
	Sambar deer	2	2	0,5	0,13	0,135
	Wild pig	25	25	5,8	1,69	1,686
<i>Carnivora</i>	Asian golden cat	22	21	5,1	1,48	1,416
	Banded palm civet	9	9	2,1	0,61	0,607
	Clouded leopard	8	8	1,9	0,54	0,539
	Common palm civet	6	6	1,4	0,40	0,405
	Leopard cat	2	2	0,5	0,13	0,135
	Malay stink badger	5	5	1,2	0,34	0,337
	Marbled cat	5	5	1,2	0,34	0,337
	Sun bear	6	6	1,4	0,40	0,405
	Yellow throated marten	16	16	3,7	1,08	1,079
<i>Primata</i>	Long tailed macaque	2	2	0,5	0,13	0,135
	Mitred leaf monkey	6	6	1,4	0,40	0,405
	Pig tailed macaque	58	56	13,6	3,91	3,776
<i>Perissodactyla</i>	Tapir	11	11	2,6	0,74	0,742
<i>Rodentia</i>	Malayan pangolin	63	61	14,7	4,25	4,113
	Moonrat	4	4	0,9	0,27	0,270
	Mouse	29	25	6,8	1,96	1,686
	Squirrel	15	15	3,5	1,01	1,011



<b>Chiroptera</b>	Bat	42	40	9,8	2,83	2,697
<b>Aves</b>	Birds	9	9	2,1	0,61	0,607
	Hornbill	5	5	1,2	0,34	0,337
	Lophura ignita	8	7	1,9	0,54	0,472
<b>Total of Video</b>		<b>428</b>	<b>414</b>	<b>100,0</b>		
<b>Total of trap day/trap night</b>			<b>1.483</b>			

Noted : N = Number of video, IV = Number of independent video.



**Figure 7.** Graph of Biodiversity, encounter rate (ER), and relative abundance index (RAI) of wildlifes in BTNP are recorded camera trap in 2022.

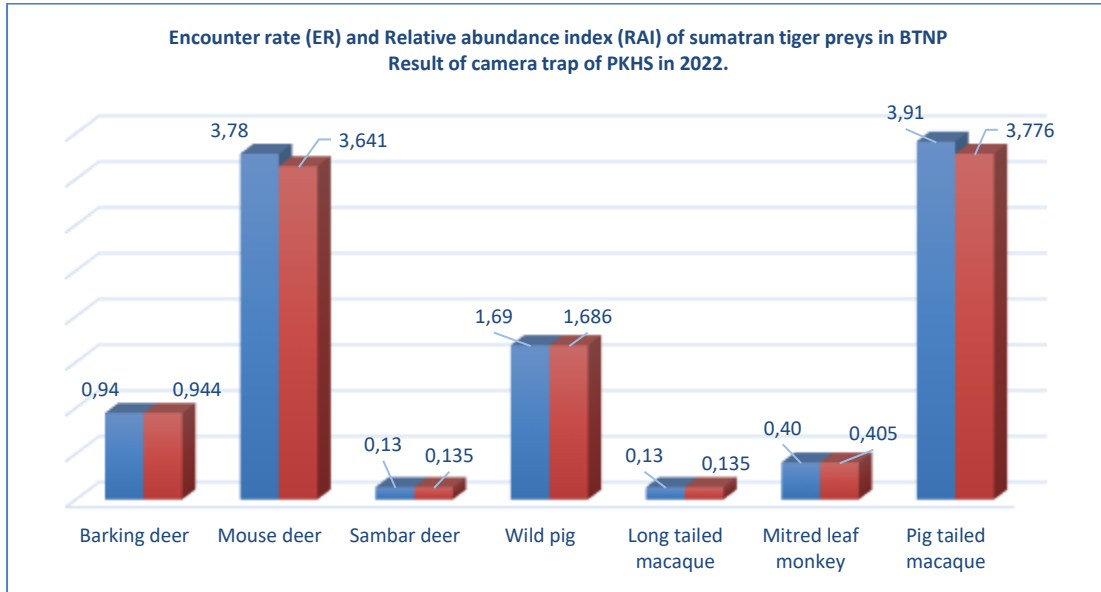
### The Sumatran Tiger Preys

In this year, total of 207 videos of sumatran tiger preys were recorded with 193 independent videos. Identified 8 tiger prey species. 4 species with the highest encounter rate (ER) and relative abundance index (RAI) are barkingdeer, pig tailed macaque, bearded pig, and wild pig.

**Table 4.** Biodiversity, encounter rate (ER), and relative abundance index (RAI) of sumatran tiger preys in BTNP are recorded camera trap in 2024.

Ordo	Species	N	IV	Percent	ER	RAI
<b>Artiodactyla</b>	Barking deer	14	14	8,6	0,94	0,944
	Mouse deer	56	54	34,4	3,78	3,641
	Sambar deer	2	2	1,2	0,13	0,135
	Wild pig	25	25	15,3	1,69	1,686
<b>Primata</b>	Long tailed macaque	2	2	1,2	0,13	0,135

Mitred leaf monkey	6	6	3,7	0,40	0,405
Pig tailed macaque	58	56	35,6	3,91	3,776
<b>Total of Video</b>	<b>163</b>	<b>159</b>	<b>100,0</b>		
<b>Total of trap day/trap night</b>		<b>1.483</b>			



**Figure 8.** Graph of biodiversity, encounter rate (ER), and relative abundance index (RAI) of sumatran tiger preys in BTNP are recorded camera trap in 2022.

## II.1.2. ACTIVITIES OF EDUCATION TO CHILDREN OF HINTERLAND IN BTNP AREA

### Introduction

The inland community of BTNP is a marginal community group that lives traditionally and most of them still rely on forest resources to fulfill their daily needs such as fruit (durian, petai), jernang sap, rattan, and rubber. In the field of education they are also very lagging behind. The majority of rural people do not know (illiterate) letters and numbers. Only children under 20 years old are mostly able to write, read and count. This also happened after PKHS established learning lodges called learning studios in two hamlets, namely in Datai hamlet (started in January 2004) and in Sadan hamlet (started in May 2007). Meanwhile, in the health sector, people rarely receive health services because their settlements are difficult to reach by government medical personnel, resulting in low health rates and very high mortality rates.

So we need a concern to help improve people's lives in various aspects such as education, economy and health. This indirectly also has an impact on the sustainability of the TNBT area and the wildlife in it. Because if their dependence on nature decreases, their activities will decrease in harvesting the forest resources of BTNP. Meanwhile, in the field of education, it affects their ability to filter out bad influences from outside. Like the case of 2 community members who killed a tiger a few years ago. They are influenced by outsiders with the lure of huge monetary rewards. However, after they managed to kill the tiger, they did not get anything and even had to languish in prison.

Educational activities for tribal children have been initiated since January 2004, first in Datai Hamlet, and in May 2007 in Sadan Hamlet. The PKHS Study Center is in Sadan hamlet which is located in the middle of the Bukit Tiga Puluh National Park area. This school is a place for children in the interior of BTNP from 4 hamlets (Suwit, Sadan, Air Bomban and Tanjung Lintang) to get basic level knowledge just like other children outside the forest area. Currently the status of this school is a Learning Group Primary School (Pokjar) which is based at SDN 04 Rantau Langsung.

