

## Northern river terrapins *Batagur baska* reintroduced in Sundarban Tiger Reserve, India

On 19 January 2022, the Turtle Survival Alliance and Sundarban Tiger Reserve of West Bengal Forest Department, India, released 10 subadult northern river terrapins *Batagur baska* into a tidal river in Sundarban Tiger Reserve. This group of terrapins, c. 9 years old and comprising seven females and three males, is the first monitored return of the species to the wild in India. The terrapins are offspring of 12 founder animals discovered in 2008 in a pond at the Sajnekhali Range Station within Sundarban Tiger Reserve.

The northern river terrapin, formerly native to India, Bangladesh, Myanmar and Thailand but now extant only in India and Bangladesh, and with three females in temple ponds in Myanmar, is categorized as Critically Endangered on the IUCN Red List. The Turtle Survival Alliance and its partners estimate that < 20 adult terrapins may survive in the wild across the vast expanse of the Sundarbans spanning south-east India and south-west Bangladesh. As human settlement of the Sundarbans increased, the wild population declined as a result of unsustainable collection of adults and eggs for food.

In 2012, in a joint initiative of Sundarban Tiger Reserve and the Turtle Survival Alliance, the founder animals were entered into a conservation breeding initiative, with the first successful reproduction of 33 hatchlings occurring that year. The 10 subadults released in 2022 were selected from > 370 individuals hatched through this programme. The programme has worked with governmental agencies to obtain permits and engage communities within the Sundarbans in educational initiatives on the importance of the return of this terrapin to the wild. Prior to release, in the presence of hundreds of citizens, the 10 terrapins were ceremoniously blessed by a priest at the temple of Bonbibi, the forest goddess of the Sundarbans, to create a cultural connection for the return of the terrapins.

The Sundarbans is a 10,000 km<sup>2</sup> mosaic of tidal rivers and mangrove forests. Through knowledge gained from previous releases of *B. baska* by the Turtle Survival Alliance's partners Zoo Vienna Schönbrunn and Bangladesh Forest Department in Bangladesh, we expect the 10 terrapins to make considerable movements through this ecosystem. The Turtle Survival Alliance's India staff will monitor post-release animal movement and survival via satellite transmitters fixed to the shell of each turtle, as well as through trained, licensed fishers who will report the location and condition of any turtles captured incidentally. Integrating local fishers and riverside communities is a fundamental component of the Turtle Survival Alliance's approach for other at-risk species in India, and the use of satellite transmitters marks the first time this method has been used for a non-marine turtle in the country.

SHAIENDRA SINGH ([orcid.org/0000-0001-6867-4907](https://orcid.org/0000-0001-6867-4907), [shai@turtlesurvival.org](mailto:shai@turtlesurvival.org)) and SREEPARNA DUTTA ([orcid.org/0000-0003-2684-9822](https://orcid.org/0000-0003-2684-9822)) Turtle Survival Alliance India, Lucknow, India. S. JONES JUSTIN West Bengal Forest Department, Kolkata, India. ANDREW D. WALDE Turtle Survival Alliance, Charleston, USA

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY SA 4.0](https://creativecommons.org/licenses/by/4.0/).

## Newly proposed protection list excludes aquatic wildlife, exposing a long-standing wildlife management problem in China

In November 2021, The National Forestry and Grassland Administration of China released a draft List of Terrestrial Wildlife of Significant Ecological, Scientific or Social Value and made it open for public consultation ([forestry.gov.cn/main/4461/20211210/101145329663518.html](https://forestry.gov.cn/main/4461/20211210/101145329663518.html)). Together with the complete ban on terrestrial wildlife consumption by the National People's Congress of China (February 2020) and revision of the List of Wildlife under Special State Protection (February 2021), the draft List of Terrestrial Wildlife demonstrates ongoing wildlife management reforms in China precipitated by the COVID-19 pandemic.

However, 191 aquatic species were not included in the draft List of Terrestrial Wildlife. Although the revision increased the number of protected species, it reassigned many amphibians and reptiles, including alligators, sea snakes, freshwater turtles, salamanders and frogs, to the aquatic category. There is no list of aquatic wildlife equivalent to the List of Terrestrial Wildlife of Significant Ecological, Scientific or Social Value, and the newly excluded aquatic species will therefore not receive the same protection as terrestrial species.

The ban of the National People's Congress prohibits the harvesting, trading and consumption of all terrestrial wildlife, including those with no protected status and even those bred in captivity, but aquatic species are not subject to this ban. This arises from the separate management of terrestrial and aquatic wildlife by the Forestry and Fishery Departments, respectively, an issue that has created a loophole that hinders the protection of threatened aquatic species and allows unsustainable consumption and farming.

Before the pandemic, both the Forestry and Fishery Departments encouraged wildlife farming. The ban on terrestrial wildlife farming prompted the Forestry Department to focus on protection, whereas the Fishery Department continued to promote utilization, even permitting the farming and consumption of 81% of the freshwater turtle species and 20% of the inland fish species ostensibly under Special State Protection.

This loophole even extends to protected areas. In 2018, the National Forestry and Grassland Administration, under

its previous name the National Park Administration, took over responsibility for all nature reserves, including those for aquatic species and wetland ecosystems, but the management of aquatic wildlife remained with the Fishery Department.

Because of these matters, aquatic wildlife is not receiving adequate protection. We recommend that this loophole should be closed by uniting all wildlife management in China under a single authority.

This work is supported by the National Natural Science Foundation of China (project number 32170532).

HAI-TAO SHI ([orcid.org/0000-0001-5968-0643](https://orcid.org/0000-0001-5968-0643), [haitao-shi@263.net](mailto:haitao-shi@263.net)) and JIAN WANG ([orcid.org/0000-0002-6164-4390](https://orcid.org/0000-0002-6164-4390)) Ministry of Education Key Laboratory for Ecology of Tropical Islands, College of Life Sciences, Hainan Normal University, Haikou, China. HUAIQING CHEN ([orcid.org/0000-0002-1032-4346](https://orcid.org/0000-0002-1032-4346)) Centre for Nature and Society, College of Life Sciences, Peking University, Beijing, China. JAMES F. PARHAM ([orcid.org/0000-0001-5058-9499](https://orcid.org/0000-0001-5058-9499)) Department of Geological Sciences, California State University, Fullerton, USA

*This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY NC SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/).*