

# How Human Impacts May Influence the Future of Species

Thursday, Feb 25<sup>th</sup>: 10am-11am ET

## Uma Ramakrishnan



Despite significant interest in conservation and biodiversity, species across the globe are declining. Tigers represent a typical endangered species. However, tigers are not declining everywhere. In India for example, tiger numbers are increasing. Does this bode well for all tiger populations in India? We attempt to answer this question using population genomics and landscape genetics from field-collected wild tiger samples across India. We have identified small and isolated, and large-connected populations of tigers. Further, we have investigated the impacts of isolation in two specific populations, where we find genomic evidence for inbreeding depression and the possible impacts of drift. Our studies provide a nuanced picture for future trajectories of tiger populations, and suggest what interventions could safeguard these populations in the future. I will also discuss some new research directions we are initiating in Indian biodiversity hotspots, that are characterized by high human population density, high mammal diversity and high land use change, making them ideal for infectious disease spillover.

[Prof. Uma Ramakrishnan](#) is a molecular ecologist and conservationist at the National Center for Biological Sciences (NCBS) in Bangalore. She received her PhD from the University of California, San Diego, and subsequently was a postdoc at Stanford University. Her research centers on revealing the processes that drive patterns of mammalian genetic variation, with a focus on the wildlife of the Indian subcontinent due to its high biodiversity, unique geographic setting, and dramatic geological history. She has collaborated with the Wildlife Conservation Society (WCS), using genetic fecal sampling to characterize the size and connectivity of tiger populations. In particular, this has informed policy decisions for protecting tiger habitat, and has assisted anti-poaching efforts. Prof. Ramakrishnan has received numerous awards for her work, including the Ramanujan Fellowship, the Parker/Gentry Award, an Outstanding Scientist Award from the Department of Atomic Energy, and fellowship at the Indian National Science Academy.

Hosted by the [Soft Math Lab](#).

Contact: Irina Tolкова

Email: [itolkova@g.harvard.edu](mailto:itolkova@g.harvard.edu)

To attend, [join](#)  
[Zoom link here](#).

password: "tigers"