



8th International
Conference on
BIG DATA
& Data Science for Official Statistics

BILBAO 2024

Informing Climate Change and
Sustainable Development Policies
with Integrated Data

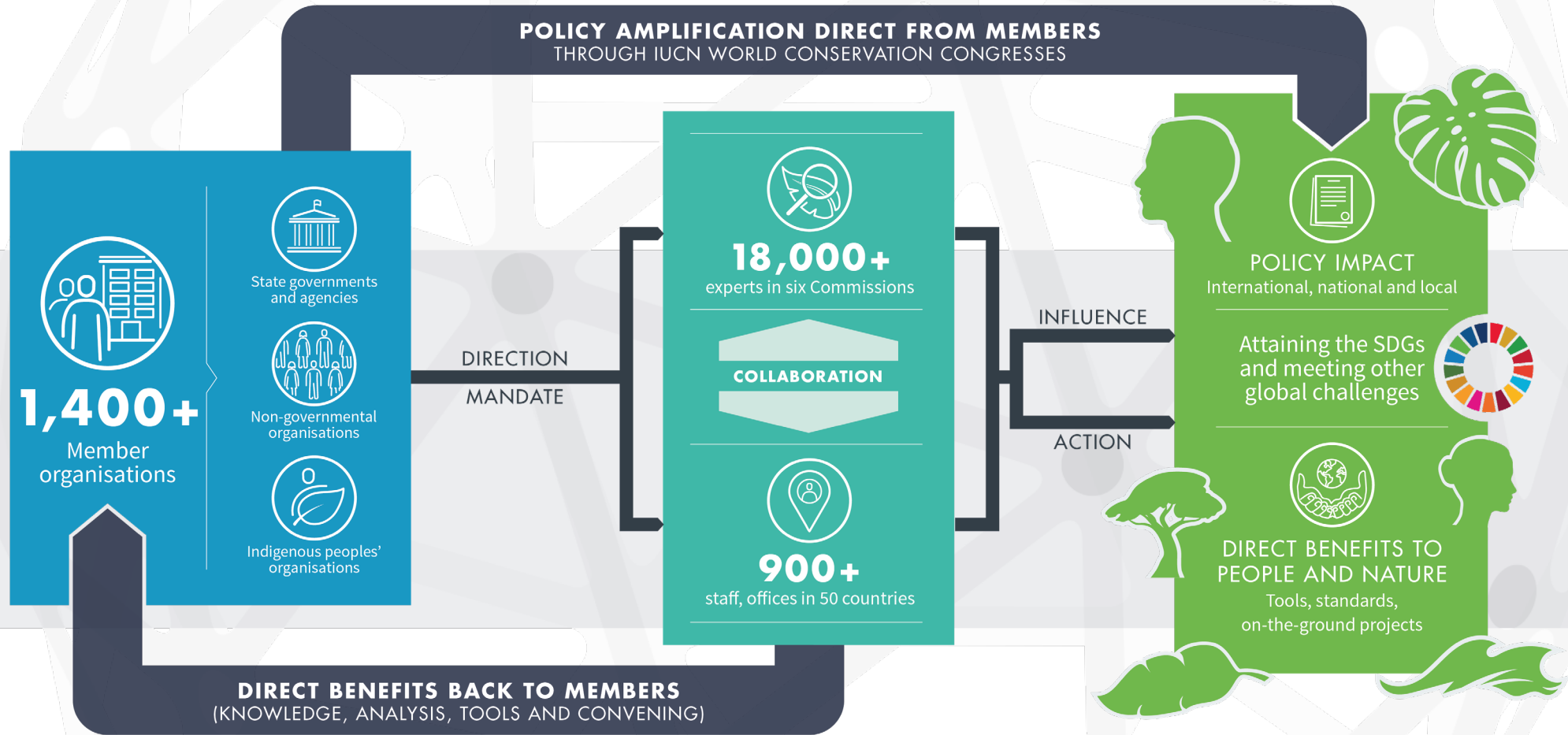
BILBAO. SPAIN | **10-14 JUNE 2024** | **#UNBigData2024**

Data needs for the Red List of Species and Key Biodiversity Areas initiatives

Konstantin Gospodinov, European Biodiversity Conservation Coordinator
Biodiversity Assessment and Knowledge, IUCN European Regional Office Brussels



The world's largest environmental network



INTERNATIONAL UNION FOR CONSERVATION OF NATURE



The IUCN Red List has assessed species extinction risk for >50 years; it encompasses >150,000 species, and is widely used in policy and practice

