REPORT ACTIVITY RESULTS

Prey Animal Inventory and Habitat Assessment of Komodo Dragons (*Varanus komodoensis)* On Ontoloe Island, 17 Islands Wildlife Area in 2024

East Nusa Tenggara KSDA Center,
Region II KSDA Division

RATIFICATION SHEET

On behalf of the Head of the East Nusa Tenggara Natural Resources Conservation Center, hereby endorses the document of Activity Result Report (LPK) of Prey Animal Inventory and Komodo (*Varanus komodoensis*) Habitat Study in the Seventeen Islands Natural Tourism Park in 2024 with the method, location, cost and implementation schedule as described in this work plan.

Ruteng, July 2024

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FOREWORD

We are grateful to God Almighty because thanks to His faithful love, this Activity Implementation Report (LPK) of Prey Animal Inventory and habitat study of Komodo dragons (*Varanus komodoensis*) in Tujuh Belas Pulau Nature Park in 2024 can be completed properly. This report is expected to be used as material and information in the policy-making process in order to protect high-value conservation areas to support life in a sustainable manner.

Thus this report is prepared as a frame of reference in making policies and activities related to the activities in this report. Hopefully this report will be useful for those who need it and for the advancement of science.

Compiler,

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INTRODUCTION

A. Background.

Komodo dragons (Varanus komodoensis) are giant lizards endemic to Indonesia, found only on several islands in East Nusa Tenggara. As the apex predator in its ecosystem, the existence and sustainability of Komodo dragons are highly dependent on the availability of prey and suitable habitat conditions. Prey availability has a very significant influence on Komodo dragon conservation efforts where the survival of the Komodo dragon population depends on the availability of prey for survival. A healthy and sustainable prey population is essential to ensure the long-term survival of Komodo dragons. Reproduction and population growth are influenced by the availability of sufficient food, which affects the Komodo dragon's reproductive rate. Female Komodo dragons need adequate nutrition to produce eggs and raise their young. When natural prey populations decline, Komodo dragons may turn to livestock or approach human settlements, increasing the risk of conflict.

Prey inventories aim to identify and count populations of animals that serve as food sources for komodo dragons, such as timor deer, wild boar, and various types of poultry. Meanwhile, habitat assessments focus on analyzing the environmental conditions that support Komodo dragons, including vegetation, water sources, and other abiotic factors. By understanding the importance of prey availability, conservationists can design more effective strategies to protect not only the Komodo dragons, but also the entire ecosystem in which they live. This creates a more holistic and sustainable conservation approach.

The results of this activity will provide a comprehensive picture of the environmental carrying capacity of the Komodo dragon population. The data obtained can be used as a basis for decision-making regarding conservation strategies and future management of komodo dragon habitats. This inventory will be conducted in Ontoloe Island, Riung District, Ngada Regency, which is one of the main komodo dragon habitats in Indonesia. The results of this inventory are expected to provide a basis for decision-making in komodo dragon habitat management and more effective conservation strategies.

An inventory of Komodo dragon prey animals is necessary to obtain information on the availability of prey animals for Komodo monitor lizards in Ontoloe Island, 17 Islands Nature Park, Riung. Data and information obtained through this activity will be used in management as a consideration in making policies related to prey animals of Komodo monitor lizards.

B. Objective

The objectives of the Prey Animal Inventory Activity in Komodo Habitat include:

1. Better understanding of the ecosystem and provide a comprehensive picture of the food chain and ecosystem dynamics in Komodo dragon habitat.
2. Assist in designing targeted conservation strategies based on actual data on Komodo dragon food availability and enable early identification of prey animal population changes that may indicate broader environmental issues.
3. Provide information to optimize habitat management to maintain a balance between Komodo dragons and their prey and provide baseline data that can be used for further scientific studies on Komodo dragon ecology and habitat.
4. Mitigate human-animal conflict and assist in designing strategies to reduce potential conflicts between human activities and the needs of Komodo dragon prey.

C. Legal Basis

1. Law No. 5 of 1990 on the Conservation of Biological Resources and Ecosystems;
2. Law No. 41 of 1999 on Forestry;
3. Government Regulation No. 28 of 2011 on Nature Reserve Areas and Nature Conservation Areas;
4. Law No. 18 of 2013 on the Prevention and Eradication of Forest Destruction;
5. Minister of Environment and Forestry Regulation No. P.18/MenLHK-II/2015 on the Organization and Work Procedures of the Ministry of Environment and Forestry;
6. Minister of Forestry Number: P.08/Menlhk/setjen/OTL01/2016 on the Organization and Work Procedure of the Technical Implementation Unit for Natural Resources Conservation;
7. Regulation of the Minister of Environment and Forestry Number P.106/MENLHK/SETJEN/KUM.1/12/2018 on the Second Amendment to the Regulation of the Minister of Environment and Forestry. Environment Environment and Forestry number P.20/MENLHK/SETJEN/KUM.1/6/2018 concerning Protected Plant and Animal Species;
8. INFLORES Budget Implementation List (DIPA) Year 2024.

METHODOLOGY

A. Tools and Materials

Tools and materials used during the activity are:

No	Name of Tools and Materials	Usage
1.	Document of TWA Tujuh Area Twelve Islands	As a reference location for Komodo dragon inventory
2.	Working Map	Determination of inventory locations Komodo dragon
3.	GPS	Saving geographical coordinates of the location of the Komodo dragon inventory location
4.	Compass	Determination of cardinal directions
5.	Digital camera and trep camera	Documenting the results of activities
6.	Binoculars	Viewing the condition of the Komodo dragon inventory area
7.	Tallysheet and field notebook + writing pad 7. writing pad	Documenting field data
8.	Connter cont	Animal counter
9.	Timer	To determine the observation time

B. Location

The location of the Komodo prey animal inventory activity in 2024 was carried out on Ontoloe Island (TWA Tujuh Belas Pulau Riung) which is administratively located in Riung District, Ngada Regency, NTT Province.