Besides managing the school in Sadan hamlet, PKHS also helps manage the Marginal Private Elementary School in Datai hamlet. This school was originally a school that was built and managed by PKHS and in its development then continued its management by the Education Office by building a new, more appropriate building. PKHS participates in the management of this school by providing a teaching staff (PKHS staff). This is done because the teachers provided by the education office are very inactive in teaching (often not attending teaching) so that schools rarely carry out learning activities.

Currently, PKHS focuses on managing Sadan school, while schools in Datai are managed directly by the education office. And the management activities of Sadan school are now carried out by the Yayasan Pelita Talang Mamak (PETAMA) which is a non-profit institution initiated and formed by PKHS to manage and develop educational activities in the interior of the BTNP area. The management of the PETAMA Foundation are young people from rural areas who are alumni of Sadan school.

### **Purpose of Activity**

The objectives of this activity are:

1. Optimizing teaching and learning activities at the Sadan school by involving local children as the spearhead.
2. Improving the human resource capacity of rural communities which will have a positive effect on the management and protection of the TNBT area and its ecosystem resources.

### **Implementation and Result**

In 2022, teaching and learning activities cannot be carried out due to the Covid-19 pandemic. However, new students have been admitted. The following is the development of learning studio management that can be conveyed;

1. There have been limited teaching and learning activities (KBM).
2. The School Final Assessment Examination (PAS) for odd semesters and Class Promotion Examinations (UKK) for even semesters have been carried out.
3. The process of accepting new students for the 2021/2022 school year has been carried out.

In this period, learning activities doing by not fully time because still pandemic of *Covid-19* situations. Datas about number of student are;

- Number student of class 1 = 17 students
- Number student of class 2 = 17 students
- Number student of class 3 = 14 students
- Number student of class 4 = 11 students
- Number student of class 5 = 12 students
- Number student of class 6 = 7 students
- Total number of student = 78 students

The teachers are Mulyadi, Desi Mariani, Yelvi Wasantara, Rusdiman.



Figure 9. Documentation of learning activities

### Sustainability of this activity

Starting in the new school year, namely July 2022, school management in Sadan is carried out by the regional government of Indragiri Hulu Regency, namely the Education Office. This is because ;

- 1) In December 2022, the PKHS MoU with Balai BTNP will end. If the collaboration is to be extended, then PKHS must commit that the amount of activity funds that will be allocated to fund the activities planned in the collaboration is a minimum of 1 billion rupiah. So that PKHS feels that it cannot guarantee that it can fulfill this commitment. So it was decided not to extend the collaboration with Balai BTNP.
- 2) The party most responsible for the problems of public education is the government. As the ultimate goal at the beginning of the commencement of educational activities for children in the interior of the BTNP area, namely the involvement of the government as the owner of the educational authority for education in the interior of the BTNP. So if now the management of education in the interior of BTNP is carried out by the government, then this is a very good and big result and achievement.

- 3) The transition process for the management of educational activities in the interior of BTNP has been carried out from the coordination stage to implementation.

### II.1.3. TRAINING ON PATROL TECHNIQUES AND SNARE SWEEP FOR THE PKHS AND BTNP PATROL TEAMS

The purpose and objective of this refresher training activity is to refresh the understanding and knowledge and skills already possessed by PKHS members and BTNP staff in the field of patrolling and sweeping snares in the context of carrying out the tasks of protecting the Sumatran tiger and its habitat in BTNP. This refresher activity was carried out by means of interactive discussions. There were 15 participants consisting of 7 BTNP rangers and 8 PKHS staffs. The resource person presented the material as a basis for discussion and then participants responded with questions or input related to the application in the field.

**Table 5. Training schedule in BTNP**

Time	Activities	Instructure/Fasilitator
Monday, 28 March 2022		
08.00 – 09.00	Registration of participant	PKHS
09.00 – 09.30	Opening ceremonial	BTNP Head Office
09.30 – 09.45	Coffee break	PKHS
09.45 – 09.50	Pre Test	PKHS
09.50 – 11.45	Lesson on land navigation	BTNP
11.45 – 13.30	Lunch break	PKHS
13.30 – 16.00	Lesson and practice of datasheet filling techniques	BTNP and PKHS
Tuesday, 29 March 2022		
09.00 – 10.30	Lesson of law enforcement and handling snares	BTNP
10.30 – 11.45	Simulation/practical of Lesson of law enforcement and handling snares	BTNP and PKHS
11.45 – 13.00	Lunch break	PKHS
13.00 – 15.30	Focus group discussion	BTNP and PKHS
15.30 – 15.40	Post Test	PKHS
15.40 – 16.00	Closing ceremonial	PKHS

- **Pre-test and Post-Test**

Pre-test activities are given on the first day before starting material 1. Meanwhile, the post-test is given after the simulation activities are carried out or on the last day. The questions tested for the pre-test and post-test are the same. There are 5 questions in this comprehension test and each question has a weight of 20 points. The participant's eligibility score in this understanding is 70 points.

**Table 6.** List of pre-test and post-test scores of trainees

No	Name	Pre-test	Post-test	Institution
		Score		
1	Sumarto	40	60	PKHS staff
2	Febriansyah	40	80	PKHS staff
3	Wijayanto	80	80	PKHS staff
4	Panji Buono	100	100	PKHS staff
5	Hoyri Fadli	100	100	PKHS staff
6	Hengki Irawan	100	100	PKHS staff
7	Abdul Yosep	100	100	PKHS staff
8	Raja Parianto	100	100	PKHS staff
9	Muji Santoso	100	100	PKHS staff
10	Abrari Syahputra	100	100	BTNP ranger
11	MB. Irhasy R Siregar	100	100	BTNP ranger
12	Sabarman	100	100	BTNP ranger
13	Ronny N. Gultom	100	100	BTNP ranger
14	Al Ikromul Hanafi	100	80	BTNP ranger
15	M. Fauzan Rizeno	100	100	BTNP ranger
<b>Total scores</b>		<b>1.360</b>	<b>1.400</b>	

The total number of pre-test scores for all training participants is 1.360 and the post-test results are 1,400. There is an increase in the average result per test by 2 points. During the pre-test the average score was 91 and the average after the post post was 93.

Then, if you look at the high and low scores, it can be seen that the lowest score during the pre test was 40 points and the highest score was 100 points. highest is 100 points. The following is a list of graphic values for pre-test and post-test results. Meanwhile, the score after the post-test was the lowest score was 60 points and the score based on the results of the understanding test and field simulation, it can be seen that all the participants (15 people) after attending the training could be categorized as having sufficient ability as implementers in the Sweep Patrol activities.

**Figure 10.** Photos of patrol training





Lesson of law enforcement



Together photo after training

#### II.1.4. SUPPORTING CONSERVATION CAMPAIGN ACTIVITIES FOR THE COMMUNITY LED BY THE BTNP OFFICER THROUGH RUN COMPETITION “THE GRANIT MARATHON 10K”.



The marathon competition with the name GRANIT 10K will be held on October 2, 2022 with the center location at Camp Granit, Talang Lakat Resort, Bukit Tiga Puluh National Park Officer. The main objective of the activity is as a form of public awareness campaign about the importance of maintaining and protecting the BTNP forest area and the natural resources in it.