THE IUCN RED LIST OF THREATENED SPECIES

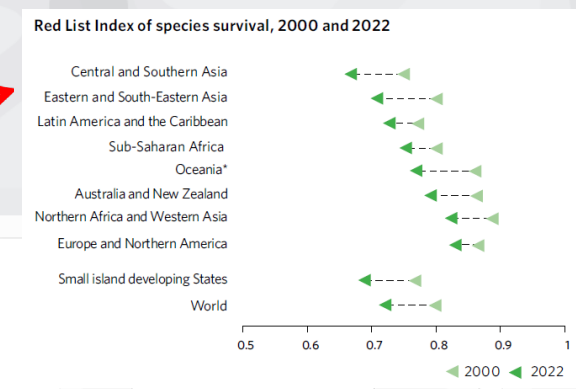
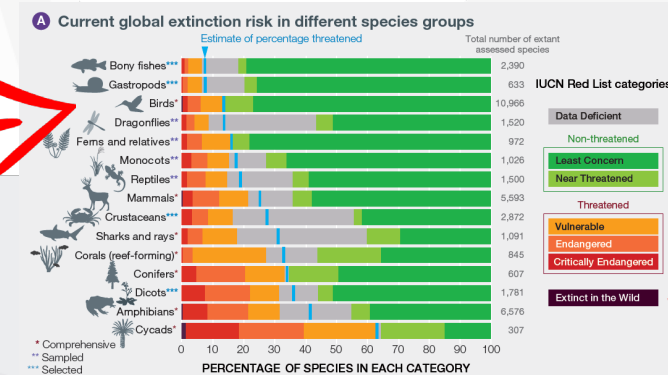
Names - common, scientific, regions etc...

AMAZING SPECIES

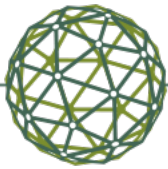
- Wandering Albatross** (*Diomedea exulans*) - Decreasing (VU)
- Burmese Roofed Turtle** (*Batagur trivittata*) - Decreasing (CR)
- Utula Spiny-tailed Iguana** (*Ctenosaura bakeri*) - Decreasing (CR)
- Akohekohe** (*Palmeria dolei*) - Decreasing (CR)

More than 42,100 species are threatened with extinction. That is still 28% of all assessed species.

| Group | Percentage |
|----------------------|------------|
| Amphibians | 41% |
| Mammals | 27% |
| Conifers | 34% |
| Birds | 13% |
| Sharks & Rays | 37% |
| Reef Corals | 36% |
| Selected Crustaceans | 28% |
| Reptiles | 21% |
| Cycads | 69% |



