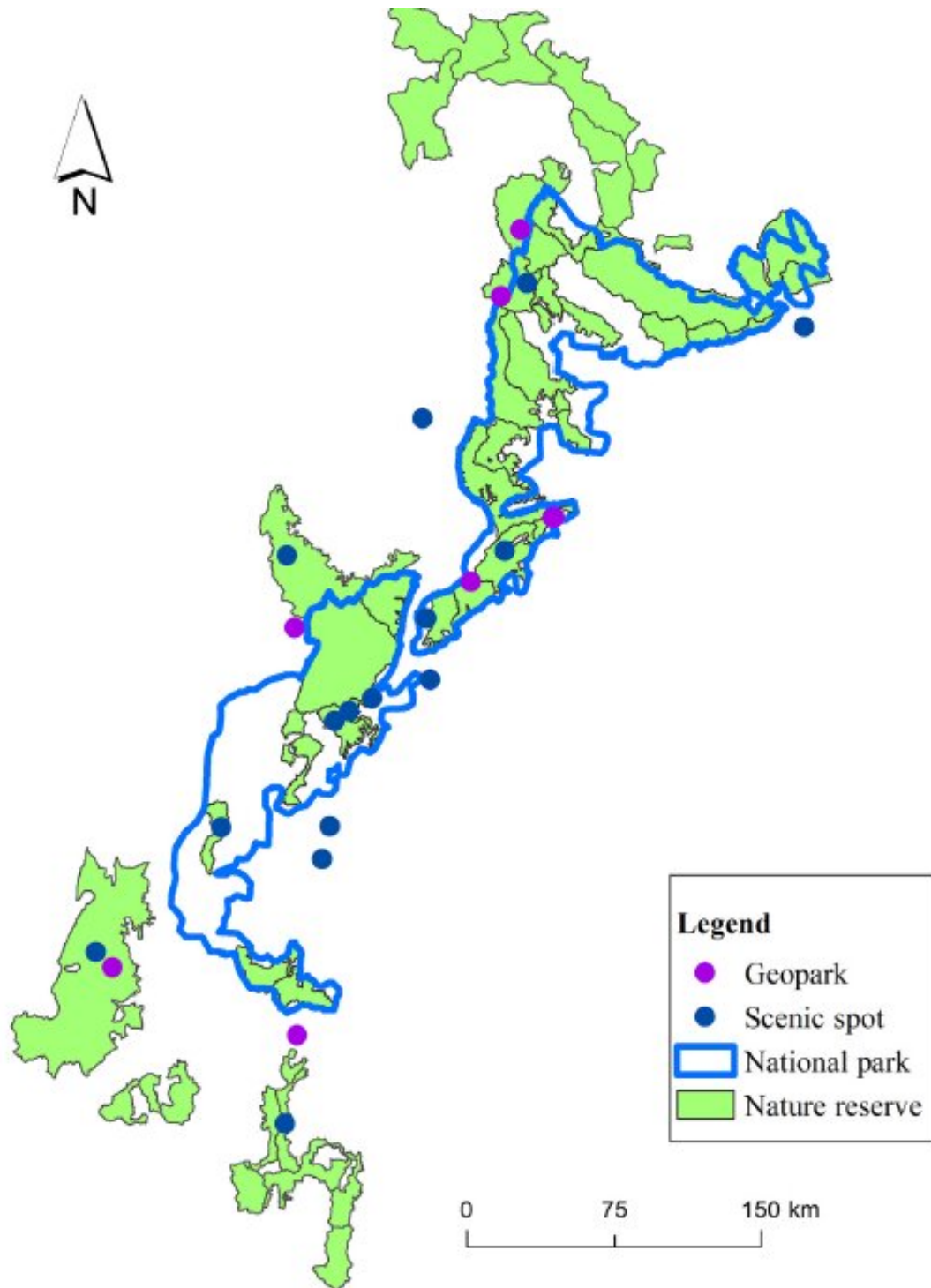


The path to China's 'ecological civilization' starts with national parks

July 10 2019



This figure shows the protected Area System within the Giant Panda Distribution in Sichuan and Gansu Provinces. After the institutional reform, the original small protected areas (e.g., nature reserves, geoparks, and scenic spots) that different departments managed inside the proposed Giant Panda National Park will be repealed once the National Park is established. Outside the National Park, one

type of protected area will be retained, where several overlapped. Credit: *Trends in Ecology & Evolution*