The number of participants was approximately 120 people from various backgrounds, namely the police, military, civil servants, students, and the general public. PKHS contributed part of the funding, and as part of the activity organizing committee.

**Figure 11.** Documentation of marathon event.

#### II.2. WAY KAMBAS NATIONAL PARK

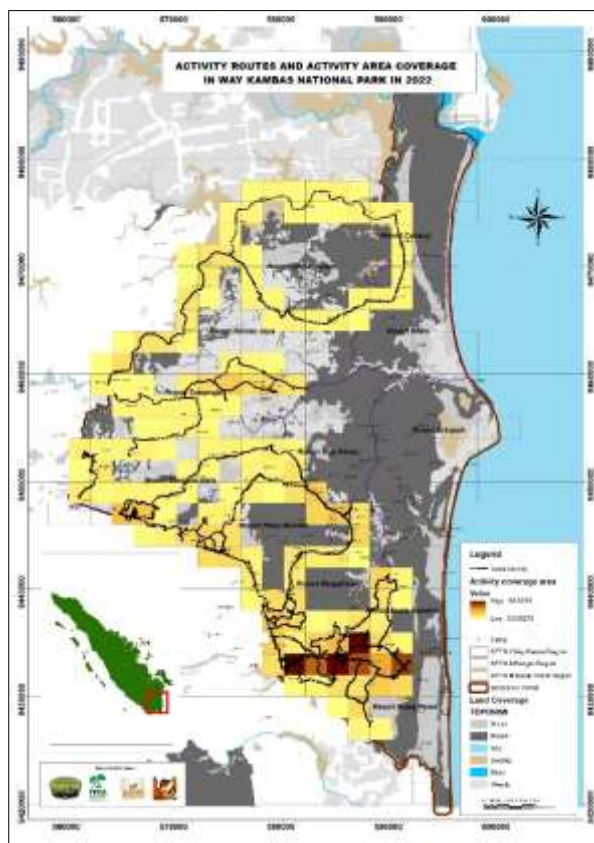
## II.2.1. SURVEY, PATROL AND MONITORING POPULATION OF SUMATRAN TIGER, PREYS AND HABITS

### A. EFFORTS OF ACTIVITIES

PKHS field team was done 11 trips for patrol and monitoring tigers, preys and their habits in the SPTN I Way Kanan, SPTN II Bungur, and SPTN III Kuala Penet. The activities were by 1 team involving 12 peoples consisting of 6 PKHS staffs and 6 WKNP staffs (ranger).

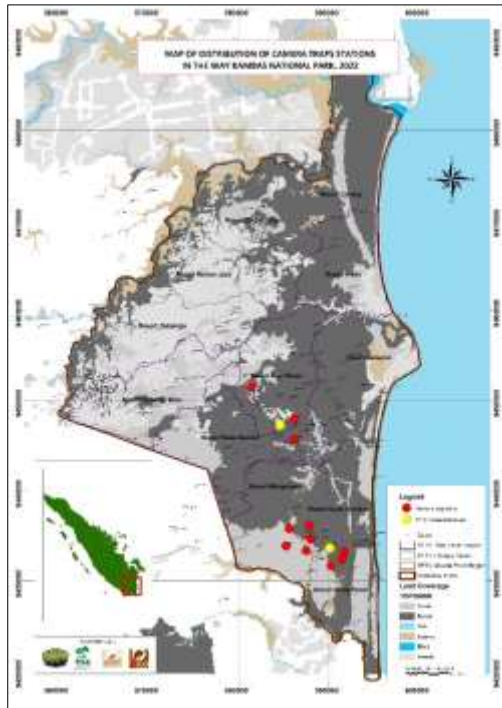
**Table 7.** Implementations and results of activities

Description	Number	Total
Implementation of activities	11 trips	65 days
Number of track length		611 kilometres
Number of coverage area		151 grid 2x2 km or 60.400 hectares
Coverage area of WKNP Sexion		Way Kanan, Bungur, and Kuala Penet
Coverage area of WKNP Resort		Way Kanan, Rawa Bunder, Margahayu, Totoprojo, Kuala Kambas, Susukan Baru, Cabang, Umbul Salam



**Figure 12.** Map of coverage area of patrol





The number of camera traps are installed are 13 units (stations) spread over two SPTN areas, that are the SPTN I Way Kanan and SPTN III Kuala Penet. There are 2 camera traps are not good performed.

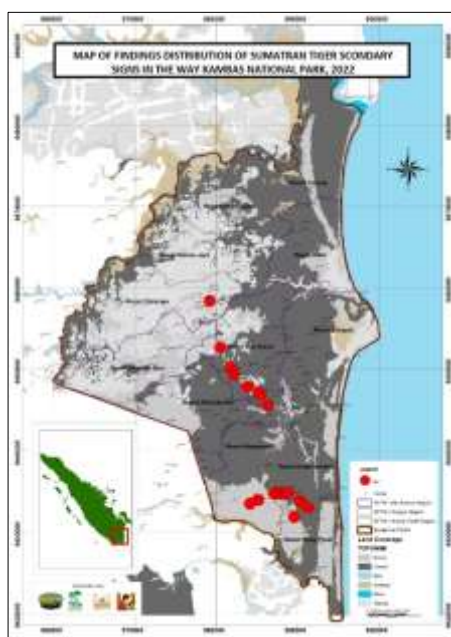
**Figure 13.** Map location of camera traps distribution on 2021

## Result of Survey and Patrol

### *The Wildlifes*

Results of the occupancy/transect survey, data on the presence of wildlifes has been collected. 12 species of wildlife has been identified consisting of 5 big mammals that are sumatran tiger, sumatran elephant, tapir, sun bear, dan wild cats; and also 6 species of sumatran tiger preys that are barking deer, sambar deer, wild pig, long –tailed macaque, siamang, and mouse deer.

### *The Sumatran Tiger*



Sign of presence of sumatran tiger was founded in 24 locations with 29 secondary signs that are 14 footprints, 6 feces, and 5 urines. The distribution of these findings is spread throughout 4 resorts that are Way Kanan, Toto Projo, Kuala Kambas, and Margahayu.