IUCN Red List of Threatened Species



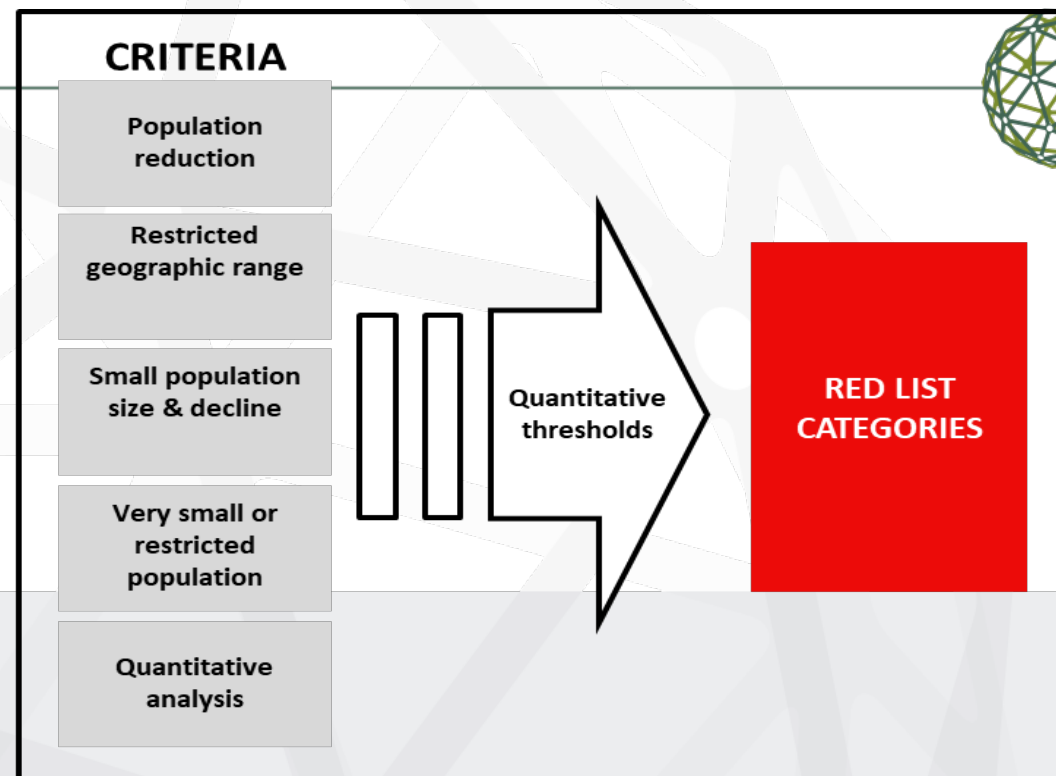
Red List Partnership



Species extinction risks

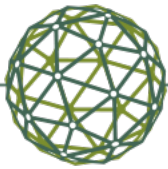
The IUCN Red List assesses extinction risks based on:

- Declining population trends
- Geographic concentration
- And/or small population size



The screenshot shows the IUCN Red List website interface. At the top, the logo 'THE IUCN RED LIST OF THREATENED SPECIES™' is on the left, and navigation links 'About', 'Assessment process', 'Resources & Publications', and 'Support us' are on the right. Below the navigation is a search bar with the placeholder text 'Names - common, scientific, regions etc...' and a search icon. To the right of the search bar is an 'Advanced' button. The main content area is titled 'AMAZING SPECIES' and features four species cards. Each card includes a photograph, the taxonomic group, the species name, the scientific name, and the conservation status.

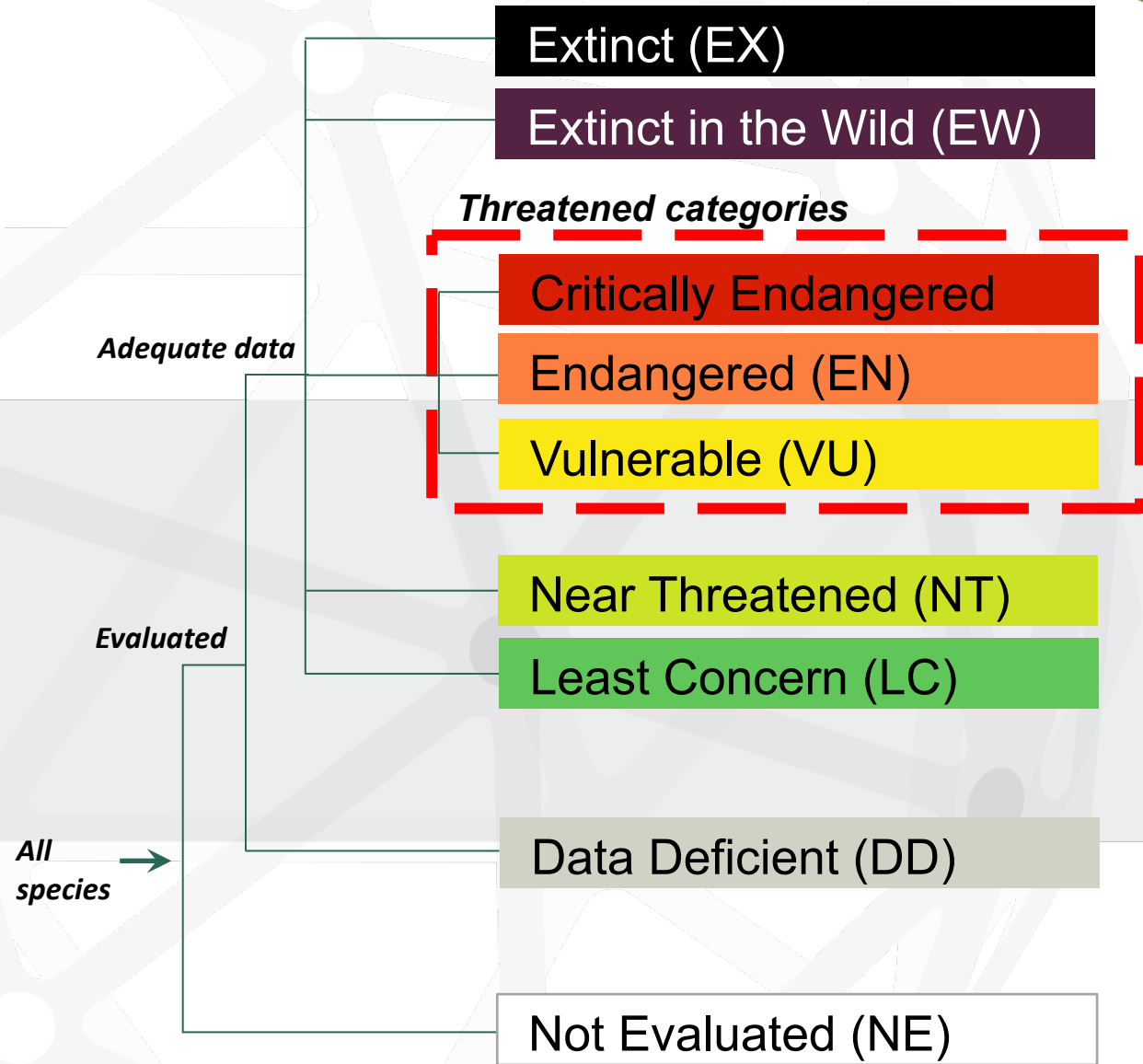
| Species | Taxonomic Group | Conservation Status |
|----------------------|-------------------------|---------------------|
| Scaly-foot Snail | ANIMALIA - GASTROPODA | Unknown |
| Siamese Rosewood | PLANTAE - MAGNOLIOPSIDA | <VU> |
| Summers' Poison Frog | ANIMALIA - AMPHIBIA | Decreasing |
| Snowy Owl | ANIMALIA - AVES | Decreasing |