C. Implementation Team

The personnel implementing this activity are planned to be 7 (seven) people as listed in table 1 below:

No	Name/NIP	Position
1.	Koko Suwandi/ 19831119 200112 1 001	Implementing PEH at the KSDA Region II Division
2.	David Daing, SST/ 19750918 200710 1 001	Data Processor concurrently Head of Resort Riung
3.	Arakib R Wuran / NIP. 199008212023211013'	Skilled Extension Worker at Watunggong Resort

No.	Name/NIP	Position
4.	Wilbertus Sado, S.Hut/ 19981021 202012 2 006	First Expert at TWa Ruteng Resort in Ranamese
5.	Wahid Fortuna Anwar/ 19991019 202203 1 002	Beginner PEH at Bajawa Resort
6.	Saverius Arifianto Djematu/-	Manggala Agni at Watunggong Resort
7.	Rizal Floresto Irawan/ -	PPNPN personnel at Riung Resort

D. Time and Schedule of Activity Implementation

The implementation of Komodo prey animal inventory *(Varanus Komodoensis)* activities was carried out for 7 (seven) days starting from 18 to 24 September 2024 with a schedule as shown in Table 2 below:

No	Stage of Implementation	Activity Implementation TimeMonth: November								
		15	17	18	18	20	21	22	23	24
1.	Preparation of RPK									
2.	Preparation of tools and materials									
3.	Activity Implementation									
4.	Recapitulation and data analysis									
5.	Report Preparation									

E. Activity Stages

The stages of implementing this activity include:

1. Preparation
   a) Preparation of an Activity Implementation Plan (Terms of Reference) Conducted to define and direct the implementation of activities.
   b) Making a Work Map is done to describe the location of the activity.
   c) Preparation of TWA Tujuh Belas Pulau Area Documents and other tools and materials.
2. Implementation of activities in the field
   a) The Komodo monitor lizard prey animal inventory activity is carried out at the point and area / around the Komodo population monitoring point that has been determined and is the Komodo's activity area (*Coverage*).
   b) The method of data acquisition was carried out by placing camera traps or traps with a minimum distance of 300 m each. This radius was determined based on the shortest distance from *Auffenberg*'s (1981) study of Komodo dragons' olfactory abilities in open deciduous forest.

Komodo's olfactory ability to bait in open deciduous forest.

c) *Site Occupancy* Method using *Camera Trap*:
   - The *Site Occupancy* method is a method for estimating population by calculating the proportion of the study area occupied by animals with the probability of an area being occupied by the target animal. Meanwhile, *Camera Trap* is used to detect the presence of the target animal to determine the level of presence and general condition of the target animal (*MacKenzie et. al.* 2002).
   - This method was used for Komodo dragon inventory activities in four locations, namely Wae Wuul CA, TWA Tujuh Belas Pulau, KEE Pota, including Longos Island;
   - This activity requires bait in the form of livestock goats purchased from the community in the amount of ± 5 to 8 heads;
   - Installation of bait (in plastic and bait boxes) on trees at a distance of ± 3 - 4 meters from the camera trap.
   - Installation and activation of camera traps, cameras were installed for six days assuming repetition of 6 sessions, 6 times (06.00 - 12.00).
   - Camera trap retrieval.
   - Downloading data on camera traps

d) CMRR (*Capture Mark Release Recapture*:
   - The CMRR (*Capture Mark Release Recapture*) method is a method to determine the demographic development of animals that requires individual animals to be captured to study their physical developmental conditions (*Clausesen et. al.* 1997; *Lancia et. Al.* 1996; *Lebreton et. Al.* 2003; *White & Clark*, 1996)
   - Implementation Technique The CMRR (*Capture Mark Release Recapture*) method uses traps to directly capture target animals. Target animals are captured so that they can be marked or scanned for target animals that have been captured and marked before. The marker is a *microchip* known as a Passive Integrated Transponder (PIT) tag.

e) The time period for placing the traps is the same as for camera traps, but at each repetition of morning and evening time, the traps are checked. If any Komodo dragons were caught, morphological measurements were taken (head length and width, body length from snout to cloaca/SVL (Snout to Vent), total length of the lower body (Ventral Total Body Length), and total length of the lower body).

Ventral Total Body Length (TBL), tail length, tail circumference, and weight) and then the Komodo dragons were scanned with a PIT tag reader. For Komodo dragons that have never been caught, they were marked using PIT tags injected under the skin tissue.

f) Komodo prey animal inventory activities are carried out at points and areas / around Komodo prey population monitoring points that have been determined and are areas of Komodo activities (*Coverage*).

g) Transect Method

The method of calculating the dung density index using transect lines. The principle of this method is to count groups of animal dung in a circular plot along the transect line, then the dung count is calculated so that the dung density index value per hectare is obtained. Although this method only produces an animal density index value and does not produce an absolute value of the actual number of animals, the index can be used to monitor the condition of animal populations in various locations and compare animal populations in the same location over time. In addition, the results showed a positive correlation between the deer dung density index value and the actual deer population size. Dung counting using a plot sampling method using line transects has been used extensively to estimate animal density. This method is more often used to provide population density indices for a wide range of vertebrate species including deer, kangaroos, elephants, possums, pigs and goats (Forsyth et al., 2003; Marques et al., 2001).

h) Point count method

The point count method is an animal observation technique by standing still at a certain point and recording animals that are seen or heard within a predetermined radius and time, in the Komodo dragon prey survey inventory observations in this activity the implementation determines the observation points systematically in the habitat of Komodo prey animals for a certain period of time (usually 10-20 minutes). The advantages of this point cont method are Effective for counting relatively stationary or slow-moving animals Suitable for areas with fairly open vegetation Can provide data on prey animal population density.

i) Vegetation Analysis

Plotted Method (Quadratic sampling techniques: single or double plots, Path Method, Plotted Line Method, Quadrant in Vegetation Analysis.