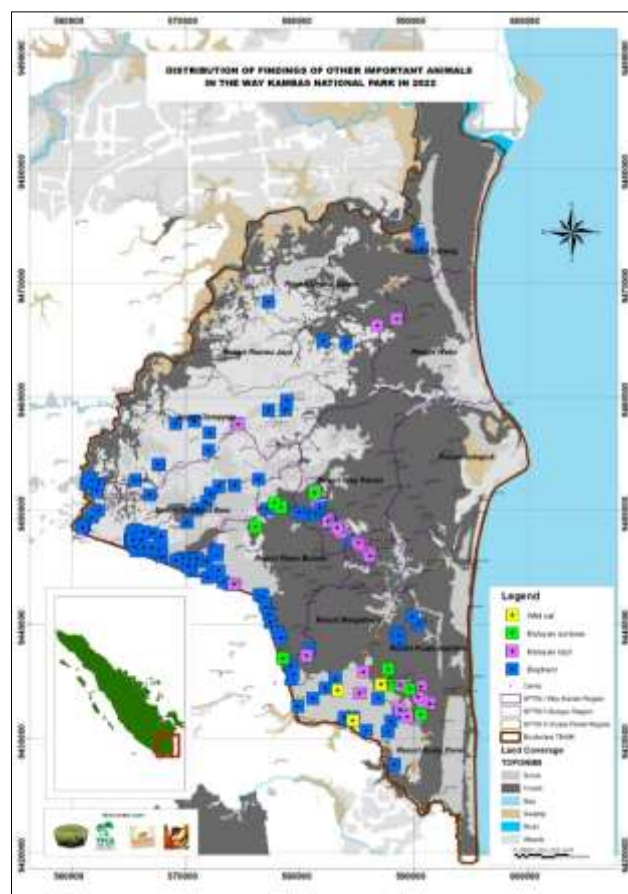
**Figure 14.** Map of distribution of sumatran tiger sign presence

### The Important Wildlifes

There are 4 important wildlifes for Way Kambas National Park besides the Sumatran tiger, namely the sumatran elephant, tapir, sun bear and wild cat. As many as 200 primary and secondary signs have been found from these animals spread over 180 locations. The Sumatran elephant is the species most often monitored.

**Table 8.** List of findings of Important wildlifes besides the Sumatran tiger in the WKNP.

No	Species	Number of location	Number of Findings	Description
1	Tapir	43	47	18 footprints, 14 scrapes, 4 food wastes, and 11 feces
2	Wild cats	3	3	2 footprints, 1 fece
3	Sun bear	10	10	1 watching, 6 footprints, 2 scratches, 1 voice
4	Sumatran elephant	124	140	76 footprints, 30 feces, 14 voices, 14 food wastes, and 6 watching
Total		180	200	



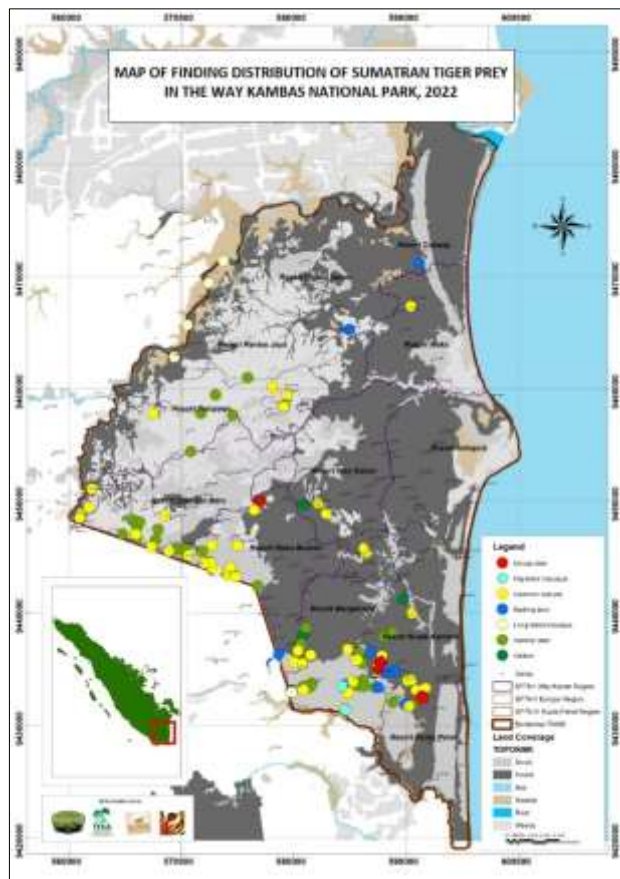
**Figure 15.** Map of finding distribution of the important wildlifes besides sumatran tiger

### The Sumatran Tiger Preys

Have found sign presence of 7 sumatran tiger preys that are wild pig, sambar deer, barking deer, mouse deer, long-tailed macaque, pig tailed macaque, and siamang. Wild pig are most found.

**Table 9.** List of findings Sumatran tiger preys in the WKNP.

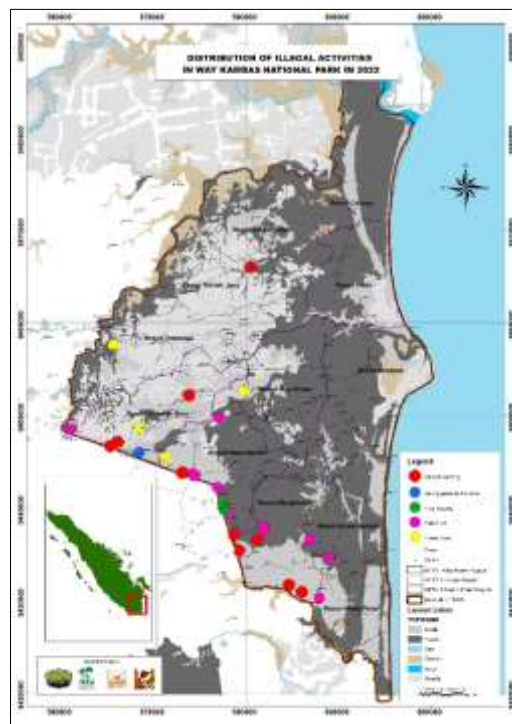
No	Species	Number of location	Number of Findings	Description
1	Barking deer	21	21	13 footprints, 6 feces, and 2 watching
2	Sambar deer	49	50	31 footprints, 11 feces, 4 voices, and 4 watching
3	Wild pig	59	65	29 footprints, 20 traces of looking for worms, 11 puddle, 4 pig's nest, 1 carcass
4	Long-tailed macaque	6	23	Watching
5	Siamang	7	7	6 voices, 1 watching
6	Mouse deer	7	7	6 footprints, 1 whatching
7	Pig tailed macaque	2	14	Whatching
Total		151	183	



**Figure 16.** Map of distribution of sumatran tiger preys sign presences

### The Forestry Crime Activity

Have found 4 types of findings indicate illegal activities that are poaching, forest fire, cutting wood, and illegal fishing. The findings of the hunting sign were in the form of theft/destruction of the camera trap and the recording of several moments of dogs to hunting/gladakes are crossing the camera trap location. Meanwhile, for the theft of fish, the finding is to catch the perpetrators of fishing in Rawa Kali Biru. There have been appeals, warnings, and expulsions (forcibly repatriated) to the perpetrators.



