High-Biodiversity Wilderness Areas (HBWA)

DEFINITION

The large intact ecosystems of the world that hold significant levels of global biodiversity.

DESCRIPTION

The High Biodiversity Wilderness Areas (HBWA) approach has been developed by Conservation International (CI). HBWAs consist of 5 of the 24 major wilderness areas that hold globally significant levels of biodiversity, as identified by Mittermeier et al (2002). [1] The 5 HBWAs are Amazonia, the Congo forests of Central Africa, New Guinea, the Miombo-Mopane woodlands of Southern Africa (including the Okavango Delta), and the North American desert complex of northern Mexico and the Southwestern part of United States of America. The intact portion of these areas covers 8,981,000 km2 (76% of their original extent), and 6.1% of the planet's land area. [2] The geographic boundaries of the HBWAs coincide with the boundaries of several amalgamated WWF ecoregions.

In the past HBWAs were mostly considered to have "low vulnerability" because of their low levels of past habitat loss. [3] However, recent analysis suggests that the high cultivation potential of many HBWAs makes them a target for future agricultural expansion. [4] Cropland expansion is one of the primary threats to biodiversity in tropical countries.

SUPPORTED BY

Conservation International (CI)

YEAR OF CREATION

2002. This was a one-off scientific process and is not being updated.

COVERAGE

Global in extent, excluding marine areas. [1] Five identified regional-scale areas.

CRITERIA

Wilderness areas are classified as areas ≥10,000 km^2 that are based on the world's terrestrial ecoregions, with a human population density outside urban areas of ≤5 people per km^2 that retain at least 70% of their historical habitat extent (500 years ago). This analysis yielded 24 wilderness areas. [2] The HBWA are the top five wilderness areas based on endemic biodiversity (at least 0.5% of the world's plants). [1]

MANAGEMENT

There is no specific management associated with HBWAs, although they are the focus of some international conservation efforts.

BUSINESS RELEVANCE

Legal and compliance – The identification process for HBWAs did not include any legal and compliance requirements. Most of them are too large to legally protect in their entirety and national governments were not involved in their identification. They are, however, referred to in some environmental safeguard standards such as those of the Sustainable Forestry Initiative [5] that require that procurement promotes the conservation of HBWAs. Due to their size, there are many protected areas which fall within HBWAs. For example, 25% of Amazonia and 20.2% of the Miombo-Mopane woodlands are designated by national governments as protected areas. [6]

Biodiversity importance – HBWAs are based on high irreplaceability of species within large intact wilderness areas. Between them, the five HBWAs hold 17% of the global total of vascular plant species and 8% of the global total of terrestrial vertebrates as endemics. In comparison, all 24 identified wilderness areas only hold a fractionally higher percentage (18% of global total vascular plants and 10% of global total terrestrial vertebrates), which indicates the high level of endemism found in HBWAs. [2] This is a regional-scale approach based on coarse scale ecoregions that therefore has limited use for site-scale assessment and decision making. More detailed assessments are often needed to locate the actual distribution of biodiversity within these areas.

Socio-cultural values – These areas are not associated with any socio-cultural values due to low human presence and intervention within these areas. However, indigenous people are often present in HBWAs. Evidence suggests that HBWAs are particularly diverse in their indigenous communities, with 1,622 different languages being spoken in HBWAs and 1,308 of those being endemic to their regions. [7]

REFERENCES & WEBSITE

1. Mittermeier, R. A., Mittermeier, C. G., Robles Gil, P. & Pilgrim, J. D. Wilderness: Earth's Last Wild Places. 576. Conservation Interantional (2002).
2. Mittermeier, R. A. et al. Wilderness and biodiversity conservation. Proc. Natl. Acad. Sci. USA 100, 10309–10313 (2003).
3. Brooks, T. M. et al. Global Biodiversity Conservation Priorities. Science. 313, 58–61 (2006).
4. Phalan, B. et al. Crop expansion and conservation priorities in tropical countries. PLoS One 8 (2013).

5. Sustainable Forestry Initiative. Requirements for the SFI 2010-2014 Program: Standards, Rules for Label Use, Procedures and Guidance. (2010).
6. Schmitt, C. B. et al. Global analysis of the protection status of the world's forests. Biol. Conserv. 142, 2122–2130
7. Gorenflo, L. J., Romaine, S., Mittermeier, R. A. & Walker-Painemilla, K. Co-occurrence of linguistic and biological diversity in biodiversity hotspots and high biodiversity wilderness areas. Proc. Natl. Acad. Sci. USA, 109, 8032–7 (2012).



Aerial view of the Amazon River, Peru. Amazonia contains the largest HBWA. Anton Ivanov/Shutterstock.com

Category:

Biodiversity designations

Related pages

Last of the Wild (Areas)

IUCN Category Ib - Wilderness Area (Areas)

Wilderness (Terms)

Links

Conservation International

Page last updated 24 December 2020