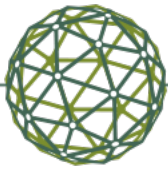


Species extinction risks

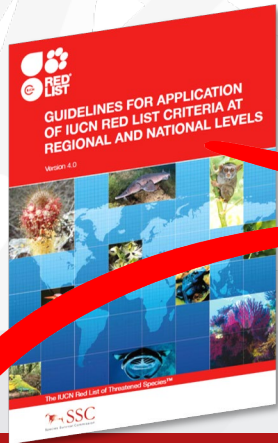
Three threatened categories:

- Critically Endangered (CR)
- Endangered (EN)
- Vulnerable (VU)





National and Regional Red Lists



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[About](#) | [Assessment process](#) | [Resources & Publications](#) | [Support us](#)

Names - common, scientific, regions etc... [Advanced](#)

AMAZING SPECIES



ANIMALIA - AVES GLOBAL
Wandering Albatross
Diomedea exulans
↓ Decreasing <VU>



ANIMALIA - REPTILIA GLOBAL
Burmese Roofed Turtle
Batagur trivittata
↓ Decreasing <CR>



ANIMALIA - REPTILIA GLOBAL
Uta Spiny-tailed Iguana
Ctenosaura bakeri
↓ Decreasing <CR>



ANIMALIA - AVES GLOBAL
Akohekohe
Palmeria dolei
↓ Decreasing <CR>

The National Red List Project

Please note, this National Red List website contains a subset of data for development purposes and the Terms of Use including citation guidance are found [here](#).
The previous dataset is available via: <https://archive.nationalredlist.org/>. This site is no longer updated but can help with most enquiries whilst we focus on redevelopment.

[Search assessments](#) | [Search publications](#)

Query information

Showing **7388** assessments

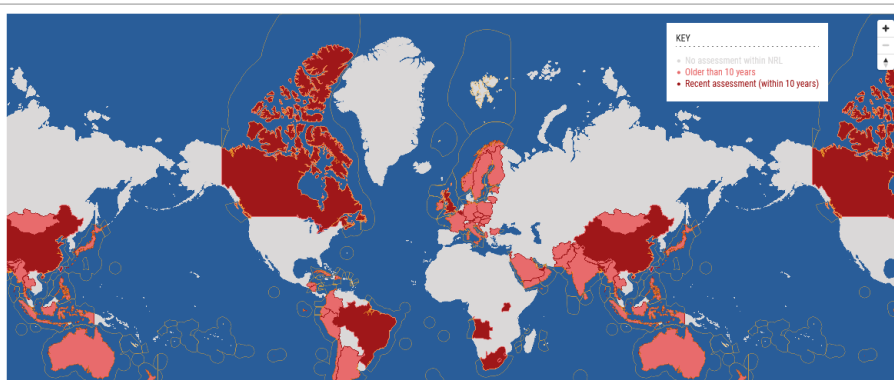
Change filters below to see new results on the map

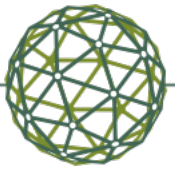
Categories:

- Amphibians
- Arachnids
- Birds
- Brown Algae
- Corals
- Crustaceans
- Ferns and Allies
- Fishes
- Flowering Plants
- Fungi
- Green Algae
- Gymnosperms
- Horseshoe Crabs
- Insects
- Lichens
- Mammals
- Molluscs
- Mosses
- Other (Invertebrates)
- Red Algae
- Reptiles
- Velvet Worms

