



Only three known Yangtze giant softshell turtles remain.

to struggle to pay maintenance bills (6). Environmental regulations are collapsing, benefiting major landowners and commodity companies that demand easier environmental licensing, permits for harmful pesticides, and elimination of protected areas (7). The advances in science and conservation from the past decade will soon be reversed, which has caused international concern (8). As Brazilian researchers struggle to adjust to the national budget and biodiversity crises, the global biodiversity community can help by recognizing the challenges Brazil's scientific community now faces.

Many international scientific societies are dedicated to fostering research through scientific meetings, research grants, and scientific publications. Researchers from low-income and lower-middle-income countries are often offered grants [e.g., (9)], discounts for membership and meetings [e.g., (10)], and reduced publication fees (11). Brazilian scientists have not been eligible for these incentives since 2006 (12), which made sense before the recent backslide in policy. However, in Brazil's new antisience climate, the eligibility requirements exclude an important share of qualified researchers now working under precarious conditions. We urge the international scientific community to help ameliorate the crisis by making Brazilian researchers eligible for incentives.

Maria Tereza Chiarioni Thomé^{1*} and Célio Fernando Baptista Haddad²

¹Postgraduate Program in Biological Diversity and Conservation in the Tropics, Institute of Biological and Health Sciences, Federal University of Alagoas, Maceió, AL, Brazil. ²Department of Zoology, Institute of Biosciences, São Paulo State University, Rio Claro, SP, Brazil. *Corresponding author. Email: mtcthome@gmail.com

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LETTERS

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Invest in amphibians and reptiles

The Yangtze giant softshell turtle (*Rafetus swinhoei*) is listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1) and categorized as Critically Endangered by the International Union for Conservation of Nature (2). Threats to *Rafetus swinhoei* have long been known, including habitat loss caused by humans' excessive hunting for food and trade, resource competition, climate change, disease, and genetic stochasticity (3–5). Despite our understanding of the risks, on 14 April, the only known female *Rafetus swinhoei* died in China, leaving one captive male in China and two known wild males in Vietnam. Unless another female is found in the wild, the species is now functionally extinct (6, 7).

More investment in conservation may have been able to save this species. However, insufficient funding still hinders amphibian and reptile conservation, and public awareness of wildlife protection remains weak. China must further expand its nature reserves and implement scientific management and protection policies to save other endangered amphibians and reptiles. In addition, developed countries and international organizations should help developing countries that lack the capital, management, and technology required to protect reptiles and amphibians. Long-term international collaborations could prevent other

endangered amphibians and reptiles from following in the path of *Rafetus swinhoei*.

Huinian Liu^{1,2}, Xin Li^{1,2*}, Chang Zhang^{1,2}

¹College of Environmental Science and Engineering, Hunan University, Changsha 410082, China. ²Key Laboratory of Environmental Biology and Pollution Control (Hunan University), Ministry of Education, Changsha 410082, China.

*Corresponding author. Email: hgxlixin@hnu.edu.cn

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Brazil's biodiversity researchers need help

Between 2006 and 2014, Brazil experienced a boom in its national science and technology budget (1) that fomented local research groups and enhanced international collaboration, resulting in the rise of Brazil in scientific rankings (2). During that period, Brazil engaged in environmental conservation (3), earning recognition as a global biodiversity leader (4). However, recently elected president Jair Bolsonaro gutted the budget for science and higher education, causing funding agencies to run out of cash by July 2019 (5) and universities

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China's ineffective plastic solution to haze

The Beijing-Tianjin-Hebei (BTH) region of China, one of the most densely populated regions in the world (1, 2), suffers from severe atmospheric haze (2, 3). In an effort to minimize fine dust blown by the wind [called eolian dust (4)], a precursor to haze (2), local governments have adopted a strategy of covering all bare land and soil in the region with plastic gauze [e.g., (5)]. However, the plastic has no effect on haze and causes soil pollution, increasing ecological risk.

Statistically, persistent haze in the BTH region occurs during low wind speeds (less than 2 m/s), allowing an accumulation of fine particles [e.g., particulate matter with a diameter of less than 2.5 μm ($\text{PM}_{2.5}$)] in the stagnant air (3). Although covering

land with gauze may be useful to prevent localized dust generation during high winds, the gauze has no direct effect in the fight against haze (6–8). However, using gauze to cover land introduces a substantial amount of plastic into the soil, which can affect soil properties. Meanwhile, plastic decomposition may be a source of the microplastics in water and coastal sediments of the region (9). The plastic cover also hinders plant recolonization and harms natural habitats, including the habitat of migratory birds, which use the coast of Bohai Bay as an important staging site on the East Asian-Australasian Flyway (10).

It is clear that the vast amount of plastic deposited in the environment does not help ameliorate haze, but it is causing ecological problems. Policy-makers must stop treating one environmental issue by creating another one. Instead of plastic cover, the bare soil and land should be rewilded with ecological restoration (11).

Xueqiang Lu^{1,2,3*}, **Rolf D. Vogt**^{3,4}, **Haixiao Li**^{1,2,3}, **Suqin Han**⁵, **Xunqiang Mo**⁶, **Yufen Zhang**¹, **Sami Ullah**⁷, **Chen Chen**⁸, **Xiaoxin Han**^{1,2,3}, **Hongyuan Li**^{1,2,3}, **Hans M. Seip**⁴

¹College of Environmental Science and Engineering, Nankai University, Tianjin 300350, China. ²Tianjin

Key Laboratory of Environmental Technology for Complex Trans-Media Pollution, Tianjin 300350, China. ³Tianjin International Joint Research Center for Environmental Biogeochemical Technology, Tianjin 300350, China. ⁴Department of Chemistry, University of Oslo, 0315 Oslo, Norway. ⁵Tianjin Institute of Meteorological Science, Tianjin 300074, China. ⁶College of Geographic and Environmental Sciences, Tianjin Normal University, Tianjin 300387, China. ⁷School of Geography, Earth, and Environmental Sciences, University of Birmingham, Birmingham B15 2TT, UK. ⁸Tianjin Huanke Future Ecological Technology Company, Tianjin 300191, China.
*Corresponding author. Email: luxq@nankai.edu.cn

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