



# Home Range and Movements of a Trans-located Sumatran Tiger (*Panthera tigris sumatrae*) Based on GPS Collar Monitoring

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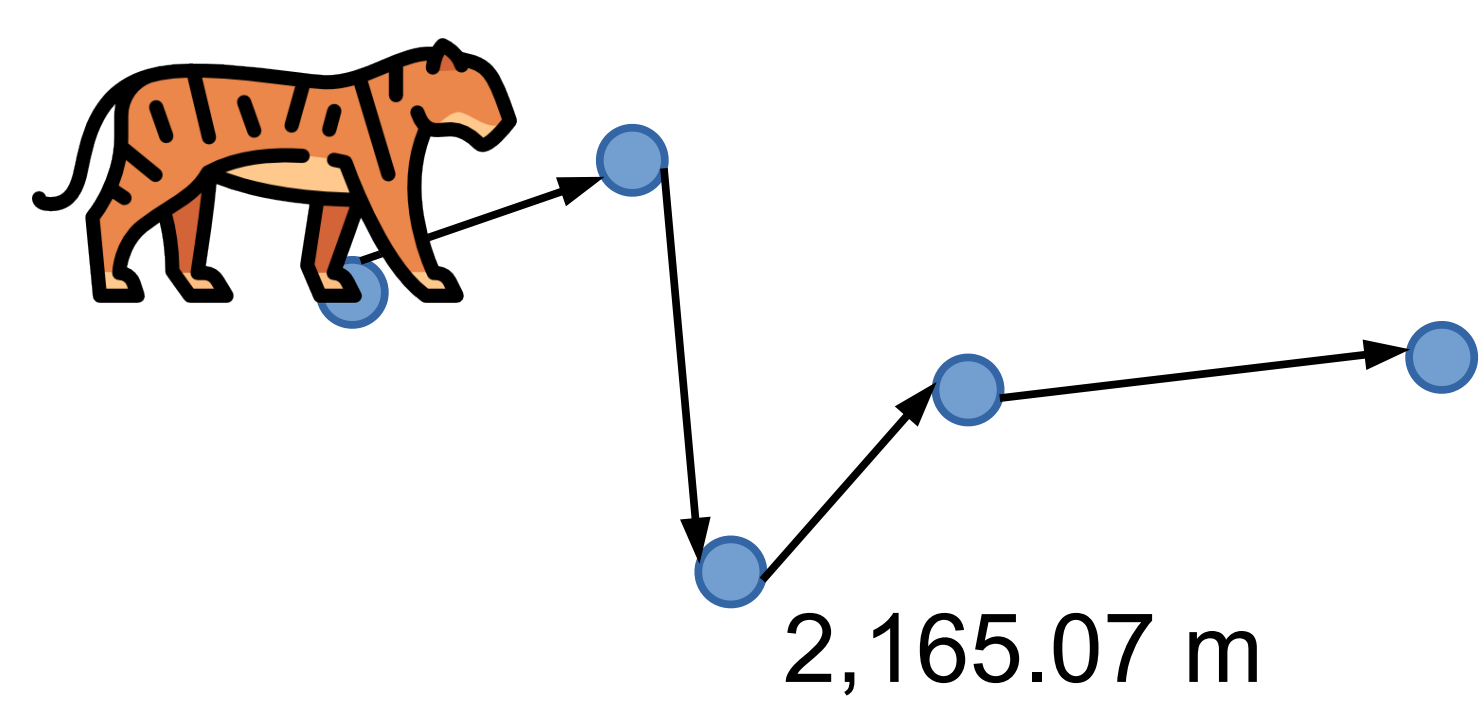
## Introduction

- The Sumatran tiger (*Panthera tigris sumatrae*) is the only tiger subspecies that Indonesia
- Problem:
  - Forest loss and fragmentation
  - Conflict between tiger and human
- Need: Trans-location for the conflict animal
- There was no information for movement of sumatran tiger