President Xi Jinping staked out China's role as a committed player to tackle the climate crisis and build an "ecological civilization." In a review published July 10 in the journal *Trends in Ecology & Evolution*, researchers discuss one of the Chinese government's efforts—reforming the management of protected areas by streamlining agencies' responsibilities and reducing functional overlaps.

"First of all, China is one of the most biodiverse countries in the world," says senior author Zhiyun Ouyang, Professor at the Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences. From permanent ice fields, to tropical forests and deserts, China's diverse ecosystems hold 15 percent of the world's vertebrates and 12 percent of its plants. "Second, China's got the fastest growing economy. The rapid development of resources, land utilization, and urbanization can have impacts on the wildlife habitat. We need to establish a nature protected area system as soon as possible to protect biodiversity and important habitats."

Since China established its first nature reserve in 1956, the number blossomed to over 12,000, covering a total area just slightly larger than the US state of Alaska or the Australian state of Queensland. Although the protected areas account for 20 percent of China's land surface, it was ineffective. Researchers pointed out that the main problem is fragmented management. One or more government departments and agencies with different goals manage the same site. The administration overlooked some of the areas that need urgent protection while overprotecting others. Development often came at the expense of conservation under these circumstances.

"To address the problem, China's government implemented some institutional reforms," Ouyang says. "Protected areas used to be managed by seven different departments. Now, they are all managed by one department, the National Park Administration. We have the opportunity to establish a cohesive system for protected area management. These reforms will help with aligning goals, reducing conflicts, and eliminating administrative redundancy."

Moreover, all state-owned natural resources now fall under the newly established Ministry of Resources, which oversees evaluating the development and conservation. The government also established the Ministry of Ecology & Environment. Its goals are to objectively monitor and assess the performance of the protected areas.

The research team recommends China should re-categorize the protected areas to meet the international classifications under the International Union for the Conservation of Nature (IUCN) for more efficient results. Ouyang also stressed the importance of striking a balance between conservation and the local economy. There are also opportunities to provide legal clarity for determining the roles, benefits, and authority of multiple stakeholders in protected areas.

"The challenge is how do we manage those areas to keep them natural, keep them lovely, keep them biodiverse, and at the same time encourage tourism, which brings in development to the local communities," says co-author Stuart Pimm, Doris Duke Professor of Conservation Ecology at Duke University. "It is naïve and an ill-informed idea that national parks aren't valuable. Tourism is the world's largest industry."

China is paving its way to accomplish the goals set by the Chinese government in response to the 2020 Global Biodiversity Targets. The country is moving toward the concept of green development and "ecological civilization." The institutional reforms also imply China's

determination to take on the international leadership in the upcoming 15th meeting of the Conference of the Parties (COP15) held by the UN in Kunming, China.

"It becomes important that the outside world knows China not just for the Great Wall, the Forbidden City, and the Terracotta Warriors, but as a country that has some of the world's most impressive national parks," Pimm says. "China is a fantastically exciting place for visitors."

More information: *Trends in Ecology & Evolution*, Xu et al.:

"Transforming protected area management in China"

[www.cell.com/trends/ecology-ev ... 0169-5347\(19\)30161-2](http://www.cell.com/trends/ecology-ev ... 0169-5347(19)30161-2) , DOI: [10.1016/j.tree.2019.05.009](https://doi.org/10.1016/j.tree.2019.05.009)

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