- Quadrat method, the sample shape can be a rectangle or circle with a certain area.
- According to Weaver and Clements (1938) a square is a square area of any size. The size varies from 1 m2 to 100 m2. The shape of the sample plot can be square, rectangular or circular.
- This quadrant method has the advantage of being easier and simpler.

j) Vegetation Data Collection

The sampling method used is the plotted line method. The sampling method of plant vegetation analysis is guided by Sundra (2018), namely the transect path is drawn perpendicularly from the base line and also uses a non-destructive method, which is a method carried out without destroying the object being measured. Transect is a narrow path across the land to be studied. The goal is to determine the relationship between vegetation changes and environmental changes.

The process of collecting vegetation analysis data begins with determining the location assisted by GPS to determine the geoposition, then a transect line is made with a length of 60 meters. In the transect, it is divided into 3 quadrants with an area of 20x20 meters. In the 20x20 meter quadrant, tree stands, poles, saplings, and shrubs were measured using a sewing meter for the calculation of Diameter at breast height (DBH). Furthermore, within the quadrant, a plot of 10x10 meters was determined to determine pole stands, 5x5 meters for saplings and shrubs, and 2x2 meters for seedlings and understory plants. Analysis plots for each stand were taken in a representative manner. All data were recorded on observation sheets and plants found were documented to facilitate identification. The following is an example of the use of transects, quadrants and plots that have been carried out:

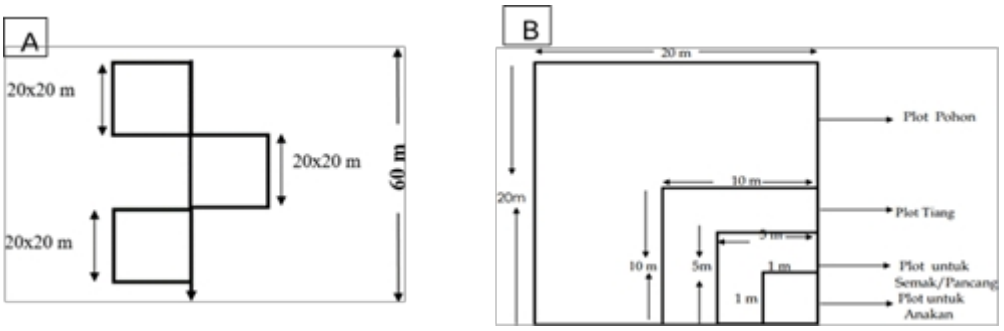
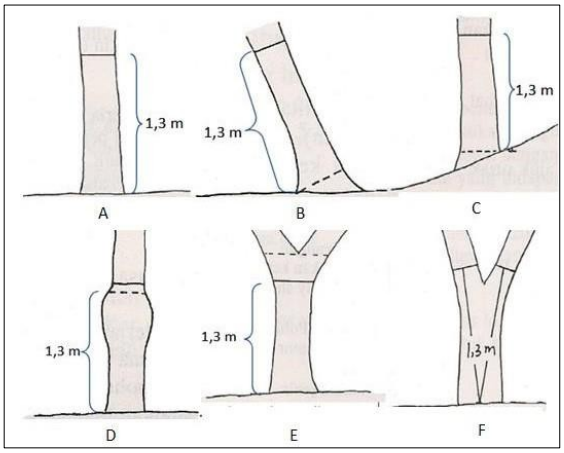


Figure 2. Schematic of the Combination Method of Paths and Plotted Lines. A. Transect; B. Plot and Sub-Plot

The measurement of Diameter at Breast Height (DBH) refers to Manuri (2011). The following is a scheme of DBH measurements that have been carried out:



Measurement of the circumference of the tree at breast height. A. Normal tree, B. Sloping tree, C. Normal tree on sloping ground, D. Deformed tree, E. Branch tree, F. Low branch tree (Manuri, 2011).

e) Vegetation Data Analysis

- Species Diversity Index

  The species diversity index is an index that expresses the interaction between diversity and evenness (Nurhidayah, 2017). The diversity index states the structure of the community and the stability of the ecosystem. Where if the better the species diversity index, the more stable an ecosystem (Diana, 2020). The diversity index can also serve as an indicator of the complexity of an ecosystem if the important components in its calculation are met, namely abundance and evenness (Sundra, 2016).

  In monitoring the biodiversity of the Golo Lijun location, East Manggarai Regency, NTT Province to calculate and interpret the data obtained, the Shannon-Winner diversity index is used. The Shannon-Winner equation (Ludwig, 1988) used in the analysis is as follows:

  F. $$H' = -\sum Pi x \ln Pi$$

  Description:

  H' : Shannon-Winner diversity index

Pi : The ratio of the number of i-th species to the total number of species (ni/N)

ni : Number of the *i-th* species

N : Total number of individuals of all species

a) The results of the data collection are written in the form of a *Tally Sheet* (attached) as an analysis material in data processing.

b) Coordination and consultation with local government as well as socialization of the importance of maintaining wildlife habitat and population, and to obtain secondary data as supporting material for the report.

c) Documentation activities are carried out in the form of filling out tallysheets and taking pictures / photos and if possible recording in the form of videos, which contain the results of the implementation of activities in the field.

3. Report

The report is prepared by the Implementation Team as documentation of the results of activities and as an accountability material for the implementation of activities.