## Methods

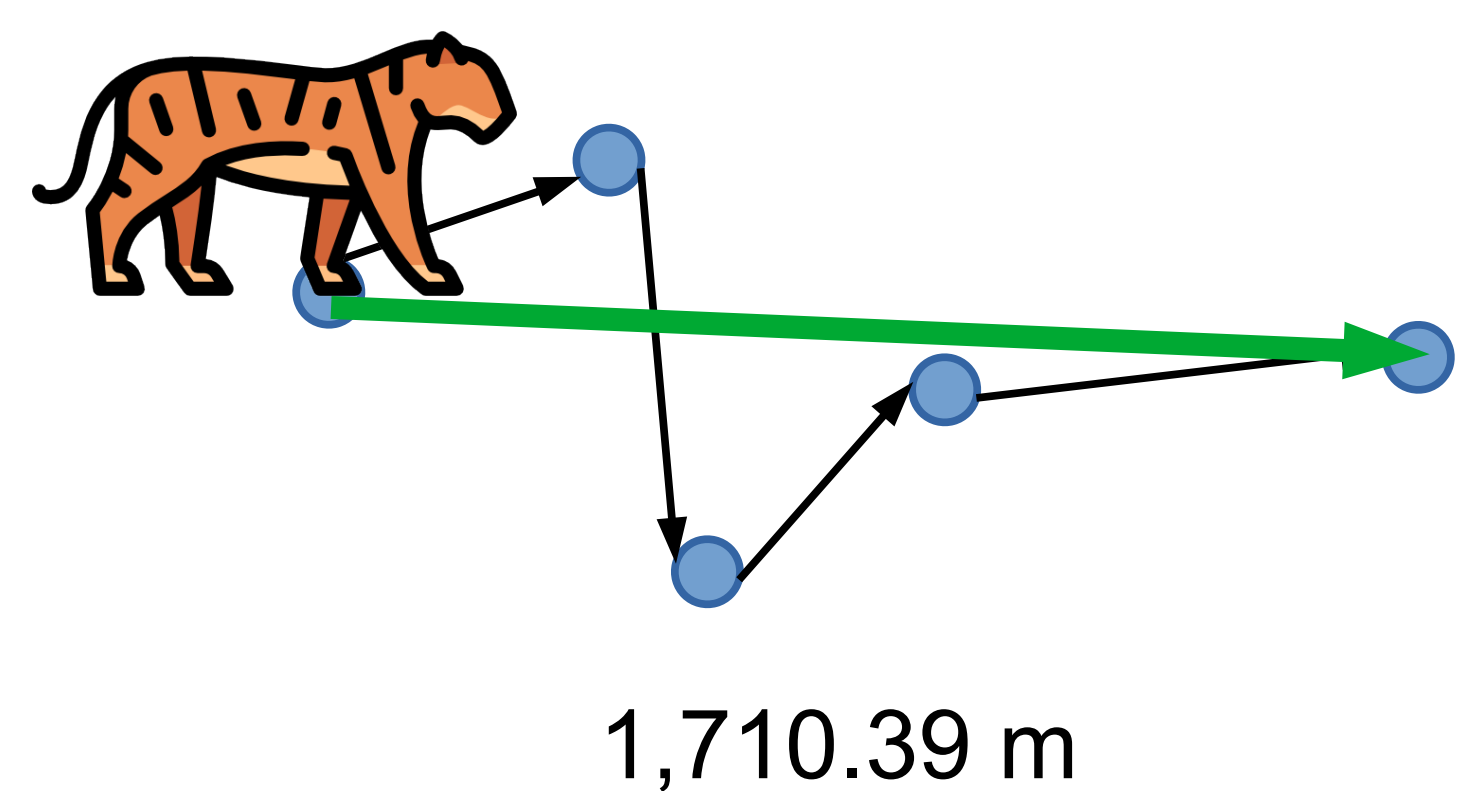
- The animal was a trans-located male individual that entered human settlement in Pulau Burung Indragiri Hilir regency in November 2018.
- After eight months rehabilitation in Dharmasraya Sumatran Tiger Rehabilitation Center.
- The individual was released in Giam Siak Kecil-Bukit Batu Biosphere Reserve from July 2019.
- This study analyzed coordinate of 46 days movements that collected by GPS collar.