Disclaimer

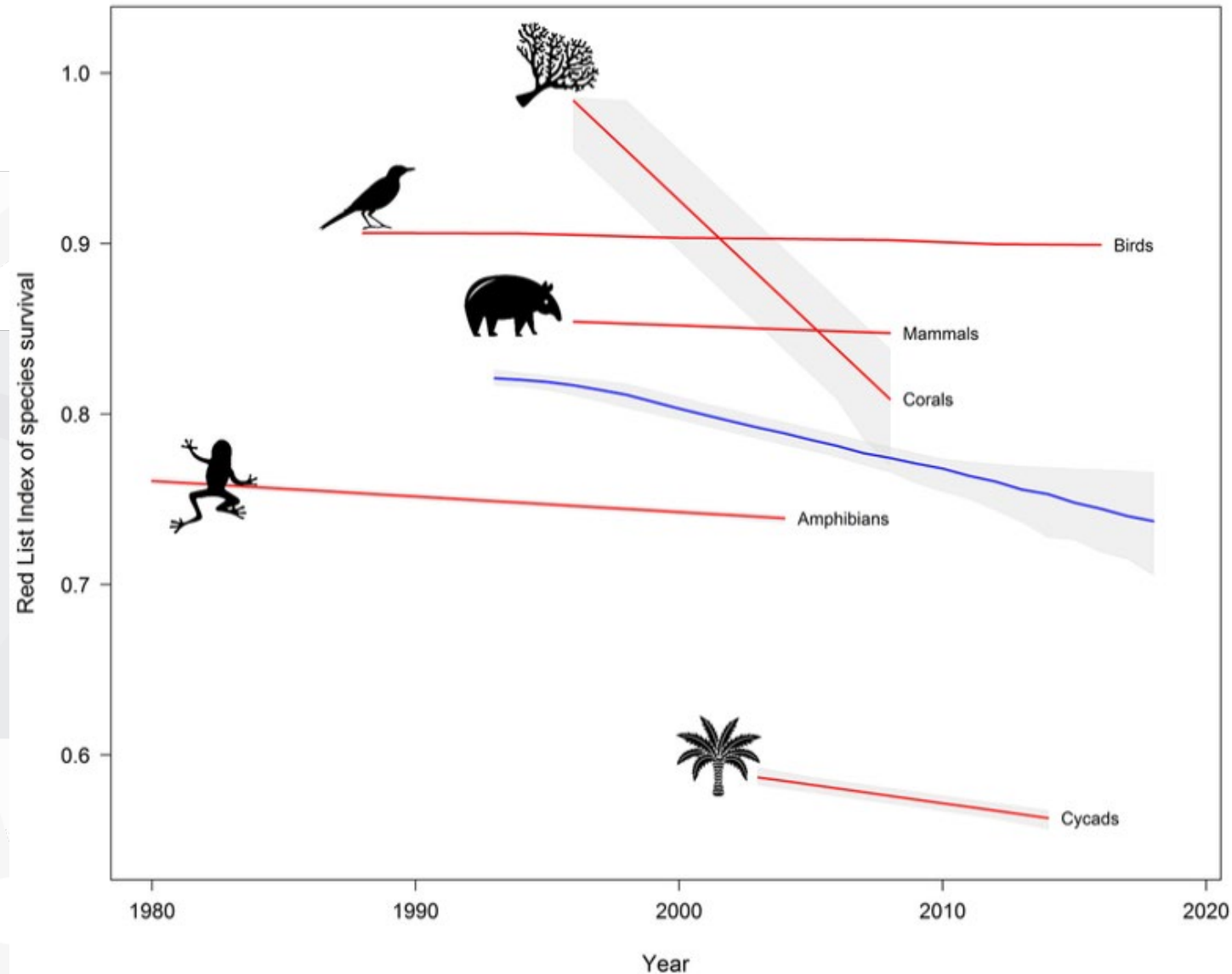
This map shows the current availability of sub-global level species assessments within the National Red List Database (NRLD). By selecting a country from the map, or using the search bar below, you can retrieve details of the assessments and source publication.

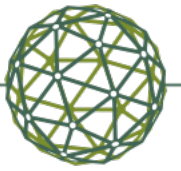




The Red List Index (RLI)

- shows trends in overall extinction risk for species
- used to track progress towards targets for reducing biodiversity loss.





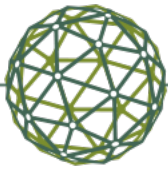
KBA Global Standard (2016)

Areas of importance for biodiversity

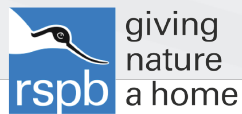
- Many different approaches at various scales
- Most conservation action occurs at the site scale
- BirdLife International's success has led to similar approaches for other taxa
- But this can be confusing for decision-makers...



