Crisis Ecoregions

DEFINITION

Large-scale terrestrial regions of the world that are considered at risk.

DESCRIPTION

Crisis ecoregions are terrestrial regions where extensive habitat conversion and limited habitat protection suggest that substantial, irreversible and irreplaceable losses of significant biodiversity and ecological function are likely without successful conservation intervention. [1] This approach uses the delineation of terrestrial ecoregions developed by the World Wildlife Fund for Nature (WWF). [2] The concept was jointly developed by members of The Nature Conservancy (TNC) and the World Wildlife Fund for Nature (WWF), and was published in Hoekstra et al (2005). [1] The aim of this approach was to shift attention from the loss of individual species to the wider 'biome crisis'. The identification of Crisis Ecoregions was intended to help global conservation efforts in expanding beyond hotspots of species diversity, in order to emphasize protection of entire ecosystems at risk. [1]

SUPPORTED BY

Not applicable.

YEAR OF CREATION

2005

COVERAGE

Global in extent, with 305 sites world wide. [1] This was a one-off process which is not being further repeated or supported.

CRITERIA

To identify Crisis Ecoregions, a Conservation Risk Index (CRI) in every ecoregion was calculated.[1] The CRI is the ratio between how much area of a biome has been converted into other land uses and how much area has been protected through protected areas (IUCN Management Categories I-VI). As such, a higher conversion-to-protection ratio gives a higher CRI and therefore indicates an ecoregion at higher risk. This method categorized 305 ecoregions as Vulnerable, Endangered, or Critically Endangered based on the following conversion and CRI thresholds: [1]

- Vulnerable: Ecoregions in which habitat conversion > 20% and CRI > 2
- Endangered: Ecoregions in which conversion > 40% and CRI > 10
- Critically Endangered: Ecoregions with conversion > 50% and CRI > 25

MANAGEMENT

There is no specific management prescribed for Crisis Ecoregions. Crisis Ecoregions are those places where significant habitat loss has occurred and levels of protection are low, leaving biodiversity and ecological function at risk and suggesting urgent need of management intervention.

BUSINESS RELEVANCE

Legal and compliance – Legal protection was not a criterion for an area to be identified as a Crisis Ecoregion. Legal protection of Crisis Ecoregions is also not feasible as they are too large to protect in their entirety and national governments are not involved in their identification. Crisis Ecoregions, however, can contain other areas of biodiversity importance to which legal protection or safeguard standards may apply. The identification of large-scale biomes at the highest risk aims to highlight the regions where conservation efforts would be best placed, in order to assure that the most threatened areas are being prioritised. Crisis Ecoregions are therefore not a designation of protection, but a regional identification of high-risk areas which aims to prompt a coordinated conservation response between the relevant stakeholders.

Biodiversity inportance – Crisis Ecoregions are areas of high biodiversity importance, which need protection due to the high vulnerability of habitat within these large geographic regions. As a regional-scale approach, they are of limited use for site-scale assessment and decision making. As these areas include both sites of high biodiversity importance as well as degraded land and urban areas, more detailed assessments are needed to locate the actual distribution of biodiversity within them.

Socio-cultural values – The criteria for identification of Crisis Ecoregions did not explicitly include recognition of socio-cultural aspects. However, as these are large areas where human activity is present, local people may be involved in use, protection and management of at least some parts of these areas.

REFERENCES & WEBSITE

1. Hoekstra, J. M., Boucher, T. M., Ricketts, T. H. & Roberts, C. Confronting a biome crisis: global disparities of habitat loss and protection. Ecol. Lett. 8, 23–29 (2005).
2. Olson, D. M. et al. Terrestrial Ecoregions of the World : A New Map of Life on Earth. Bioscience 51, 933–938 (2001).



Taurus Mountains, Turkey. The Mediterranean is a crisis ecoregion. AixYago/Shutterstock.com

Category:

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Page last updated 24 December 2020