## Results



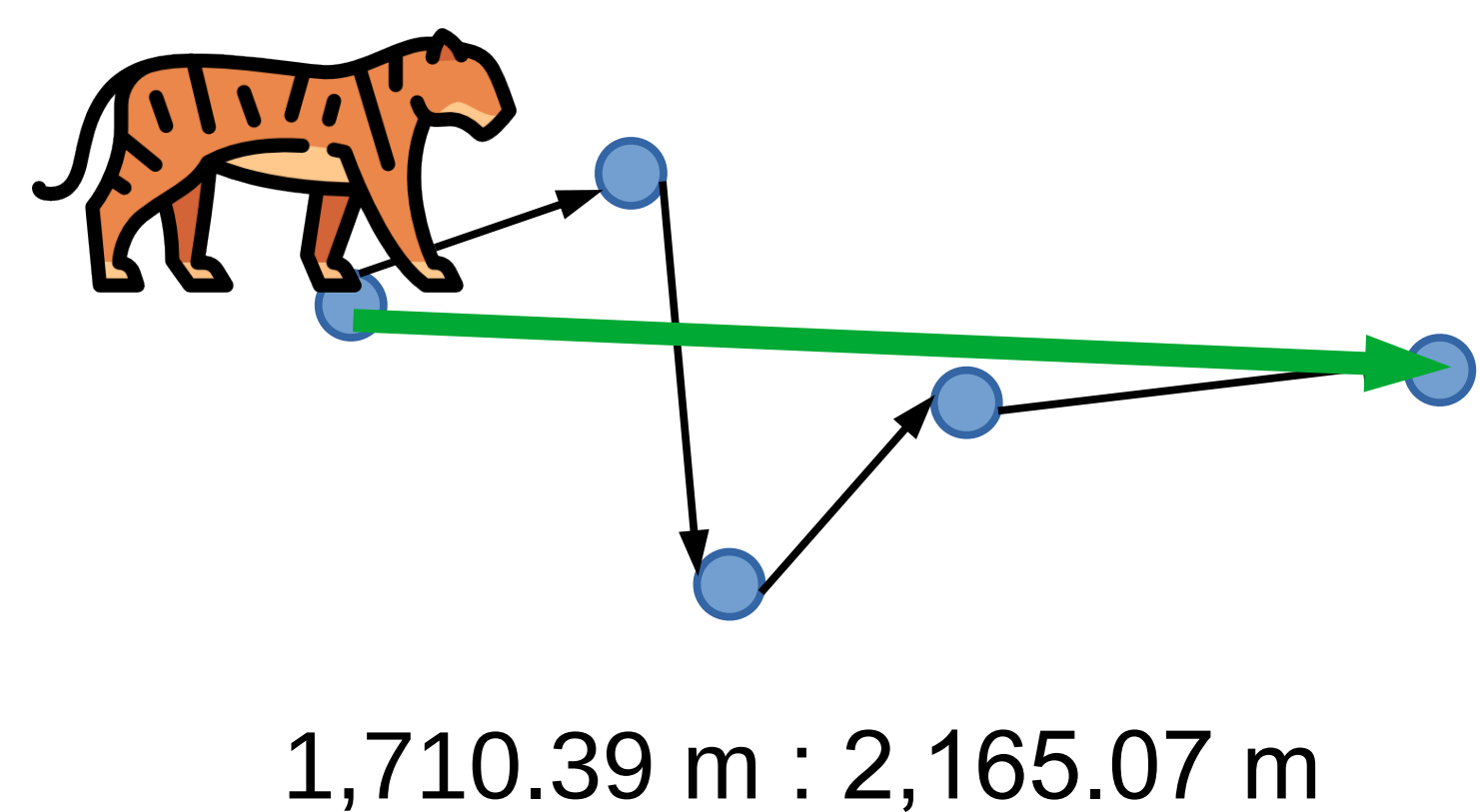
Daily Movement Distance

2,165.07 m



Straight Line Distance

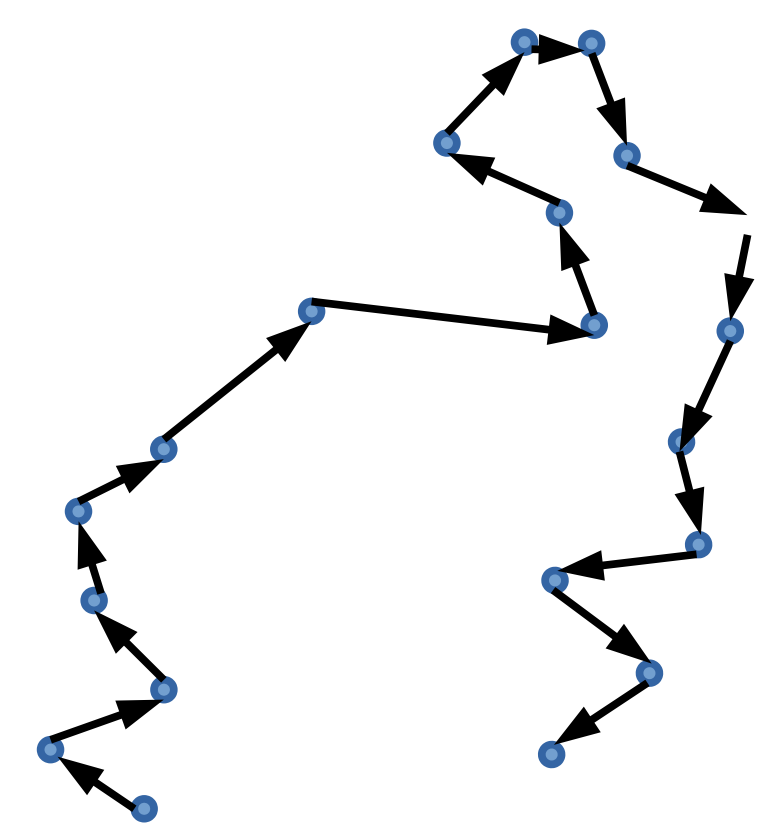
