

Most biodiverse countries spending the least on conservation, study finds

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Countries that contain most of the world's species biodiversity are also spending the least on a per-person basis to protect these natural assets, according to scientists from the Wildlife Conservation Society (WCS) and the University of Queensland. The authors also noted that spending appears to be associated with the country's social and governance organization.

The study titled "Geography of Conservation Spending, Biodiversity, and Culture" appears in the latest edition of *Conservation Biology*. The authors are: Tim McClanahan of WCS and Peter Rankin of the University of Queensland.

Using open-source data from several international and research organizations, the authors found that cultural factors, such as individuality, defined as self-sufficiency, the equality of the society, and the strength of the rule-of-law governance organization are associated with relative [spending](#) on [conservation](#) activities. The problem is that countries spending the most are not located where the species diversity is most concentrated, which could undermine efforts to protect most the world's biodiversity unless spending and policies change.

"Our finding that the countries most in need of conservation are also not investing in saving it relative to their population numbers and economic output, indicates that more cross-cultural and culturally-specific initiatives are needed to conserve the Earth's species," said Dr. Tim McClanahan, Senior Scientist for WCS and co-author of the study.

"Promoting conservation after economic development and cultural values change is a recipe for more species extinctions."

The authors reasoned that cultures change slower than the rapid rate at which species are being lost, and this requires a new set of conservation strategies that promote economic development and wealth before acting to conserve species. While these factors were associated with per capita spending on conservation, there is a need to act quickly with the current-funding constraints.

The researchers combined six sources of information to undertake a study investigating how culture influences spending on protecting the world's biodiversity and if that spending coincides with where most of the Earth's biological diversity is located. Cultural organization traits and values were informed by the cultural dimensions discovered by social scientists who study human values and management organization. The cultural axes were augmented with World Bank indices on national governance measures and environmental diversity data gathered from the IUCN (International Union for the Conservation of Nature) and the Catalogue of Life, and a range of other data on individual countries, including: population; economic wealth; and recent compilation of within-country spending on [biodiversity conservation](#).

Overall, the research revealed that cultures near or in the tropics—where most of the diversity is located—spent the least on biodiversity conservation. Social factors such as group identity and hierarchical leadership increase with proximity to tropical regions, but these factors do not indicate an inclination toward investing money in conservation. These same cultural attributes are associated with weaker rule-of-law governance, according to the authors.

Interesting outliers, such as Costa Rica, Croatia, and Thailand, spend more of their GDP on conservation. Similarly, some countries like

Germany, Luxembourg, Israel, and Latvia, spent less than what would be expected for their cultures of individuality and stronger rule-of-law governance organization.

McClanahan added: "While culture is not destiny in terms of care for the environment, the study indicates that cultural context has to be considered when planning global conservation policies and activities. Care for the environment and high conservation spending in countries with strong individuality and rule-of-law has to show impact and be more than a symbolic response to declining natural resources."

The authors recommend that the need to protect areas of high biodiversity require approaches to natural resource management that consider the cultural context and use existing social traits embodied in the culture's collectivism and social hierarchies. This means, for example, engaging leadership and promoting bio-cultural heritages. To stop species extinction culturally appropriate conservation efforts are much more likely to succeed in comparison to market-oriented strategies.

"Rather than promoting markets, which has led to wealth, conservation values and spending in temperate countries, these individualistic cultures should use their desire to stop species depletion in tropical biodiversity rich countries by promoting more culturally appropriate conservation efforts," concluded McClanahan.

Provided by Wildlife Conservation Society

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