G. Cost Plan

Costs are sourced from the BBKSDA NTT Activity Budget Sourced from the Inflores Project Fiscal Year with the required operational costs of Rp. Rp73,870,000, - (*Seventy Three Million Eight Hundred Seventy Thousand Rupiah*), as RAB (Budget Details of the implementation of activities in table 3, below:

No	**Prey Animal Inventory and Komodo Habitat Study on Ontoloe Island**	**1**	**Keg**	**Unit**	**Quantity**
I	**Materials Shopping**				
1	Tools and Materials	1	Keg	Rp6,000,000	Rp6,000,000
2	Personal use	12	Unit	Rp250,000	Rp3,000,000
3	Preparation Meeting	1	Keg	Rp1,000,000	Rp1,000,000
4	Result Discussion Meeting	1	Keg	Rp1,000,000	Rp1,000,000
5	Copying and binding report	7	Keg	Rp50,000	Rp350,000
6	Food ingredients for laborers (10 people x 5 days)	50	OH	Rp59,000	Rp2,950,000

No.	Prey Animal Inventory and Habitat Assessment of Komodo Dragons in Ontoloe Island Ontoloe Island	1	Keg	Unit	Total
II	**No Other Operational Goods Expenditure**				
1	Labor Wages (10 people x 5 days)	50	HOK	IDR100,000	RP5,000,000
2	Rental/Transportation Expenditure				
3	Ground Vehicle Rental	7	Keg	Rp800,000	Rp5,600,000
4	Sea Vehicle Rental	2	Keg	Rp800,000	Rp1,600,000
III	**Expenditure on Ordinary Service Travel**				
1	Pre-condition Team Travel (2 people x 2 days)	4	OT	Rp430,000	Rp1,720,000
2	Travel of Implementation Team (7 people x 7 days)	49	OT	Rp430,000	Rp21,070,000
3	Lodging for Implementation Team (7 people x 6 nights)	42	OT	Rp200,000	Rp8,400,000
4	Supervision Team Service Travel (2 people x 3 days)	6	OT	Rp430,000	Rp2,580,000
5	Super Vision Team Lodging (2 0 person x 2 nights)	4	OT	Rp1,200,000	Rp4,800,000
6	Airfare for Supervision Team 2 people	4	OT	Rp2,200,000	Rp8,800,000
Total					**Rp73,870,000**

IV. ACTIVITY RESULTS

A. Monitoring Komodo monitor lizards using *camera traps*

From the results of the installation of camera traps at 13 points of the location, it is known that as many as 3 camera trap points captured the presence of Komodo dragons, as shown in the table below:

No	ID Camera	21-Sep-24		22-Sep-24		23-Sep-24	
		pagi	sore	pagi	sore	pagi	sore
1	ONT01	0	0	0	0	0	0
2	ONT03	0	0	0	0	0	0
3	ONT04	1	0	0	0	0	0
4	ONT05	0	0	0	0	0	0
5	ONT06	0	0	1	1	0	0
6	ONT07	0	0	0	0	0	0
7	ONT08	0	0	0	0	0	1
8	ONT09	0	0	0	0	0	0
9	ONT10	0	0	0	0	0	0
10	ONT11	0	0	0	0	0	0
11	ONT12	0	0	0	0	0	0
12	ONT13	0	0	0	0	0	0
13	ONT14	0	0	0	0	0	0

Table 4. Data on the presence of Komodo lizards

The Komodo dragon population has been difficult to find on Ontoloe Island (TWAL 17 Island), until now the distribution area is only in several locations of Ontoloe Island (TWAL 17 Island) with the following map:

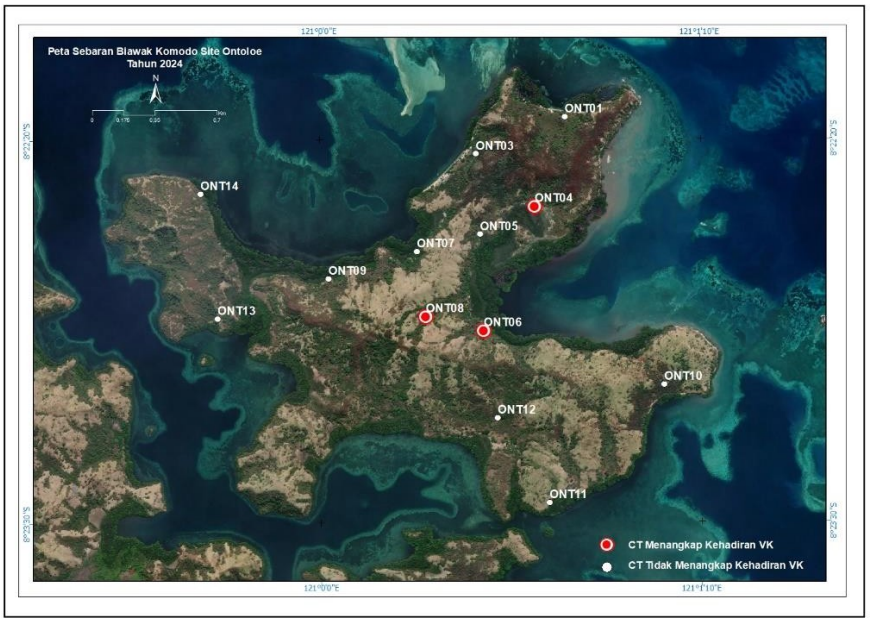


Figure 9. Distribution map of Komodo monitor lizards captured by camera traps.

Some images of Komodo monitor lizards captured by camera traps:

Figure 10. Capture of Komodo monitor lizards

Analysis Result

The estimated density of Komodo monitor lizards per camera trap has a value of 0.2982. The estimated value of the proportion of Komodo monitor lizard occupancy area in the study area on Ontoloe Island (TWAL 17 Island) is 0.2579. While the estimated value of the abundance of Komodo monitor lizards in the Wae Wuul CA study area showed 3.88 and the estimated probability of detection was 0.1720.

