The rare Chinese box turtle (*Cuora flavomarginata*) continues to be traded on the black market.

Edited by **Jennifer Sills**

China's wild turtles at risk of extinction

China's turtle species diversity ranks third in the world, with 34 species including 3 tortoises, 5 sea turtles, and 26 freshwater turtles (*1*). However, with the exception of three species that lack sufficient data, all of China's turtle species have been listed as Endangered or Critically Endangered on the Red List of China's Vertebrates, making them the most endangered group of vertebrates in the country (*1*). Evidence suggests that most wild populations of turtles in China declined by more than 90% between 1980 and 2012 (*2*). If China does not take steps to mitigate the risks to wild turtles, they could face imminent extinction.

The catastrophic decrease of the wild turtle population is primarily the result of overexploitation (*2*, *3*). Because turtles symbolize luck and longevity in Chinese culture, they are widely kept as pets and used for food and traditional medicine (*3*, *4*). To meet the huge consumption demand, the turtle farming industry has developed rapidly in China since the 1990s (*5*). Farmers purchase wild-caught turtles to improve the reproductive capability of farmed stocks (*6*). Some rare species, such as box turtles (genus *Cuora*), are very expensive in the black market (*7*), and high profits have stimulated poaching of wild turtles (*2*).

Wild turtles in China face other threats as well. With the rapid economic development in recent decades, construction of hydropower plants, coastal development, water pollution, and other human activities have destroyed the turtles' habitat (*8*, *9*). Meanwhile, the invasion of alien turtles threatens the survival of native turtles (*10*). For example, the red-eared slider (*Trachemys scripta elegans*), one of the world's 100 most invasive species, is farmed in China and has been widely found in the wild, causing serious ecological risks (*10*).

The Chinese government must urgently implement measures to protect wild turtles. Ecological education efforts should work to shift the expression of cultural love for turtles from consumption to conservation. The government should also strengthen the enforcement of the Wildlife Protection Law of China (*11*) to crack down on poaching and illegal trade of wild turtles and to prevent and control the invasion risk of alien turtles. Finally, despite their endangered status on the Red List (*1*), only one-third of China's wild turtles are currently included on the National Key-Protected Species List (*12*), an appendix of the Wildlife Protection Law of China that lists species in need of protection. To ensure legal and enforceable protection, China should update the Protected Species List to include all endangered turtle species.

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COVID-19 recovery can benefit biodiversity

Coronavirus disease 2019 (COVID-19) is a global crisis. Severe interruptions to international trade and travel are crippling economies and forcing reevaluation of economic, health, and environmental trajectories. Given that COVID-19 has triggered widespread changes in human behavior and reductions in pollution (*1*, *2*), it presents opportunities for further positive change. Lockdowns have spurred households to rethink consumer needs, making now an opportune time to promote sustainable consumer choices that will become more engrained with prolonged exposure (*1*). How we emerge from the state of lockdowns will drive a new world economy with lasting effects on global biodiversity and supply chains (*3*, *4*).

The COVID-19 pandemic has the potential to trigger enormous effects on biodiversity and conservation outcomes. This virus emerged due to wildlife exploitation (*5*), and the risk of new diseases increases with environmental degradation (*6*). Past events such as pandemics, wars,

and financial crises have also triggered quantifiable environmental changes (*7*, *8*). We can learn from such events to guide effective conservation strategy. National governments and intergovernmental organizations should adopt clear strategies to safeguard both biodiversity and human health throughout the COVID-19 recovery.

Active promotion and implementation of certain strategies could tip the balance in favor of positive biodiversity outcomes. We can reboot economies while protecting humans and nature by redesigning trade networks and supply chains to localize and better support sustainable consumer options. We can also strengthen environmental protections, improve environmental monitoring through better use of automation, and ensure that conservation funding schemes remain active.

Environmental policy has already moved in both directions. Although in some places, environmental protections have weakened (*9*), in others, governments have banned animal trade (*3*, *10*) and aim to localize supply chains to increase resource security (*11*). Blanket wildlife trade bans are not the answer (*3*), but appropriately nuanced strategies that incorporate such measures should be encouraged. As we progress into a post–COVID-19 world, recovery strategies can be optimized to benefit biodiversity conservation and protect human health.

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COVID-19 spotlights medical diagnostics

The coronavirus disease 2019 (COVID-19) pandemic highlights the importance of the field of medical diagnostics. Governments are trying to avert crisis conditions by opening makeshift testing units and recruiting nonclinical research staff to conduct testing (*1*), but this strategy is not a long-term solution. To increase the number of medical diagnosticians, this career path should be encouraged, valued, and adequately funded. Diagnostic expertise will likely become even more vital as our rapidly aging societies continue to challenge a strained health care system (*2*, *3*).

Although constant steps are undertaken to improve the working conditions of doctors, paramedics, and nurses [e.g., (*4*, *5*)] as well as to promote these career choices among the young generations (*6*, *7*), the field of medical diagnostics lags (*6*). Medical universities focused on educating first-line medical staff often give nonclinical degree programs lower priority and funding. Medical diagnostics graduates, saddled with the less prestigious perception of their profession, rarely request higher wages or better working conditions (*6*). Diagnostics facilities play an important role in the functioning of health care in both everyday and emergency situations, and yet they are often overlooked in budget plans (*8*–*10*). Ensuring proper training, funding, and esteem for diagnostic personnel and facilities is crucial to a successful health care system.

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