**Figure 17.** Map of finding distribution of forestry crime activities in the WKNP, 2022.

**Table 10.** List of forestry crime activities

No	Kind of crime	Location	Number of Found	Description
1	Hunting	11	16	5 steel wire snares (large prey animals) were activating, 2 steel wire snares were inactive, and 9 nylon/mine snares (small/medium prey animals, also monitor lizards) were inactive. The snares were found in the resorts of Susukan Baru, Rawa Bunder and Margahayu.
2	Fishing	14	37	2 camps, 3 traps, 30 fishing rods, and 2 troll nets
3	Forest fire	6	6	The area of the forest that burned was around 32 hectares
4	Cutting of wood	2	2	Former logging activities of 2 pieces of meranti wood

### The Camera Trapp

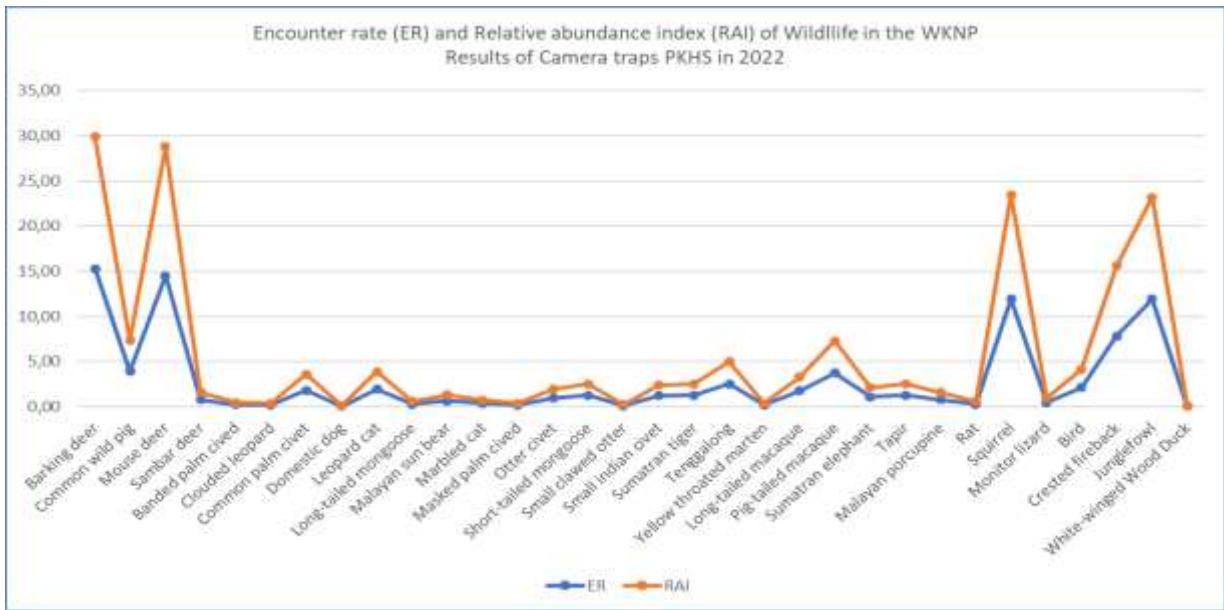
#### The Wildlifes

Results of camera trap are instaled during 1.660 trap day/night are recorded 1.510 videos of wildlifes with 1.460 independent videos. Have been identified 32 species consisting

of 27 mammals, 1 reptil, and 4 aves. 27 species of mammals came from 5 ordo, ordo *carnivore* are most species that are 16 species (59% of mammals videos or 50% of wildlifes videos). But, ordo by most video are *artiodactyla* that are 663 videos atau 43,9% of wildlifes videos. 5 species with highest encounter rate (ER) and relative abundance index (RAI) are mouse deer, barking deer, wild pig, sempidan biru, and long-tailed macaque.

**Table 11.** Encounter rate (ER) and relative abundance index (RAI) of wildlifes in the WKNP, results of camera trap in 2022.

Class/Ordo	Species	Number of Video			ER	RAI
		Total	Independent	Percent		
<b><i>Mamalia</i></b>						
<b><i>Artiodactyla</i></b>	Barking deer	254	242	16,8	15,30	14,578
	Common wild pig	65	57	4,3	3,92	3,434
	Mouse deer	240	238	15,9	14,46	14,337
	Sambar deer	13	13	0,9	0,78	0,783
<b><i>Carnivora</i></b>	Banded palm civet	4	4	0,3	0,24	0,241
	Clouded leopard	3	3	0,2	0,18	0,181
	Common palm civet	30	30	2,0	1,81	1,807
	Domestic dog	1	1	0,1	0,06	0,060
	Leopard cat	32	32	2,1	1,93	1,928
	Long-tailed mongoose	5	5	0,3	0,30	0,301
	Malayan sun bear	11	11	0,7	0,66	0,663
	Marbled cat	6	6	0,4	0,36	0,361
	Masked palm civet	3	3	0,2	0,18	0,181
	Otter civet	16	16	1,1	0,96	0,964
	Short-tailed mongoose	21	21	1,4	1,27	1,265
	Small clawed otter	2	2	0,1	0,12	0,120
	Small indian civet	20	20	1,3	1,20	1,205
	Sumatran tiger	21	21	1,4	1,27	1,265
	Tenggalong	42	41	2,8	2,53	2,470
	Yellow throated marten	3	3	0,2	0,18	0,181
<b><i>Primata</i></b>	Long-tailed macaque	29	26	1,9	1,75	1,566
	Pig-tailed macaque	62	59	4,1	3,73	3,554
<b><i>Proboscidea</i></b>	Sumatran elephant	18	17	1,2	1,08	1,024
	Tapir	21	21	1,4	1,27	1,265
<b><i>Rodentia</i></b>	Malayan porcupine	13	13	0,9	0,78	0,783
	Rat	5	5	0,3	0,30	0,301
	Squirrel	198	191	13,1	11,93	11,506
<b><i>Reptilia</i></b>	Monitor lizard	8	8	0,5	0,48	0,482
<b><i>Aves</i></b>	Bird	35	34	2,3	2,11	2,048
	Crested fireback	130	129	8,6	7,83	7,771
	Junglefowl	198	187	13,1	11,93	11,265
	White-winged Wood Duck	1	1	0,1	0,06	0,060
<b>Total of Video</b>		<b>1.510</b>	<b>1.460</b>	<b>100,0</b>		
<b>Total of Trap Day</b>		<b>1.660</b>				



**Figure 18.** Graph of Encounter rate (ER) and relative abundance index (RAI) of wildlifes in the WKNP, results of camera trap in 2022.

### The Sumatran Tiger

Recorded 21 sumatran tiger videos with 21 independent videos. After analyzing 21 sumatran tiger videos, identified 2 tiger individuals consisting of 1 adult male and 1 adult female. To simplify identification process and monitoring in the field, then each individual tiger are given an identity marker are name ID, that are BAGASKARA (adult male) and KARTINI (adult female). BAGASKARA and KARTINI are tiger couple, because often recorded in the same place by nearly time of recorded. The encounter rate (ER) and relative abundance index (RAI) of sumatran tiger are ER=1,27 and RAI=1,265.