Key Biodiversity Areas provide an umbrella framework designed to harmonize existing approaches



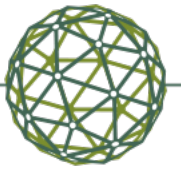
KBA Partnership



KEY BIODIVERSITY AREAS

A Programme for Sustaining the Most Important Sites for Nature



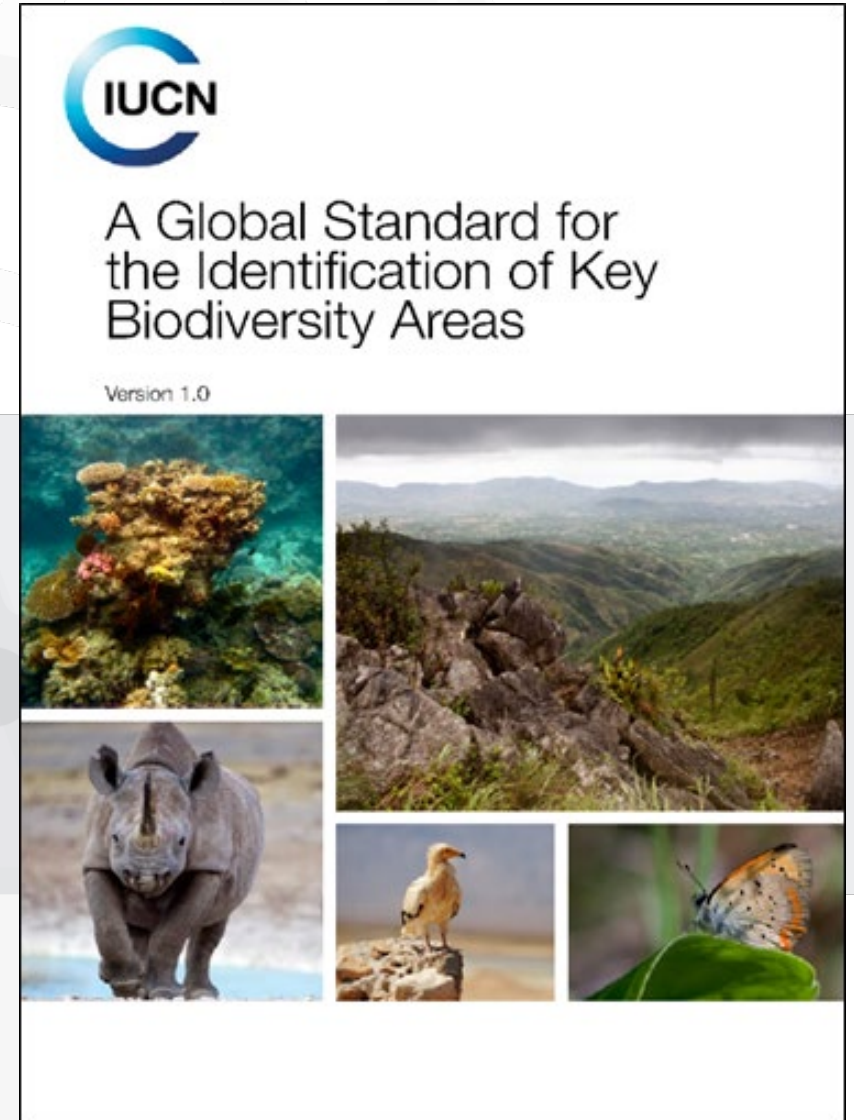


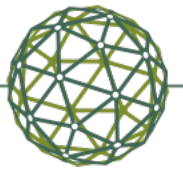
KBA Global Standard (2016)

KBAs = sites contributing significantly to the global persistence of biodiversity

- 11 criteria
- Objective, Repeatable & Transparent
- Allows comparison between countries and regions
- Standard metric for sites of importance for biodiversity

“A geographical area on land and/or in water with defined ... boundaries that is actually or potentially manageable as a single unit (e.g., a protected area or other managed conservation unit)...” (KBA Guidelines 2021, pg 200)