The number of camera traps installed was 13 cameras with a distance of 500 meters between camera traps. Komodo dragon olfactory distance is 500 meters, with the detection distance of each camera overlapping and not overlapping each other, the camera detection radius is

± 500 meters.

From the results of the camera capture, it can be seen that the Komodo monitor lizards on Ontoloe Island (TWAL 17 Island) are relatively healthy, this is shown through photos at the base of the Komodo monitor lizard's tail that looks fat (convex) not concave. As is known, based on several studies, the base of the tail of the Varanidae lizard family (monitor lizards) (including Komodo lizards) is a storage place for fat reserves (Ariefiandy et all, 2012). However, security of the Komodo monitor lizard population area is still considered to maintain the survival of the lizards.

Discussion

Of the 13 camera trap installation points, there were 3 points that detected the presence of Komodo monitor lizards.

The results of the Presence analysis show that the estimated average density of dragons per camera trap during monitoring at the Ontoloe Island study site (TWAL 17 Island) in 2024 is 0.29 ± 0.17 individuals with a 95% confidence level and the confidence interval value ranges from 0.09 - 0.96 individuals. While the estimated proportion of Komodo dragon occupancy area in Ontoloe Island study area (TWAL 17 Island) during monitoring is 0.25
± 0.13 with a 95% confidence level, the confidence interval value ranges from 0% - 51%. Thus, about 25% or only a quarter of the study area in the Ontoloe Island study site (TWAL 17 Pulau) was occupied by Komodo dragons at the time of monitoring.

The detection probability value of 0.17 ± 0.09 with a 95% confidence level means that during the activity the probability of detecting the presence of komodo dragons in each session was only 5% - 43%. This means that 25% of the area inhabited by komodo dragons during this activity, if a camera trap is installed for 6 sessions (3 days) of monitoring, the possibility of seeing komodo dragons around is only 17%. While the estimated population abundance of komodo lizards during this activity was 3.88 ± 2.32 individuals with a confidence level of 95%, the total population ranged from 1 - 12 individuals. This shows that the Komodo monitor lizard population in the Ontoloe Island study area (TWAL 17 Island) is relatively difficult to find directly. However, periodic monitoring is needed to obtain population trend data so as to reach a conclusion on the condition of the Komodo monitor lizard population on Ontoloe Island (TWAL 17 Island).

Minimum number of known Komodo dragon individuals from monitoring activities conducted in the Ontoloe Island study area (TWAL 17 Island) in 2024, obtained from the data tabulation form in Form 2. Individual Estimation where direct counting of each individual Komodo dragon caught by the camera trap is done. The minimum number of individual dragons in this activity is 4 dragons consisting of 2 komodo dragon pups and 2 juvenile dragons.

B. Monitoring Komodo monitor lizards using *trapping cages*

From the results of the installation of *trapping cages* spread across 13 locations, it is known that a total of 2 Komodo lizards entered the *trapping cage* which was divided into 2 locations with the following details:

1. Komodo dragon 000757DDDA

Morphological Data Collection of Komodo Lizards 000757DDDA The data obtained are as follows:

Location CT	: ONT 04
PIT Tag	: 000757DDDA
Age Class	: Youth
Head Length	: 14.38 cm
Head Width	: 7.29 cm
SVL	: 91 cm
Body Length	: 203.4 cm
Tail Length	: 112.8 cm
Tail Circumference	: 30 cm
Weight	: 14.3 Kg

2. Komodo dragon 000757DDDA

Morphological Data Collection of Komodo Lizards 00075A84E5 The data obtained are as follows:

CT location	: ONT 06
PIT Tag	: 00075A84E5
Age Class	: Youth
Head Length	: 13.92 cm
Head Width	: 6.89 cm
SVL	: 84.8 cm
Body Length	: 195 cm
Tail Length	: 109 cm
Tail Circumference	: 29 cm
Weight	: 12 Kg

The results of animal monitoring using *trapping cages* provide an important insight into the demographic conditions of Komodo dragons on Ontoloe Island (TWAL 17 Island) at the time of this study. During this observation, various sizes of Komodo monitor lizards were safely captured. Each captured animal was recorded in detail, including body size and physical condition. Some of the captured Komodo dragons were also fitted with pit tags to mark each individual. Of the two dragons caught and pit tagged, none of the dragons were the result of previous years' captures.

C. Monitoring Komodo monitor lizards' prey animals

From the results of camera captures, it can be seen that there are several animals that have the potential to become food animals for Komodo monitor lizards, including Gosong birds (*Megapodiidae*) and long-tailed monkeys (*Macaca fascicularis*) (Figure 10.).

Gosong bird (*Megapodiidae*)

Monkey (*Macaca fascicularis*)

Figure 13. Potential prey animals of Komodo dragons

Using the faecal count method (counting groups of animal feces on plots along the transect line. From 10 points of transect lines with a length of 150 meters, divided into 30 plots/transect with a plot area of 3.14 m^2. Of the total 300 plots, only monkey droppings were found with a density/hectare of 53.1 ± 14.1. The following is a photo documentation of animal droppings found inside and outside the plots.