**Figure 19.** Two tiger individuals are of camera trap in 2022.



monitored

BAGASKARA (adult male)



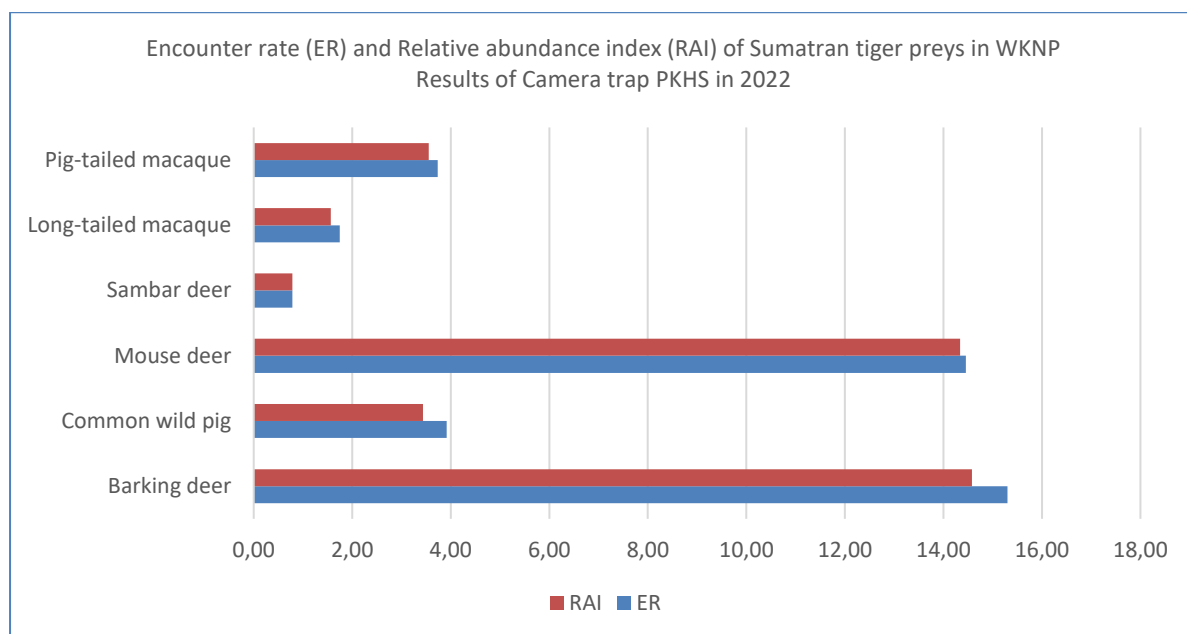
KARTINI (adult female)  
**Sumatran Tiger Preys**

Have recorded 663 videos of the sumatran tiger preys with 635 independent videos. Identified 6 preys species come from 2 ordo that are common wild pig, barking deer, mouse deer, and sambar deer (*ordo artiodactyla*); so, long-tailed macaque and pig-tailed macaque (*ordo primata*). Presentation of total of Sumatran tiger preys video are 44% of total of all wildlifes videos.

The encounter rate (ER) and relative abundance index (RAI) of six species of sumatran tiger preys have been recorded by camera trap are quite high, with 3 species *artiodactyla* that are mouse deer and barking deer included in over abundance category; whereas common wild pig, long-tailed macaque, sambar deer, and pig-tailed macaque included in quite abundance category.

**Table 12.** The encounter rate (ER) and relative abundance index (RAI) of sumatran tiger preys in WKNP based on camera trap results in 2022.

Class/Ordo	Species	Number of Video			ER	RAI
		Total	Independent	Percent %		
<b>Artiodactyla</b>	Barking deer	254	242	38,3	15,30	14,578
	Common wild pig	65	57	9,8	3,92	3,434
	Mouse deer	240	238	36,2	14,46	14,337
	Sambar deer	13	13	2,0	0,78	0,783
<b>Primata</b>	Long-tailed macaque	29	26	4,4	1,75	1,566
	Pig-tailed macaque	62	59	9,4	3,73	3,554
<b>Total of Video</b>		<b>663</b>	<b>635</b>	<b>100,0</b>		
<b>Total of Trap Day</b>		<b>1.660</b>				



**Figure 20.** Graph of encounter rate (ER) and relative abundance index (RAI) of sumatran tiger preys in WKNP based on camera trap results in 2022.

## II.2.2. TRAINING ON PATROL TECHNIQUES AND SNARE SWEEP FOR THE PKHS AND WKNP PATROL TEAMS

The purpose and objective of this refresher training activity is to refresh the understanding and knowledge and skills already possessed by PKHS members and TNWK staff in the field of patrolling and sweeping snares in the context of carrying out the tasks of protecting the Sumatran tiger and its habitat in WKNP. The participants of this training are 15 peoples who come from/consisting of; 4 staffs of PKHS and 11 WKNP rangers who are representatives of each resort, 1 person each.

**Table 13.** *List of participants of patrol team training in WKNP in March 18-19, 2022*

No	Name	Institution
1.	Marjulis	WKNP ranger
2.	Suprpto	WKNP ranger
3.	Yudhi S.U	WKNP ranger
4.	Helmi	WKNP ranger
5.	Edy Rusmanto	WKNP ranger
6.	Imam Muslim	WKNP ranger
7.	Totok Riyadi	WKNP ranger
8.	Wahyudi	WKNP ranger
9.	Sabarudin	WKNP ranger
10.	Muslimin	WKNP ranger
11.	Marsah Hermansyah	WKNP ranger
12.	Sunarwanto	PKHS field staff
13.	Herwindo	PKHS field staff
14.	Anang Rendi	PKHS field staff
15.	Dwi Adiyanto	PKHS field staff

The refresher training for 2 days is divided into two sessions, namely; the first day the delivery of class material and the second day the delivery of skills related to finding and destroying snares and simulations or practices.

In every delivery of training materials by instructors or resource persons, discussion and dialogue models are always developed so that there is no one-way and monotonous flow. With the discussion process, it is hoped that the atmosphere will become more lively and the flow of material delivery can be two-way (there is input from participants to resource persons and between participants).

Some of the lessons presented in this training are ;

- 1) The basic principles of protection, patrol and law enforcement in the field of forestry and conservation. This material was delivered by Mr. Abdu, SP., as the coordinator of the Forestry Service Office of the Way Kambas National Park. Dalam paparan yang diberikan kepada peserta antara lain disampaikan hal-hal sebagai berikut :
- 2) Introduction to the typology of animal snares and snare sweeping activities. This material was presented by Dedy Istnandar (Coordinator species of WKNP) and Luqmansyah (Ranger of WKNP).
- 3) Land navigation. The material on land navigation by Dedy Istnandar.
- 4) Introduction to ASF sampling SOP. This material was delivered by the PKHS Team. This material emphasizes, among other things, the principles of ASF sampling.



- 5) The technique of filling out data forms (tally sheets) and making basic reports by Santoso from PKHS.

**Pre test and Post test**

To find out about the knowledge of participants before and after attending the training, all participants were given the same questions at the beginning and end of the training (pre-test and post-test). Each participant was given 5 questions, each of which was related to the title or theme of the training material. To answer each question participants are only asked to choose one of the most correct answer options (multiple choice). Each answer to the question is given a score of 20, so the score obtained by participants if they can answer all the questions correctly is 100 (range of values 0 - 100). The general description of the results of the pre-test and post-test of the training participants is as follows:

**Table 14.** *List of pre-test and post-test scores of training participants*

Score	Pre Test (number people)	Post Test (number people)
100	5	5
80	3	6
60	7	4

From the description of the results of these values can be explained as follows:

- 1) During the pre-test and post-test there were 5 peoples out of 15 peoples who had the knowledge and were able to answer all the questions correctly (score 100); this means that the five people already have good knowledge of the training material.
- 2) There were 3 participants who scored 60 at the pretest and at the post test the score increased to 80; which means that the knowledge of the three participants increased after attending the training.
- 3) There are still 4 people whose pretest and posttest scores are the same, namely 60.