KBA Criteria

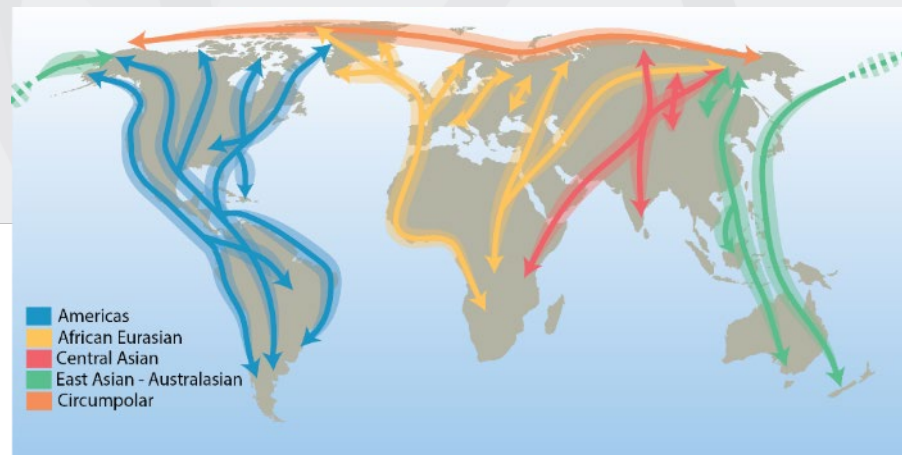
applicable to marine, freshwater, terrestrial, and subterranean systems