1,710.39 m



**0.63**

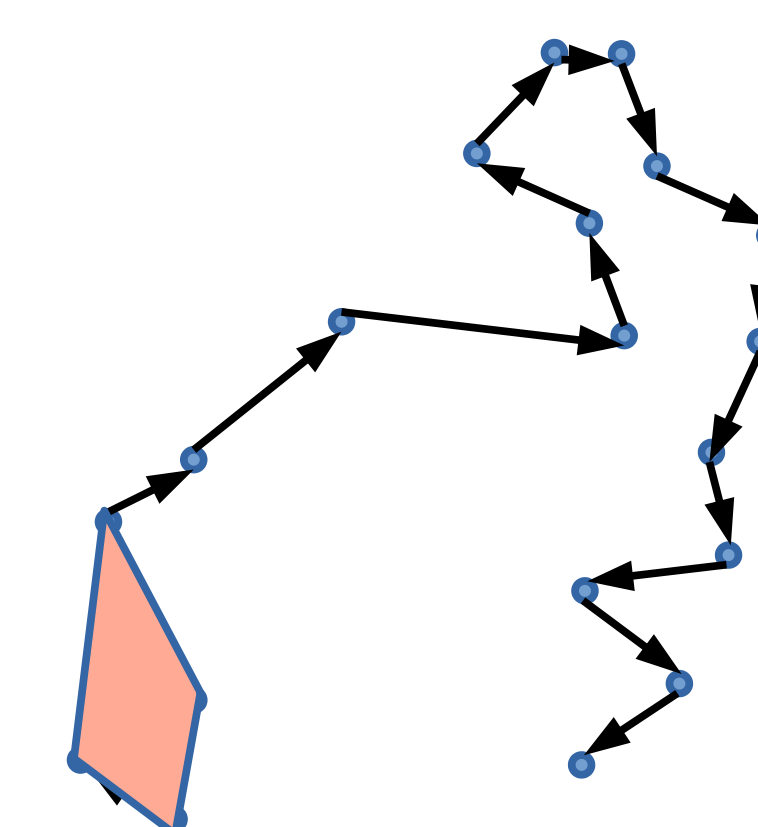
Ratio  
Straight Line Distance :  
Daily Movement Distance

