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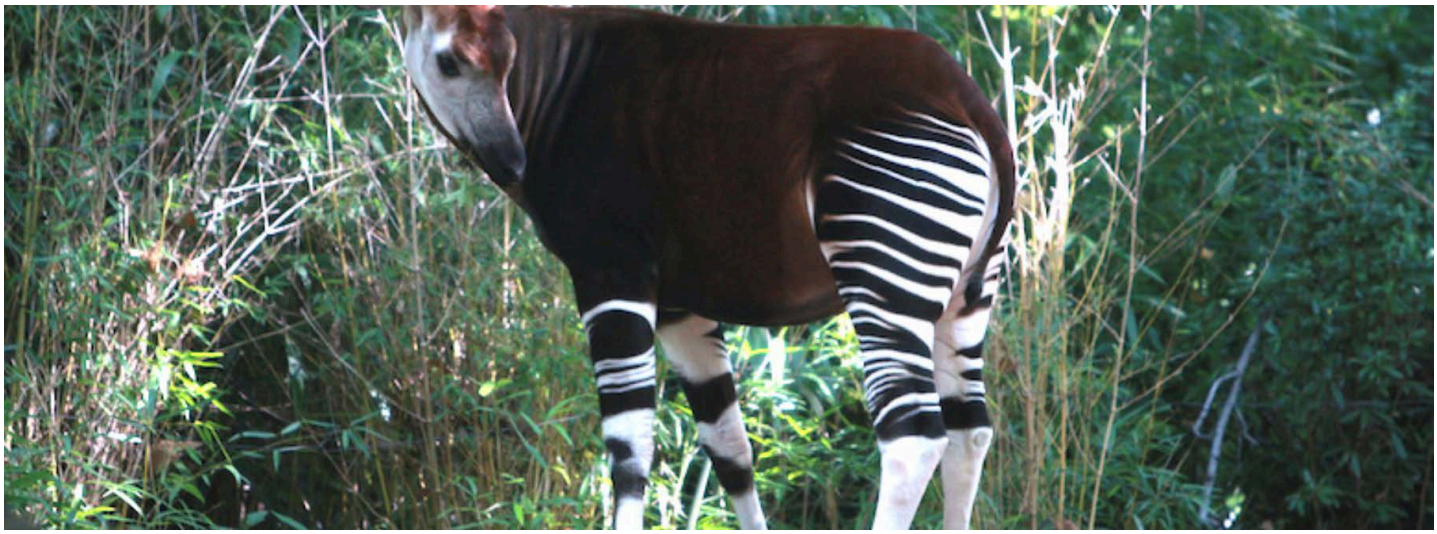
'IUCN Green List of species': A new way to measure conservation success

by **Shreya Dasgupta** on 26 March 2018



- *Scientists have proposed a framework for a new "Green List of species" that outlines a standard way of measuring species recovery and conservation success.*
- *The framework starts by defining what a "fully recovered species" looks like, then lays down four metrics that quantify the importance of conservation efforts for a species' recovery.*
- *The Green List will eventually become a part of the IUCN Red List, the scientists say, with the final species assessment including both the extinction risk categories as well as the four conservation metrics to help judge whether conservation actions are helping a species recover.*

The IUCN Red List of Threatened Species, the world's most widely used information source on a species' conservation status, may soon get a makeover.

The Red List measures the decline in populations of plants and animals, and classifies species into groups on the basis of their extinction risk. But what if, despite years of conservation efforts, the threat category of a species doesn't budge. Does this mean that conservation efforts have been unsuccessful? Does it mean that the species is not recovering?

Scientists have now proposed a framework for a new "Green List of species" to change the way we measure conservation success. The framework, published in the journal Conservation Biology, shifts the focus from trying to pull a species back from the brink of extinction, as the Red List currently does, to finding ways of helping species recover to their maximum potential.

“Successful conservation of a species is not just about avoiding extinction; we want species to move towards ‘fully recovered’ which means healthy populations across its former range, interacting with its ecosystem in ways it should be,” said co-author Barney Long, director of species conservation at the NGO Global Wildlife Conservation. “Of course not all species can recover to their former range and populations but we should be trying to recover and not ‘save’ species where possible.”

