

Science for Environment Policy

Does conservation make a difference?

If all conservation measures had ceased in 1996 the conservation status of the world's ungulate species would have been nearly eight times worse by 2008 than they were in reality, a new study suggests. The researchers generated a hypothetical scenario without any protection measures to show the substantial impact that conservation has for wildlife.

Some previous studies have attempted to estimate the value of conservation by showing that in some cases extinctions have been prevented, or declining populations have recovered. However, it is very difficult to understand the true value of conservation because we do not know what would have happened without it.

For this study researchers examined the impacts of conservation for the world's ungulates, a term that loosely means 'hoofed animals' and includes, among others, antelope, deer, giraffes and rhinos. To do this, they used the [IUCN Red List](#) categories of conservation status (least concern, vulnerable, endangered etc.) for a total of 235 ungulate species between 1996 and 2008. They then compared these real-world trends to a hypothetical situation in which all conservation actions ended in 1996 by estimating what the Red List category for each species would have been in 2008 in the absence of conservation action.

The no-conservation scenario assumed that all land managed for conservation reverted to a different land use in 1996. To calculate how this would change each species' Red List status, the researchers used information on population sizes and threats, as well as current conservation measures and how their absence would affect the species. As well as presenting their best estimate of the change in Red List status without conservation the researchers also provided optimistic and pessimistic estimates, for best- and worst-case scenarios.

Over the studied period, the real-world trend in Red List index (a numerical combined measure of all Red List statuses of a group of species) for the ungulates declined by 2.5%. Without conservation, however, the authors' best estimate is that the index would have declined by 20.4% (ranging from 6.2% for the optimistic estimate and 74.1% for the pessimistic). The best estimate is the equivalent to at least 148 species deteriorating by one Red List category compared to the 21 species in the real world.

For six species, including Javan rhino (*Rhinoceros sondaicus*) and greater one-horned rhino (*R. unicornis*), this would have meant declining to the point where they would have been completely extinct or extinct in the wild.

The results show that, without conservation, declines in the Red List status of ungulate species would have been nearly eight times worse. The proportion of species defined as threatened in the Red List would have risen to 58% by 2008, compared to the real-world scenario of 46%. For the common wildebeest (*Connochaetes taurinus*) the authors say that conservation prevented a substantial decline from the 'least concern' category to 'critically endangered'. This is because vital migration routes would have likely been disrupted by roads and there would have been increased hunting pressures without conservation measures to protect the land.



18 June 2015
Issue 417

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Source: Hoffmann, M., Duckworth, J.W., Holmes, K., Mallon, D., Rodrigues, A. S. L. & Stuart, S. N. (2015). The difference conservation makes to extinction risk of the world's ungulates. *Conservation Biology*. Early online. DOI: 10.1111/cobi.12519. The study is free to view at: <http://onlinelibrary.wiley.com/doi/10.1111/cobi.12519/abstract>.

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To cite this article/service: "[Science for Environment Policy](#)"; European Commission DG Environment News Alert Service, edited by SCU, The University of the West of England, Bristol.