UN environment WCMC 40 years

Biodiversity Indicators Partnership

INDICATOR FACTSHEET

INDICATOR NAME: **Species Protection Index**

Key facts

Indicator type	State
Is the indicator **applicable for national use?**	Yes
Current development status	Developed
What is the **coverage**?	Global
Is the indicator **freely available?** If so, where? Please provide a link.	Yes Link: https://mol.org/indicators https://www.half-earthproject.org/maps/
Is the indicator **peer-reviewed?**	Yes
Who is involved in the production of this indicator/**who are the partners?** Please provide partner logos.	MOL MAP OF LIFE GEO BON

Target information

TARGETS	
Please indicate the primary **Aichi target** and any secondary targets that this indicator aligns to?	Aichi: 11 Post-2020: Goal A3, A6; Target 2
Is the indicator an **official SDG indicator**, if so, for which target?	
Is the indicator **relevant for other SDG targets**? If so please state which.	Goal 14, 15
Is the indicator an **official indicator for other MEA (e.g.** CITES/CMS/RAMSAR**),** if so, for which targets?	IPBES Global Assessment
Is the indicator included in the **IPBES core or highlighted** indicators?	Core

Is the indicator **relevant for other MEA targets**? If so please state which.	

Themes:

THEME	
Agriculture	
Marine and freshwater habitats	X
Pollution	
Finance, research and knowledge	
Human well-being	
Policy and conservation actions	X
Species	X
Terrestrial habitats	X
Sustainable use of natural resources and land	

Who is the main contact point for the indicator?

Walter Jetz, walter.jetz@yale.edu

Description of the indicator: (what the indicator is/measures, what policy questions it addresses, brief background/history of development).

The Species Protection Index (SPI) is the average percent of global reserve target met by a country for its species, weighted by the stewardship countries have each of them.

An SPI of 100 means that all of a country's species are sufficiently represented in its formal reserves. In turn, an SPI of 50 suggests that a country on average meets only half of the reserve area target for its species. The stewardship-weighting means that a species occurring only in a given country and nowhere else (endemic) is weighted, e.g., 10 times more strongly in the averaging than a species with only 10% of its global range in this particular country.

An increase in protected area network will generally result in an increase of a country's SPI. Strategic and targeted protection for species with reserve gaps will increase SPI more strongly than reserve placement that does not consider the distribution of species and their current representation in reserves.

The indicator is calculated annually at near global scale and comprehensively for a growing set of species groups.

Graphs and diagrams: (insert graphic/figure, how to interpret the trend and what do +ve/-ve trends mean etc.)

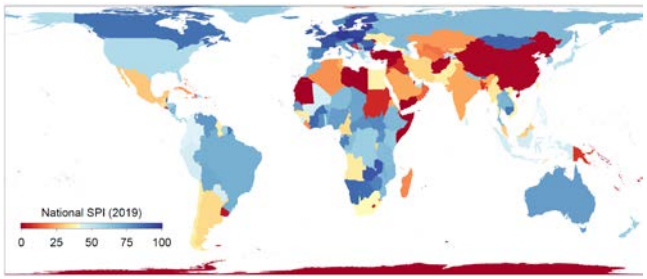

Fig 1: Country SPI values for Year 2019 for terrestrial vertebrates (31,904 species).

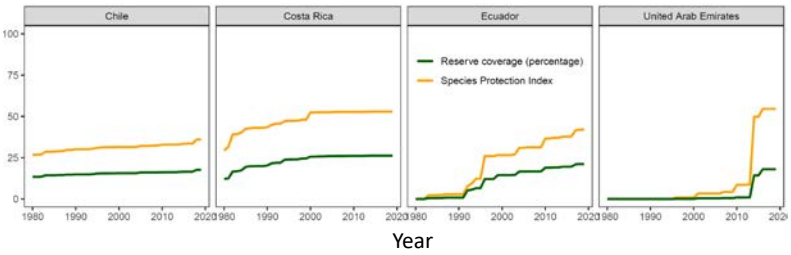

Fig 2: SPI trends (orange) for four example countries (terrestrial vertebrates), compared to trends in areal reserve coverage (% of country area).

Year

Current storyline (a succinct overview of the current trend and explain how this impacts biodiversity)

The increases in the reserve areas over the past forty years generally resulted in increased species coverage. But often reserves addresses species reserve gaps inefficiently, and in most countries current formal reserve fall way short of meeting minimum areal reserve targets for their species.

Data and methodology:

Coverage	Global
Scale	Global
Time series available	1980-2019
Next planned update	2021
Possible disaggregations	By species group and country; sub-national regions in progress
Metadata used	
Methodology	SPI quantifies stewardship-weighted annual trends in the proportion of species' reserve targets met. It can be flexibly aggregated at the levels of species, nations and the globe. SPI applies a species-level weight to account for different national stewardships of species, i.e. their varying responsibilities as determined by the portion of a species' global range expectation they hold. SPI uses latest, best-possible predictions of species geographic ranges from Map of Life, based on a variety of expert sources (https://mol.org/datasets) combined with habitat information and remote sensing layers. Currently (2020) for mammals and amphibians sources include range maps assembled by experts supporting IUCN Red List assessments (https://www.iucnredlist.org/resources/spatial-data-download).

Producing this indicator nationally: Please provide a brief description on how easy it is to produce this indicator at the national level

In addition to annual reserve information the indicator requires extensive and standardized high-resolution species distribution information to be calculated. Currently the national level calculation is readily done in the Map of Life infrastructure. Tools that enable the use of user-provided reserve layers for custom national calculation are planned.

Use of the global method and data at the national level: Please provide explanatory text in the box below which answers the following questions:

Are there national subsets of global data available for use to calculate this indicator? Yes. Can the indicator methodology be applied with in-country data to develop a national indicator? Yes, in-country and other data can be combined. Is there guidance on how to produce the indicator at the national level? Please provide a link to available guidance. See further information and national subset becoming available at https://mol.org/indicators

Examples of national use: Please provide examples on where and how the indicator has been used at the national level, and links to case studies if available

Availability of global data for national use:

Freely available for non-commercial use	Available with agreements in place with providers	Contact provider
X		

Contact person(s) for supporting national use: Please provide an alternative contact name and email address if this is different than the main indicator contact

scott.rinnan@yale.edu

Further resources:

https://mol.org/indicators

Rinnan, D. S., and W. Jetz. 2020. Terrestrial conservation opportunities and inequities revealed by global multi-scale prioritization. bioRxiv:2020.2002.2005.936047.

Index, Environmental Performance. "Environmental performance index." Yale University and Columbia University: New Haven, CT, USA (2018).