Sumatran rhino in Way Kambas, Sumatra, Indonesia. Photo by Rhett A. Butler for Mongabay.com.

The framework starts by defining what a “fully recovered species” looks like. It then lays down four metrics that quantify the importance of conservation efforts for a species’ recovery: what conservation actions have achieved for the species in the past, and what those efforts can achieve in the future.

“In order to make conservation decisions, we have to know how much conservation has already affected the species: we want to know what’s working, what’s not,” lead author H. Reşit Akçakaya, professor of ecology and evolution at Stony Brook University, New York, told Mongabay. “We want to highlight successes and also learn from failures.”

The first of the four metrics, “conservation legacy,” measures the difference that past conservation actions have made to a species. It compares the current status of a species with what would have happened if existing conservation efforts, such as conservation funding or legal protections like protected areas, had not been taken to secure the species’ populations in the last 50 years.

The remaining three metrics look at future conservation impacts. “Conservation dependence,” for example, measures what would happen to a species in the future if ongoing conservation actions were stopped. “Conservation gain” quantifies the improvements that conservation efforts can bring about in the future. And “recovery potential” aims to quantify the maximum plausible recovery that a species can achieve in the long term.

Overall, the Green List would provide a global standard for qualifying species recovery and conservation success, the authors say.

"IUCN recognises the need to set aspirational goals for biodiversity conservation and to demonstrate that conservation does work," said Craig Hilton-Taylor, head of the IUCN's Red List Unit and one of the paper's co-authors. "This new framework highlights an ambitious shift in conservation thinking towards ensuring the recovery of species, rather than just avoiding extinctions."

William F. Laurance, a tropical ecologist at James Cook University in Australia and member of Mongabay's advisory board, who was not involved in drafting the framework, welcomed the idea of "identifying positive goals for species conservation." But he cautioned that to be successful, the Green List would need to be widely used, and be effective in steering conservation priorities.

"The authors have a lot of real-world conservation experience," he said. "It gives their idea further credibility with 'old dogs' such as myself who have seen many conservation fads come and go."

Bengal tiger in Corbett National Park, India. Photo by Udayan Dasgupta/Mongabay.

The Green List will eventually become a part of the IUCN Red List, Akçakaya said. The final species assessment will include both the extinction risk categories as well as the four conservation metrics to help judge whether conservation actions are helping a species recover.

But things can change, Akçakaya cautioned. The framework, in its current form, is only an initial proposal, and the authors plan to test and refine the evaluation system over the next few years based on feedback from other conservationists. The "Green List of species" is also a working title that might change in the near future. The scientists hope to launch the final product in 2020.

“We wanted to publish the paper early to use it as a discussion piece and encourage feedback, criticism, and support,” Long said. “We now have to conduct extensive testing with many different species across the world’s habitats, from long lived trees to insects that live only a few days, from wide-ranging birds to fungi that are only found in one site. We also need to test on terrestrial marine and freshwater species. Only with such extensive testing will we find a system that works for all species.”

The paper’s authors hope that the Green List will help funders and decision-makers base their policies on the impacts that conservation has had, and can have, on target species.

“One of the problems that come up once in a while these days is that if a species is recovering in status, it becomes difficult to find funding for that species. But the reason the species is recovering is because of conservation action,” Akçakaya said. “We hope that the Green List will become a more rational basis for making decisions about which projects to fund than decisions based only on the current extinction categories.”

William Sutherland, professor of conservation biology at the University of Cambridge, U.K., who was not involved in the paper, also welcomed the notion of the Green List. “One challenge is that we are weak in quantifying what works so the scores of the role of conservation action will often be speculative,” he said. “It is important that this is used to generate support by giving a positive confident message rather than distracting funds from on ground practice.”

Okapis, or “forest giraffes,” were unknown to the Western world until the 20th century. They are only found in the forests of the Democratic Republic of Congo. Photo by Rhett A. Butler.

Citation:

- Akcakaya H.R., et al (2018) Quantifying species recovery and conservation success to develop an IUCN Green List of Species. *Conservation Biology*. https://doi.org/10.1111/cobi.13112