

Sumatran 'tiger map' reveals tiger population higher than expected

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The destruction and fragmentation of Sumatran tiger habitats is driven by illegal logging, infrastructure developments and pervasive rural communities. These actions bring people and tigers into close proximity and often lead to conflict and the illegal killing of the tigers themselves and the prey species on which they depend. Credit: (credit to PHKA/WCS) Note: PHKA is the Directorate of Forest Protection and Nature Conservation of the Ministry of Forestry of Indonesia.

Scientists have created the highest resolution map of the Sumatran tiger distribution ever produced, revealing that the island now hosts the second largest tiger population on earth. The research, carried out with the Wildlife Conservation Society's Indonesia Program and Forum HarimauKita, will be published in a special issue of *Integrative Zoology*, on tiger conservation and research methodologies.

Hariyo T. Wibisono and Wulan Pusparini conducted a questionnaire-based survey across the island to identify the status of Sumatran tiger distribution. They found that tigers still occupy a large majority of the remaining available habitat in Sumatra. Of the 144,160 square kilometers (55,660 sq mi) of remaining potential habitat, tigers are present in over 97% (140,226 sq km; 55,141 sq mi). However, only 29% of the habitat found to contain tigers is protected.

"These findings imply that Sumatran tiger population might be much larger than we believed, and could potentially be the second largest tiger population in the world after India," said Wibisono.

The survey also revealed that tigers occupy a great diversity of [ecosystems](#). Tigers were found from 0 meters above sea level in coastal lowland forests, to 3200 meters (10,500 feet) above sea level in high mountain forests and in every eco-region in between.

"There is a need for further scientific population assessment," said Wibisono, "but if the population is indeed as large as this new survey suggests then real actions and more support from tiger experts and the international community should be mobilized in the conservation of Sumatran tigers."



Tigers are able to live in a wide range of habitats. A male tiger photographed by a camera trap in montane forest habitat within the Leuser Ecosystem, North Sumatra Province, Sumatra. In this region, tiger signs were discovered at up to 3.200m asl by WCS survey teams. Credit: (credit to PHKA/WCS/LIF/Panthera) PHKA is the Directorate of Forest Protection and Nature Conservation of the Ministry of Forestry of Indonesia.

Based on their findings, the scientists recommend that at least five habitats should be reassessed as [Tiger Conservation](#) Landscapes (TCLs). A TCL is an area where there is sufficient habitat for at least five tigers and in which tigers have been confirmed to be present in the last 10 years.

These habitats include: 1.) Leuser Ecosystem which contains lowland to montane habitat in the northwest, 2.) Berbak-Sembilang containing lowland peat swamps and coastal habitat in southeast, 3.) Ulu Masen Ecosystem containing lowland to montane habitat in northwest, 4.) Batang Gadis containing lowland to lower montane habitat in central Sumatra, and 5.) Giam Siak Kecil in the central part of the island.

Mr. Wibisono sought to undertake this survey because he believed, based on his extensive experience working on the ground in Sumatra, that previous studies underestimated tiger population distribution. He and his colleague's findings verify his hunch and demonstrate that tigers are present at an island-wide scale in Sumatra.

The world tiger population has declined by 50% since 1998, and only an estimated 3,200-3,600 remain in the wild. The presence of tigers over a wide area of [habitat](#) in Sumatra is one of the few bright spots in the current state of wild tigers, but more protection is needed to ensure a viable future for this magnificent animal.

"Although tigers are clearly in peril, I am encouraged by the historic commitments made at the recent global tiger summit to increase the number of tigers worldwide," said Zhibin Zhang, editor-in-chief of Integrative Zoology. "At the end of November, the International Tiger Conservation Forum was held in St. Petersburg, Russia. The governments of the 13 tiger range countries agreed to double tiger numbers by 2022."

"By publishing this special issue on tiger conservation and research methodologies we hope to contribute to the efforts by governments, scientists and conservationists to bring tigers back from the brink."

Provided by Wiley

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