Komodo monitor lizard (*Varanus komodoensis*) droppings

Monkey (*Macaca fascicularis*) droppings

D. Potential Threats

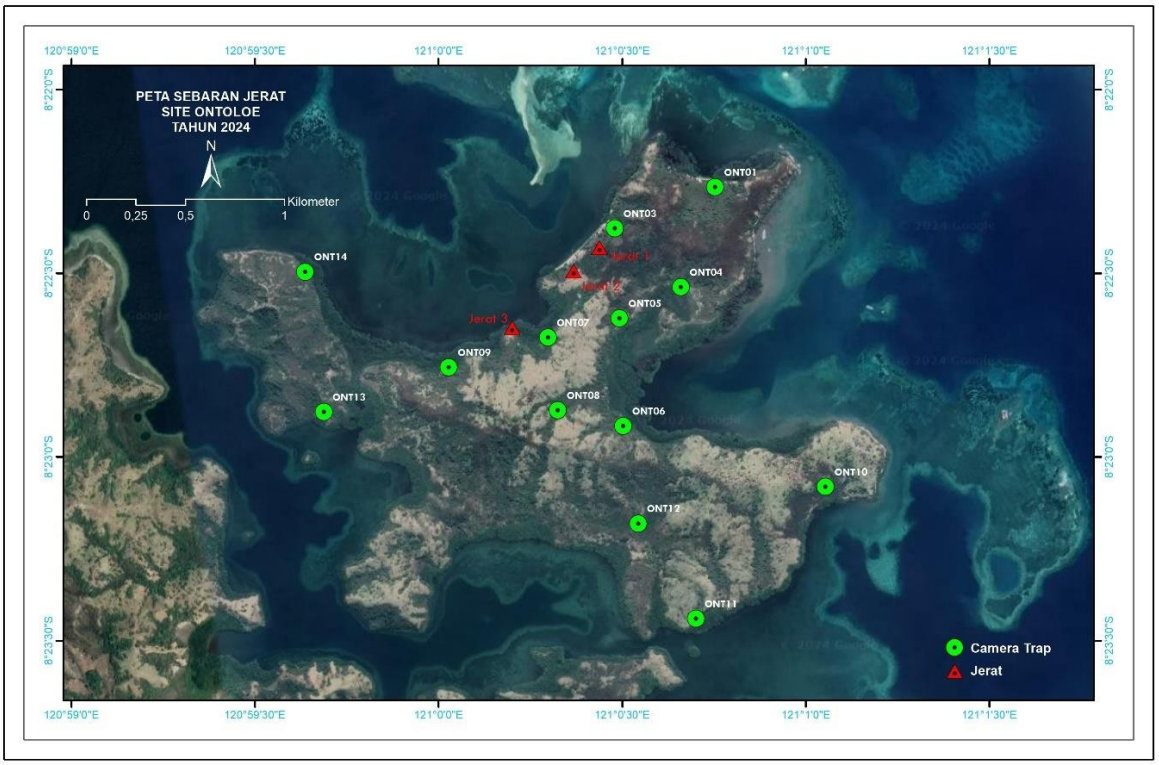
During the monitoring activities, the team found 3 active snares that were encountered directly. Below are the photos and the distribution of the snares:


Picture .First snare


Picture .Second snare

Picture. Third snare

The following is a map of the distribution of snares found by the team when carrying out activities:



E. Vegetation Analysis

Sampling intensity is a number that describes the ratio between the number of samples and the total population. Sampling intensity depends on the level of accuracy desired and the heterogeneity of the population at hand (Madyana, 1989). Boon and Tideman (1950) describe a forest group whose area is

For 1,000 ha or more, the sampling intensity should be 2%, while for less than 1,000 ha, the sampling intensity should be 5-10%. Because Ontoloe Island is less than 1,000 ha, 358.6 ha, the IS used is 5%. Based on the predetermined IS of 5% of the 358.6 ha area, one path was determined for each camera trap point with a total of 130 plots or measuring plots. List of Important Value Index as follows:

No	Tree species	INP value			
		Seedling	Stake	Pole	Tree
1	Reeds	54,14%	-	-	-
2	Acid	3,05%	3.25%	4,82%	65,82%
3	Belaang	5,00%	2.81%	-	-
4	Beringin Laut	-	-	-	1%
5	Bidara	-	1.66%	1,29%	1,08%
6	Coke	-	-	-	1,05%
7	Duri	0,62%	0.94%	-	-
8	Cat Tail	2,43%	-	-	-
9	Gamal	-	4,83%	1,28%	-
10	Gnevo	4,73%	-	-	-
11	Bubuta/Wuta	2,31%	7,29%	12,52%	25,06%
12	Forest Kedondong	-	-	-	5,18%
13	Kemuning	1,16%	2,31%	-	1,45%
14	Kerinyu	1,20%	5,05%	-	-
15	Kesambi	1,16%	-	1,24%	0,95%
16	Kukun	1,82%	6,49%	4,73%	-
17	Lamtoro	17,68%	55,56%	64,76%	28,43%
18	Leken	-	3,82%	-	-
19	Loke	0,58%	-	-	-
20	Lumnicera	-	8,37%	21,96%	8,04%
21	Mamis	0,62%	-	2,54%	-
22	Manduana	6,73%	-	-	-
23	NB	1,74%	-	-	-
No	**Tree Type**	**INP Value**			

		Seedling	Stake	Pole	Tree
24	Tilapia	13,82%	25,54%	64,12%	18,20%
25	NN 1	1,16%	-	-	-
26	NN 2	0,58%	-	-	-
27	NN 3	3,91%	-	-	-
28	NN 4	0,58%	-	-	-
29	NN 5	0,58%	-	-	-
30	NN 6	0,58%	-	-	-
31	NN 7	-	1,37%	-	-
32	NN 8	-	1,52%	-	-
33	NN 9	-	0,94%	-	-
34	Pampa	5,68%	12,27%	49,97%	43,13%
35	Pasi	0,66%	-	-	-
36	Rambudatu	3,60%	6,49%	1,19%	-
37	Rengit	2,60%	11,33%	34,73%	42,27%
38	Grass	5,20%	-	-	-
39	Water spinach	5,55%	-	-	-
40	Santiago	1,32%	-	-	-
41	Songa Tingi	-	7,79%	3,09%	5,15%
42	Tanger	1,16%	5,05%	1,52%	6,97%
43	Tride	47,28%	18,47%	-	-
44	Waru	0,58%	-	3,36%	5,11%
45	Waru Laut	0,58%	6,85%	19,24%	27,41%

The composition of plant species at the **seedling** level was found to be 34 tree species. Of these 34 species that have the highest Index of Importance (INP) value is Alang - alang with a value of 54.14%. The composition of plant species at the **sapling** level found as many as 23 species of trees. Of these 23 species that have the highest Importance Index Value (INP) is Lamtoro with a value of 55.56%. The composition of plant species at the **pole** level was found to be 21 tree species. Of the 21 species that have the highest Index of Importance (INP) value is Lamtoro with a value of 64.76%. The composition of plant species at the **tree** level was found to be 19 tree species. Of the 19 species that have the highest Importance Index Value (INP) is Tamarind with a value of 65.82%.