**Figure 21.** *Photos of Training patrol team*



Opening ceremonial

Lesson about patrol implementation and law enforcement



Lesson about ASF wild pig disease



Lesson about wildlifes snare



Lesson about land navigation



Pre-test/pos-test session

### II.2.3. MONITORING OF WILDLIFES AND *MELASTOMA MALABATHRICUM* PLANT IN THE SAMPLING PLOT OF GRAZING AREA OF ANIMAL PREY IN KALIBIRU SWAMP

This activity is a continuation of the previous year's activity, namely monitoring the condition of the sample plots (1 hectare) for controlling the *Melastoma malabathricum* plant, which is an invasive plant that can eliminate grass species and populations which are a food source for prey animals for the Sumatran tiger and or other ungulates. Where the activities carried out in the sample plot were the removal of these weeds which were carried out in 2018-2019.

The types of activities carried out are monitoring the condition of regrowth of *Melastoma malabathricum* after removal, and also monitoring wild animals that are active in sample plots using Binoculars. Observations were made above the tree house.

The results from monitoring the regrowth of Senggani (*Melastoma malabathricum*) in the sample plots are;

- 1) Senggani plants (*Melastoma malabathricum*) are growing again, especially at the edges of the plot.
- 2) Native grass species have started to grow in most of the plot area which has the potential to become a source of food for grass-eating animals (animals that prey on tigers) in the Kali Biru swamp.

**Figure 22.** Photos; comparison between the conditions of the sample plots after removal of *Melastoma malabathricum* (2019) and 3 years after removal (2022).



After removal (2019)



3 years after removal (2022)

While the results of monitoring activities on wildlife activities in the sample plots and in their surroundings were observed several types of wildlife, namely the Sumatran elephant, sambar, deer, wild boar, long-tailed monkeys, macaques, and several types of water birds, hornbills, and others.

**Figure 23.** Photos; monitoring of wild animals with binoculars and examples of wildlife activities that have been photographed.



Monitoring by binoculars at tree house



Wildlifes in activating in grazing area

#### II.2.4. THE RESEARCH FACILITATION FOR MASTER'S DEGREE STUDENTS

Research activities have been carried out by three students of Lampung University, namely Vera Liony, Agis Agista, and Bagus Susilo Putra. The three students are of the Biology Masters Program. The research themes for each student are as follows:

- 1) Agis Agista ; The Abundance of Barking deer (*Muntiacus muntjak*) and Sambar Deer (*Cervus unicolor*) as Prey Animals for the Sumatran Tiger (*Panthera Tigris Sumatrae*) Using by Camera Trap in Way Kambas National Park.
- 2) Vera Liony ; The Abundance of Wild pig (*Sus Scrofa*) as Prey Animals for the Sumatran Tiger (*Panthera Tigris Sumatrae*) Using by Camera Traps in Way Kambas National Park.
- 3) Bagus Susilo Putra : The Analysis of the Presence of the Sumatran Tiger (*Panthera tigris sumatrae*) and Its Preys Based on Camera Trap Data in Way Kambas National Park (TNWK), Lampung.

The research progress of the three of them is currently conducting data analysis and preparing a thesis.

**Figure 24.** *Photos of field activities by students and field team.*



### II.2.5. CONDUCTING GUIDANCE TO UNDERGRADUATE STUDENTS WHO ARE DOING CONSERVATION PRACTICAL WORK IN THE WAY KAMBAS NATIONAL PARK

On 10 until 15 in July of 2022, PKHS facilitated and guided 6 undergraduate students at Bengkulu University, one of the tertiary institutions in Bengkulu Province, Sumatra. They are from the Faculty of Forestry. They are working on assignments for practical work in institutions that are carrying out natural resource conservation activities.

Some of the knowledge and practice in the field taught by PKHS are;

- 1) Introduction to the Sumatran tiger and its bio-ecology.
- 2) Introduction to PKHS.
- 3) Introduction to the basics of survey, monitoring and patrol activities such as introduction and practice of land navigation science, introduction and practice of mapping science, introduction and practice of filling out tally sheets and making basic reports, introduction and practice of identifying secondary signs of Sumatran tigers and other wild animals, as well as the introduction and operational practice of camera traps.

**Figure 25.** *Photos of providing guidance to students.*





Introduction to land navigation science and techniques



Completion of the tally sheet/data recording of findings data

### III. THE CONCLUSION

#### III.1. In The Bukit Tiga Puluh National Park

In closing, from the implementation of activities in the context of efforts to save the Sumatran tiger, prey animals and their habitat during 2022, the following can be conveyed:

- 1) Four types of activities have been carried out, namely: (a) Patrol, surveys and monitoring of tiger populations, preys and their habitats; (b) Education for children in the inside of the BTNP area; (c) Training on patrol techniques and snare sweep for the pkhs and btnp patrol teams; (d) Supporting conservation campaign activities for the community led by the BTNP officer through run competition “the Granit Marathon 10K”.
- 2) Patrol survey activities and monitoring of sumatran tigers and their habitats have reached the all of BTNP resorts (6 resorts).
- 3) The results of the patrol survey activities include observing several types of wildlifes, that are sumatran tiger, Sumatran elephant, tapir, sun bear, wild cats and several types of tiger preys, and other wildlifes. Founded 3 types of forestry criminal activities, that are illegal logging, wildlifes hunting, and forest encroachment.
- 4) The results of the camera trap include;
  - a. Monitored 25 species of wildlifes consisting of 22 mammals and 3 aves.
  - b. The tiger was not captured.
  - c. It was observed that 7 types of sumatran tiger preys were observed, that are wild pig, barking deer, sambar deer, mouse deer, pig tailed macaque, long tailed macaque, and mitred leaf monkey.
- 5) Educational activities carried out with activity points are limited teaching and learning activities, odd semester exams, class promotion exams, and new student admissions. But, starting in July 2022, management of educational activities taken over by the local government.
- 6) Training on patrol techniques and snare sweep for the PKHS and BTNP patrol teams was held on March 28-29 2022. There were 15 participants consisting of 7 BTNP rangers and 8 PKHS staffs.

- 7) Supporting conservation campaign activities for the community led by the BTNP officer through run competition “the Granit Marathon 10K”. The number of participants was approximately 120 people from various backgrounds, namely the police, military, civil servants, students, and the general public.

### III.2. In The Way Kambas National Park

In closing, from the implementation of activities in the context of efforts to save the Sumatran tiger, prey animals and their habitat during 2022, the following can be conveyed:

