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Nature Conservation Index (NCI)

Biodiversity conservation aims to mitigate the impacts of climate, environmental and biodiversity crises by protecting species and ecosystems essential to Earth's life-support systems. Nations are responsible for managing their habitats and species for future generations -- a duty that depends on factors like species richness, extinction risks and socio-political commitments. Comprehensive and accurate data on national biodiversity are crucial for making informed decisions that contribute to climate change mitigation, prevent extinctions and ensure sustainability. Recently, more data have become available due to increased awareness, technology and international activity. However, there is currently no universal index that aggregates and disseminates such data across countries. This gap can hinder global efforts to assess national contributions and develop necessary conservation interventions.

To address this, we present the new Nature Conservation Index (NCI), which evaluates a country's effectiveness in biodiversity conservation. The NCI relies on high-quality data across four pillars, each representing a key aspect of conservation management.

The first pillar -- Land Management (Area-based conservation) -- assesses how well countries protect habitats. It includes indices like protected area coverage, land use, and sustainable resource use. Expanding protected areas and improving land management practices can enhance the score. The second pillar -- Threats to Biodiversity -- reflects risks posed to species, with improvements achieved by enhancing species protection. Indices such as species threat levels, declining populations, and invasive species pressure gauge the effectiveness of conservation efforts. The third pillar -- Capacity and Governance -- evaluates a country's legal, fiscal, and societal commitment to biodiversity conservation. Indices include management costs, conservation laws, and public engagement. The fourth pillar -- Future Trends -- focuses on policies aimed at mitigating climate change and safeguarding against future biodiversity challenges, using indicators from Yale's Environmental Performance Index, highlighting the importance of forward-looking strategies in biodiversity conservation.

By consolidating high-quality data, the NCI provides countries with a clear metric to assess their conservation progress and identify areas for improvement. It also has the potential to guide international bodies in promoting incentives or sanctions for particular countries, supporting global sustainability efforts.