

Most panda habitat is outside nature reserves: research

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Though much effort and many resources have been expended to protect the endangered giant panda, research by an international team of scientists shows that much suitable panda habitat is outside the nature reserves and areas where the panda is reported to live.

"This research can help the Chinese government and international non-governmental organizations develop comprehensive strategic plans for more effective conservation of the panda," said Jianguo "Jack" Liu, MSU University Distinguished Professor of fisheries and wildlife who holds the Rachel Carson Chair in Sustainability and serves as director of the MSU Center for Systems Integration and Sustainability (CSIS). Liu is internationally known for his work on [environmental sustainability](#) and coupled human and natural systems.

"Overall, about 40 percent of the suitable habitat for [pandas](#) is inside the [nature reserves](#)," said Andrés Viña, CSIS specialist. "Our model also identified potentially suitable habitat outside the currently accepted geographic range of the panda."

The research is published in the journal *Biological Conservation*.

The [giant panda](#) is the rarest member of the bear family. Panda once ranged throughout most of China, northern Vietnam and northern Myanmar. Today, fewer than 1,600 giant pandas live in the wild in three Chinese provinces: Gansu, Shaanxi and Sichuan. Human actions -- including logging, residential development and the expansion of farming

-- are considered the main reasons for the dramatic contraction of the giant panda's habitat.

The research team developed habitat models using geographical/environmental information gathered by satellites overlaid with information on panda occurrence. After analyzing the six mountain regions in the three provinces where pandas are known to live, the scientists developed a habitat suitability index for the entire 48,328-square-mile area.

The range-wide habitat analysis model gives governments and other agencies a new tool as they develop conservation strategies and priorities not only for pandas but also for many other endangered species.

"The Chinese government plans to add approximately 69,500 square miles of land to the country's nature reserve system between 2010 and 2020," said Zhiyun Ouyang, director of the Lab of Urban and Regional Ecology at the Chinese Academy of Sciences in Beijing. "So opportunities exist to create new reserves, to expand existing reserves and to create corridors that increase the connectivity among the reserves. On the basis of our results, we suggest some new areas to be included in China's nature reserve system."

Provided by Michigan State University

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