The results of the vegetation analysis show that the dominant vegetation in the Ontoloe Island study area (TWAL 17 Island) is in the tree phase (Acid) with an Importance Index Value (INP) of 65.82%.

V. CONCLUSIONS AND SUGGESTIONS

Of the 13 cameras installed, 3 cameras captured the presence of Komodo monitor lizards, meaning that the distribution of the Komodo monitor lizard population can be found in the study area on Ontoloe Island (TWAL 17 Island). The proportion of occupied area in the study area on Ontoloe Island (TWAL 17 Island) is 0.25± 0.13 (95% CI= 0 - 51%) which means that a quarter of the study area is inhabited by Komodo lizards with a detection probability of 0.17 ± 0.09 (95% CI = 5 - 43%) which means that each session has a probability of detecting the presence of Komodo dragons around 24%. The average density of Komodo dragons in each camera trap was 0.29 ± 0.17 individuals (95% CI= 0.09 - 0.96 individuals) and the estimated abundance of Komodo monitor lizards in the study area is 3.88 ± 2.32 individuals (95% CI = 1 - 12 individuals).

In the study area, there are animals that have the potential to feed Komodo monitor lizards, namely monkeys (Macaca fascicularis) with a density per hectare of 53.1± 14.1. Meanwhile, there are no animals that have the potential to become competing predators of Komodo monitor lizards from the results of camera capture.

In the study area, vegetation analysis was also carried out in 130 plots where the composition of seedlings found 34 tree species with the highest importance index value (INP) in the form of Alang- alang with a value of 54.14%, the composition of saplings found 23 tree species with the highest importance index value (INP) in the form of Lamtoro with a value of 55.56%, the composition of poles found 21 tree species with the highest importance index value (INP) in the form of Lamtoro with a value of 64.76%, the composition of trees found 19 tree species with the highest importance index value (INP) in the form of Tamarind with a value of 65.82%.

The potential threat to Komodo dragons in the Ontoloe Island habitat study (TWAL 17 Island) is the snares set in several places on Ontoloe Island (TWAL 17 Island). There were 3 active snares found directly during the activity.

APPENDIX

Appendix 1, Form 1, Raw Data

TALLY SHEET DATA CAMERA TRAP

Lokasi : **Ontoloe** **Tahun : 2024**

FORM 1 : DATA MENTAH

(diisi lengkap dengan jam)

No	ID Camera	Tanggal Pasang	Tanggal Ambil	21-Sep-24		22-Sep-24		23-Sep-24	
				pagi	sore	pagi	sore	pagi	sore
1	ONT01	20-Sep-24	24-Sep-24	0	0	0	0	0	0
2	ONT03	20-Sep-24	24-Sep-24	0	0	0	0	0	0
3	ONT04	20-Sep-24	24-Sep-24	9,18	0	0	0	0	0
4	ONT05	20-Sep-24	24-Sep-24	0	0	0	0	0	0
5	ONT06	20-Sep-24	24-Sep-24	0	0	11,36	16,36	0	0
6	ONT07	20-Sep-24	24-Sep-24	0	0	0	0	0	0
7	ONT08	20-Sep-24	24-Sep-24	0	0	0	0	0	13.13, 13.43
8	ONT09	20-Sep-24	24-Sep-24	0	0	0	0	0	0
9	ONT10	20-Sep-24	24-Sep-24	0	0	0	0	0	0
10	ONT11	20-Sep-24	24-Sep-24	0	0	0	0	0	0
11	ONT12	20-Sep-24	24-Sep-24	0	0	0	0	0	0
12	ONT13	20-Sep-24	24-Sep-24	0	0	0	15,18	0	0
13	ONT14	20-Sep-24	24-Sep-24	0	0	0	0	0	0

Appendix 2, Form 2, Individual Estimation

CAMERA TRAP DATA TALLY SHEET

Location: Ontoloe Year 2024

FORM 2. INDIVIDUAL ESTIMATION

(filled in sequence with alphabetical code, /fi, B and so on...)

No.	ID Camera	Date Install	Date Retrieve	21-Jun-22		22-Jun-22		23-Jun-22	
				morning	see	morning	see	morning	afternoon
1	ONTD1	2D-Jun-22	24-Jun-22	0		o		0	0
2	ONTD3	2D-Jun-22	24-Jun-22	0	o	o	o	0	0
3	ONTD4	2D-Jun-22	24-Jun-22	A2	o	o	o	0	0
4	ONTDS	2D-Jun-22	24-Jun-22	0	o	o	o	0	0
5	ONTD6	2D-Jun-22	24-Jun-22	0	o	B2	B2	0	0
6	ONTD7	2D-Jun-22	24-Jun-22	0	o	o	o	0	0
7	ONTD8	2D-Jun-22	24-Jun-22	0	o	o	o	0	C1
8	ONTD9	2D-Jun-22	24-Jun-22	0	o	o	o	0	0
9	ONT1D	2D-Jun-22	24-Jun-22	0	o	o	o	0	0
1D	ONT11	2D-Jun-22	24-Jun-22	0	o	o	o	0	0
11	ONT12	2D-Jun-22	24-Jun-22	0	o	o	o	0	0
12	ONT13	2D-Jun-22	24-Jun-22	0	o	o	D1	0	0
15	ONT14	2D-Jun-22	24-Jun-22	0	o	o	o	0	0