1,710.39 m : 2,165.07 m



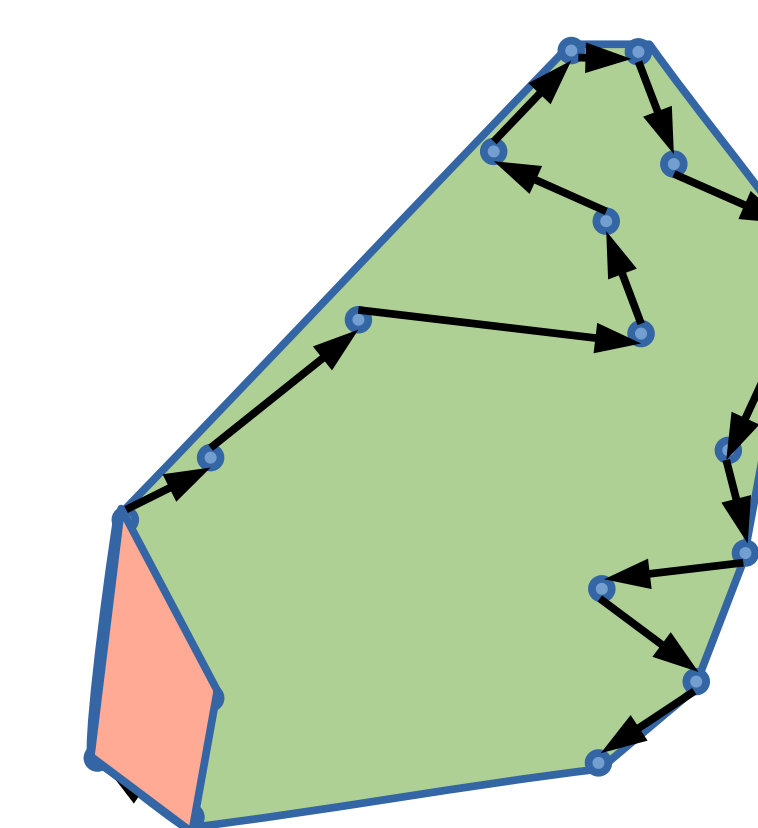
Home range

**259,11 Km<sup>2</sup>**



**70.8 Ha**

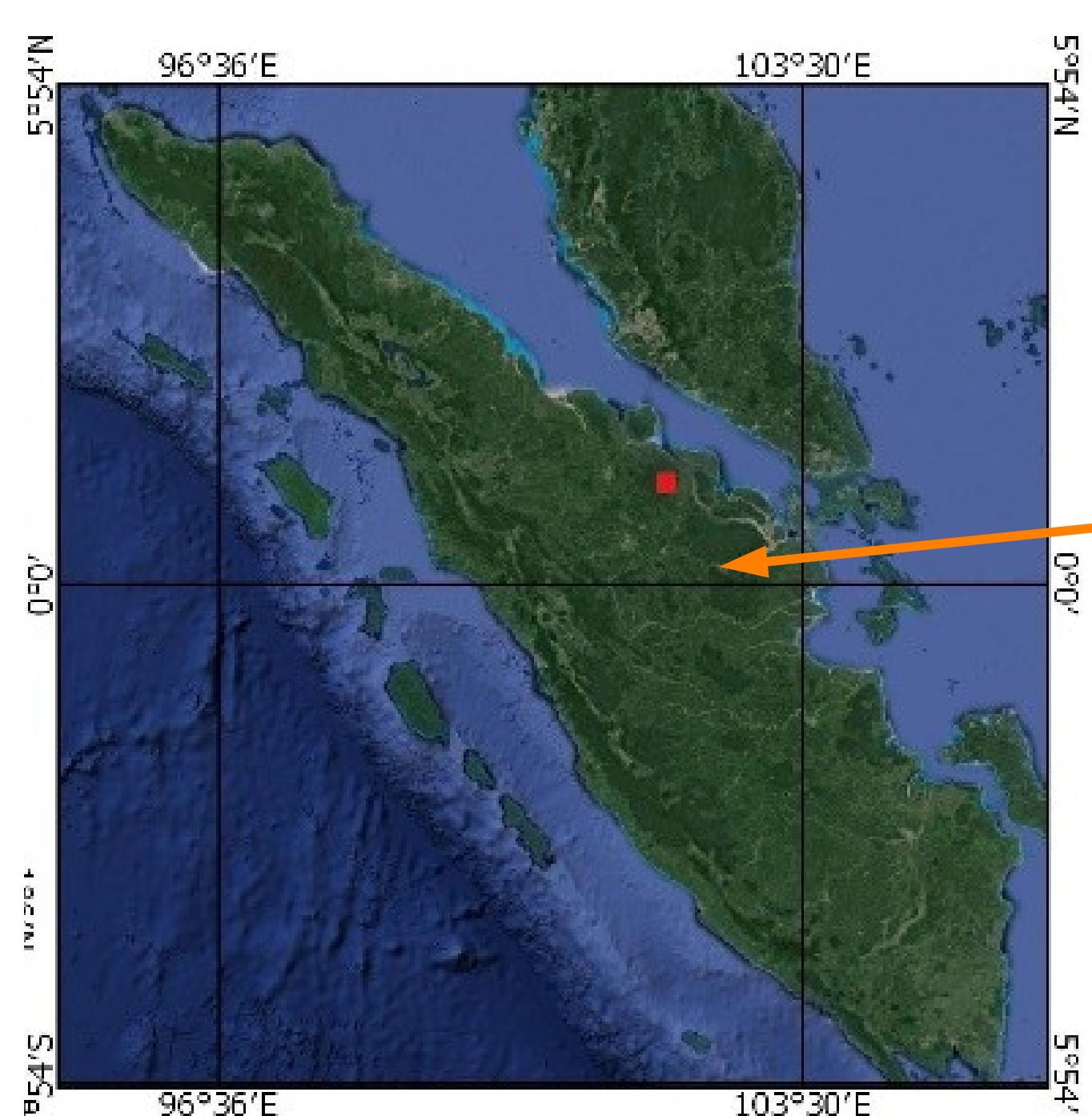
Daily Movement Range



**8×10<sup>-6</sup>**

Ratio  
Daily Movement Range : Home Range

## Study Site



Sumatra Island, Indonesia

Captured: in Pulau Burung, Indragiri Hilir

Released: in Giam Siak Kecil – Bukit Batu Biosphere Reserve



## Discussion

Home range comparison fo tiger subspecies:

N	Location	n	Metod	Average home range size (km <sup>2</sup> )	Reference
0					
1	GSK-BB (Sumatera)	1	GPS (MCP)	259,11	this research
2	Panna (India)	1	RT (MCP)	243	Chundawat et al., (1999)
3	Leuser (Sumatera)	3	CT (MCP)	278 (180-380)	Griffith (1994)
4	Sumatera (Indonesia)	5	GPS (MCP)	318 (67,1-610,3)	Priatna (2012)
5	Shikote-Alin (Rusia)	14	RT (MCP)	402 (181-761)	Goodrich et al., (2005)

Our study is the first movement analysis for Sumatran tiger.