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## SAL FOREST TORTOISE HABITAT STRETCHES OVER UNPROTECTED AREAS

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Critically endangered: The sal forest tortoise is heavily hunted for food and collected both for local use, such as decorative masks, and international wildlife trade. | Photo Credit: Abhijit Das

The sal forest tortoise is widely distributed over eastern and northern India and Southeast Asia. However, it is not common in any of this terrain. In fact, 23 of the 29 species of freshwater turtle and tortoise species found in India come under the threatened category in the IUCN red list and are under severe existential threat due to human activities. Also known as the elongated tortoise (Indotestudo elongata), the sal forest tortoise, recently assessed as critically endangered, is heavily hunted for food. It is collected both for local use, such as decorative masks, and international wildlife trade.

A recent study by ecologists in the Wildlife Institute of India, Dehradun, finds that the area designated as a protected area network has only a small overlap with the actual habitat it roams around in. According to the authors of the study published in the journal *Herpetological Conservation and Biology*, over 90% of the potential distribution of the species falls outside current protected area's network. Also, in northeast India, the representation of the species in protected areas is least, and there is little to no connectivity among most of the protected areas where the species is present.

The study also found that 29% of the predicted distribution of the species falls within high occurrence fire zones or areas where there is management burning. "This includes Uttarakhand State which is the "westernmost" distribution limit of the species and where field surveys were conducted with the help of Uttarakhand forest department," says Abhijit Das, an author of the study, from the Wildlife Institute of India, Dehradun, in an email to *The Hindu*. According to him, especially in northeast India, which is a suitable habitat for the species, they experience jhum fire. Such an intervention may not only directly kill the animals but also open up habitats, which, in turn, increases the chance of people finding the tortoise easily. Forest fires also perturb soil moisture which may impact forest floor thus changing the whole community on which the reptiles depend.

According to the IUCN the population of the species may have fallen by about 80% in the last three generations (90 years).

Dr. Das says: "We need to realise that tortoises are no less threatened than tigers. Thus, they should be part of regular monitoring effort. In summer days, these tortoises select moist patches such as dry stream beds. Such areas should be protected from the spread of forest fire."

The study covers not only parts of India but also Bangladesh, Bhutan and Nepal. Dr. Das observes: "It is not difficult to go to these countries for research or even in having collaborations. However, transboundary research has not picked up in our countries. For tigers, yes, there are some efforts in this line, but not for many other species which are equally threatened globally." There is for tigers, the "Tiger Conservation Unit" and transboundary conservation reserves such as Manas for the Indo-Bhutan region, the Sundarban for the India-Bangladesh region. "However, there are many species such as our study species which have very large distribution but it is rare and overexploited throughout its range. The critically endangered brackish water turtle (Batagur baska) distributed in India and Bangladesh also needs such support," he adds.

There is little information on the population sizes of the sal forest tortoise, or any such species, mainly because they are so rare, live in remote areas of the forest and funding opportunities to study them are few. Species having large distribution may suffer myriad problems. "Protected areas are designated in a largely mammal-centric way. Many reptiles and amphibians which are equally threatened live outside protected areas where exploitation risk is more," says Dr. Das.

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