Esti'masi'j'umlah i'ndi'vi'du caught camera :

Codes: Child (1), Adolescent (2), Dewoso (3)

Number of Individuals : Juveniles 2

juveniles 2 tails

: Devvasa D tail

: Total 4 tails

Appendix 3, Form 3, Occupancy data

TALLY SHEET DATA CAMERA TRAP

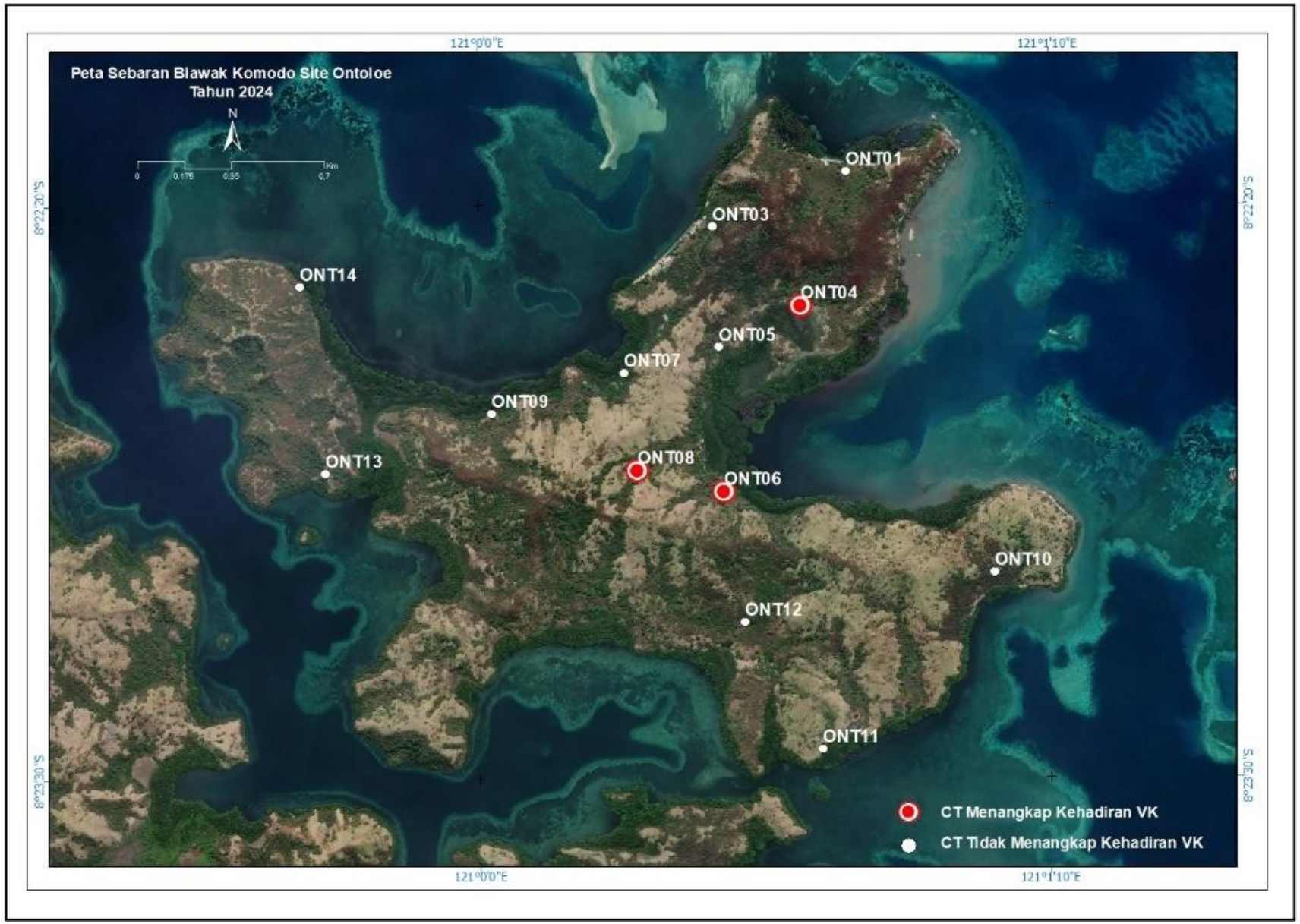
Lokasi : Ontoloe **Tahun : 2024**

FORM 3 : DATA OCUPANCY

(diisi data kehadiran komodo, 0= tidak ada, 1 = ada.)

No	ID Camera	21-Sep-24		22-Sep-24		23-Sep-24		Monyet	Salvator	Burung Gosong				Lainnya
		pagi	sore	pagi	sore	pagi	sore							
1	ONT01	0	0	0	0	0	0							
2	ONT03	0	0	0	0	0	0	1						
3	ONT04	1	0	0	0	0	0							
4	ONT05	0	0	0	0	0	0	1						
5	ONT06	0	0	1	1	0	0							
6	ONT07	0	0	0	0	0	0							
7	ONT08	0	0	0	0	0	1							
8	ONT09	0	0	0	0	0	0		1					
9	ONT10	0	0	0	0	0	0							
10	ONT11	0	0	0	0	0	0							
11	ONT12	0	0	0	0	0	0							
12	ONT13	0	0	0	0	0	0		1					
13	ONT14	0	0	0	0	0	0			1				

Annex 4, Distribution of CTs that captured Komodo monitor lizard presence



Appendix 5, Snare Distribution Map