- 1) Four types of activities have been carried out, namely: (a) Patrol, surveys and monitoring of tiger populations, preys and their habitats; (b) Training on patrol techniques and snare sweep for the PKHS and WKNP patrol teams; (c) Monitoring of wildlifes in the sampling plot of grazing area of animal prey in Kali Biru swamp; (d) The research facilitation for master's degree students; (e) Conducting guidance to undergraduate students who are doing conservation practical work in the WKNP.
- 2) Patrol survey activities and monitoring of sumatran tigers and their habitats have reached the 8 resorts of total 12 resorts in WKNP.
- 3) The results of the patrol survey activities include observing several types of wildlifes, that are sumatran tiger, Sumatran elephant, tapir, sun bear, wild cats and several types of tiger preys, and other wildlifes. Founded 4 types of forestry criminal activities, that are wildlifes hunting, Forest fire, cutting wood/tree, and illegal fishing.
- 4) The results of the camera trap include;
  - d. Monitored 32 species of wildlifes consisting of 27 mammals, 1 reptile and 4 aves.
  - e. Monitored 2 sumatran tigers individuals (1 adult male and 1 adult female) of the 21 tiger videos.
  - f. It was observed that 6 types of sumatran tiger preys were observed, that are wild pig, barking deer, sambar deer, mouse deer, pig tailed macaque, ang long tailed macaque.
- 5) Training on patrol techniques and snare sweep for the PKHS and WKNP patrol teams was doing in 18 – 19 in March of 2022. The participants of this training are 15 peoples who come from/consisting of; 4 staffs of PKHS and 11 WKNP rangers who are representatives of each resort, 1 person each.
- 6) Monitoring of wildlifes in the sampling plot of grazing area of animal prey in Kali Biru swamp was doing. The types of activities carried out are monitoring the condition of regrowth of *Melastoma malabathricum* after removal, and also monitoring wild animals that are active in sample plots using Binoculars. Observations were made above the tree house.
- 7) The research facilitation for master's degree students was doing and still going. Research activities have been carried out by three students of Lampung University, namely Vera Liony, Agis Agista, and Bagus Susilo Putra. The three students are of the Biology Masters Program. The research progress of the three of them is currently conducting data analysis and preparing a thesis.
- 8) Conducting guidance to undergraduate students who are doing conservation practical work in the WKNP. On 10 until 15 in July of 2022, PKHS facilitated and guided 6 undergraduate students at Bengkulu University, one of the tertiary institutions in Bengkulu Province, Sumatra. They are from the Faculty of Forestry. They are working

on assignments for practical work in institutions that are carrying out natural resource conservation activities.

#### IV. THE APPENDIXS

**Appendix 1.** Documentation of survey, patrol, and monitoring of sumatran tiger, preys, and habits in BTNP.



The illegal logging evidences



The illegal logging evidences



The illegal logging evidences



The illegal logging evidences



Bark of *Vatica rassak* tree (evidences)



The illegal logging evidences



Found a snare for the deer (snare is activating)



Found a snare for the tiger (snare is not activating)



The forest clearing (evidence of forest encroachment)



The forest clearing (evidence of forest encroachment)



Sumatran tiger footprint



Checking of camera trap



Sunbear footprint



Feces of Tapir



Feces of Sumatran elephant



Tents of the patrol team to spend the night in the forest



**Appendix 2. Screen capture of wildlifes videos, camera trap results in BTNP.**

 <p>11-22-2022 12:45:59</p>	 <p>07-29-2022 13:24:59</p>
 <p>11-16-2022 18:28:04</p>	 <p>10-09-2022 04:07:34</p>
 <p>08-23-2022 17:03:01</p>	 <p>04-18-2022 06:30:44</p>
 <p>04-24-2022 09:45:23</p>	 <p>11-25-2022 12:38:48</p>



Mouse deer

10-22-2022 18:57:54



Pig tailed macaque

10-14-2022 09:10:52



Malayan porcupine

09-28-2022 19:03:10



Mitred leaf monkey

11-16-2022 08:25:00



Yellow throated marten

09-19-2022 11:06:58



Common palm civet

08-08-2022 23:06:15



Banded palm civet

08-20-2022 19:07:11



Malay stink badger

08-13-2022 03:13:04



Moorat

09-27-2022 20:26:27



Great argus

07-21-2022 14:37:00

**Appendix 3. Documentation of survey, patrol, and monitoring of sumatran tiger, preys, and habits in WKNP.**

	
<p>Team on the track line</p>	<p>Recording data of findings</p>
	
<p>The patrol team prepares to continue their task after spending the night in tents</p>	<p>The patrol team headed to the target location by boat</p>
	
<p>Found a pig wallow</p>	<p>Sambar deer footprints</p>



A feces of Sumatran tiger



A scrape of tapir



Found a large animal trap that is still active



Found a large animal trap that is still active (other site)



Found traces of forest fires











Finding nets for catching fish





**Appendix 4. Screen capture of wildlifes videos, camera trap results in WKNP.**

 Common wildpig	 Sambar deer	 Pig tailed macaque
 Barking deer	 Mouse deer	 Long tailed macaque
 Marbled cat	 Clouded leopard	 Tenggalong
 Leopard cat	 Sumatran elephant	 Malayan sun bear
 Tapir	 Short tailed macaque	 Crested fireback





**Appendix 5. Screen capture and identification of Sumatran tiger, camera trap results in WKNP.**


No	MAP-ID GRID	Stasiun's Name	CAPTURE OF VIDEO
1	1110-54-17B	Jalur Camp C	 <p data-bbox="1018 600 1118 629">KARTINI</p>
2	1110-54-16C	Salak	 <p data-bbox="1018 992 1118 1021">KARTINI</p>
3			 <p data-bbox="1018 1384 1118 1413">KARTINI</p>
4	1110-54-26A-ST01	Jalur Saporo	 <p data-bbox="978 1776 1158 1805">UNIDENTIFIED</p>

5	1110-53-76B	Kopian	 <p>02-04-2022 18:45:58</p> <p><b>KARTINI</b></p>
6	1110-54-25C	Sulastri	 <p>02-01-2022 16:38:51</p> <p><b>KARTINI</b></p>
7	1110-53-76B	Kopian	 <p>03-01-2022 08:15:51</p> <p><b>BAGASKARA</b></p>
8			 <p>04-10-2022 08:35:54</p> <p><b>BAGASKARA</b></p>

9	1110-54-26A-ST01	Saporo	 <p style="text-align: center;"><b>UNIDENTIFIED</b></p>
10	1110-53-76B	Kopian	 <p style="text-align: center;"><b>BAGASKARA</b></p>
11			 <p style="text-align: center;"><b>BAGASKARA</b></p>
12			 <p style="text-align: center;"><b>KARTINI</b></p>



13	1110-54-26A-ST01	Saporo	 <p style="text-align: right;">07-31-2022 08:08:20</p> <p style="text-align: center;"><b>BAGASKARA</b></p>
14	1110-54-16C	Salak	 <p style="text-align: right;">05-31-2022 14:40:33</p> <p style="text-align: center;"><b>BAGASKARA</b></p>
15			 <p style="text-align: right;">09-19-2022 11:54:11</p> <p style="text-align: center;"><b>BAGASKARA</b></p>
16	1110-54-16A	Restorasi Puspa	 <p style="text-align: right;">05-31-2022 00:11:38</p> <p style="text-align: center;"><b>BAGASKARA</b></p>

17			 <p data-bbox="746 555 1401 600">KARTINI 08-24-2022 18:21:0</p>
18			 <p data-bbox="746 958 1401 1003">KARTINI 09-06-2022 18:22:06</p>
19	1110-54-17B	Jalur Camp C	 <p data-bbox="746 1384 1401 1413">KARTINI 08-28-2022 08:16:4</p>
20	1111-22-12C	Rumah Pohon	 <p data-bbox="746 1787 1401 1818">BAGASKARA 08-21-2022 09:13:5</p>

21			 <p data-bbox="986 568 1145 598"><b>BAGASKARA</b></p>
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Noted : KARTINI is adult female tiger; and BAGASKARA is adult male tiger.