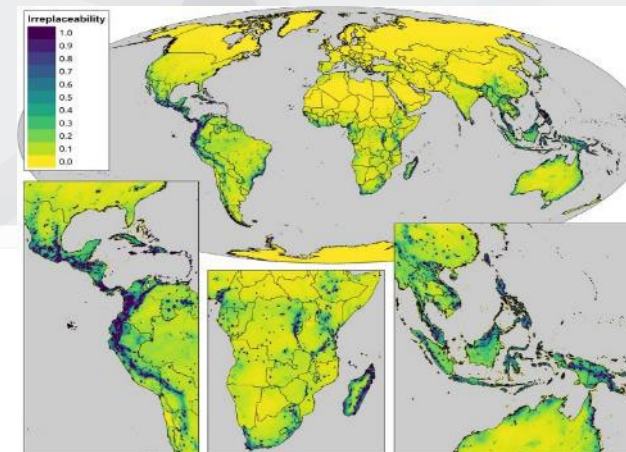
A: Threatened biodiversity

B: Geographically restricted biodiversity

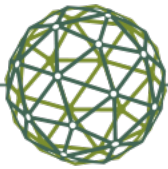
C: Ecological integrity



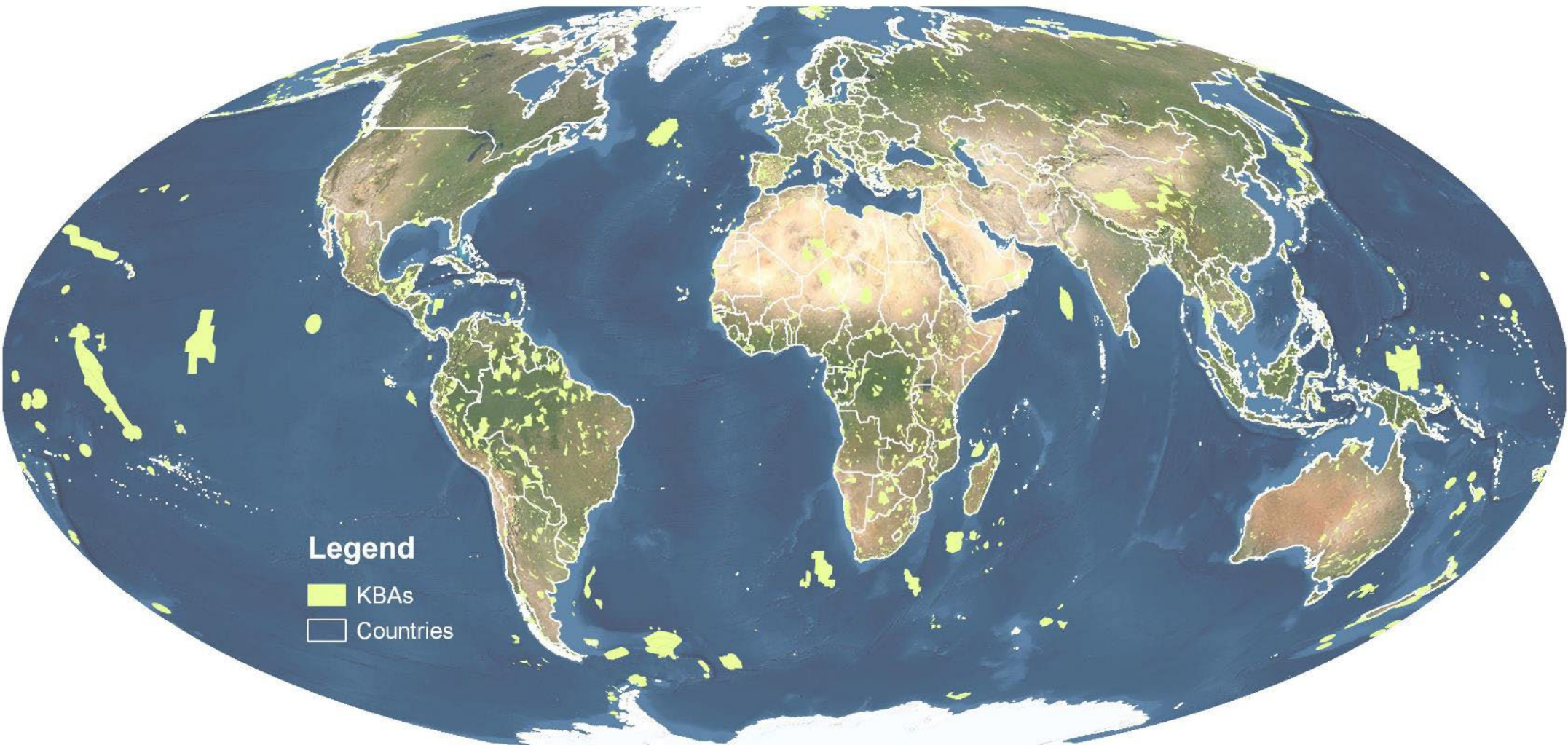
D: Biological processes

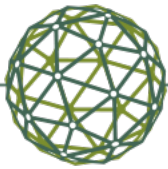


E: Irreplaceability



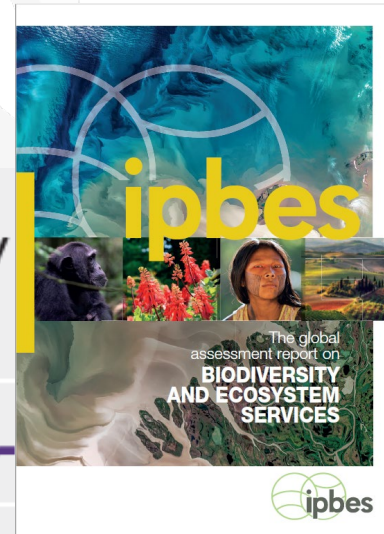
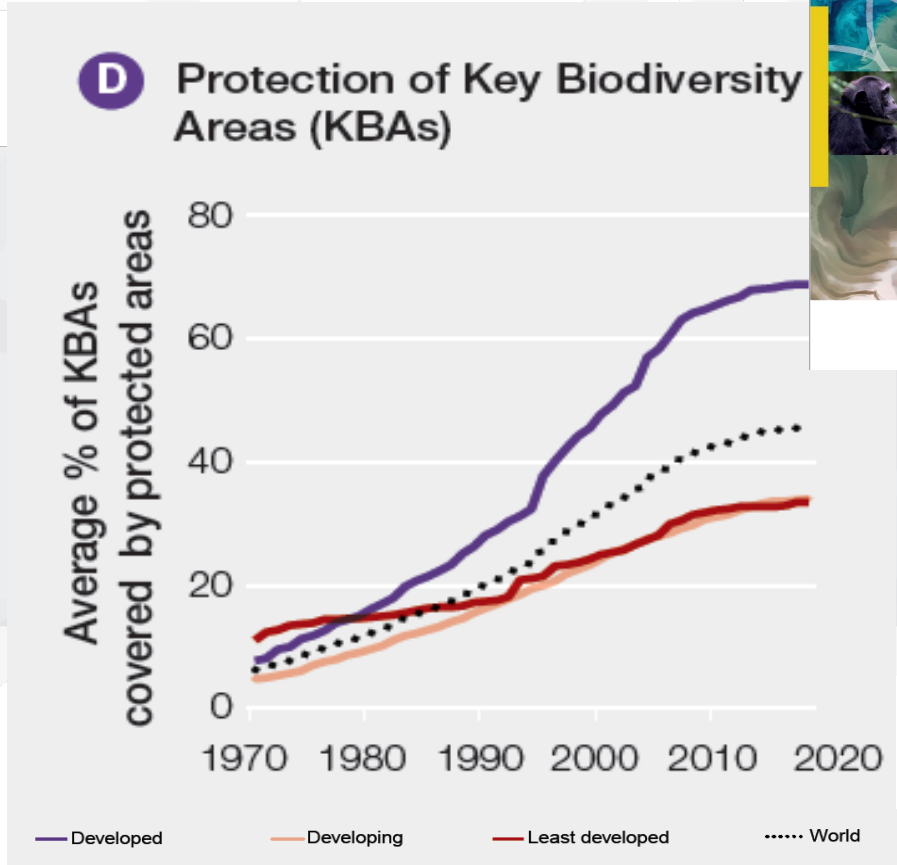
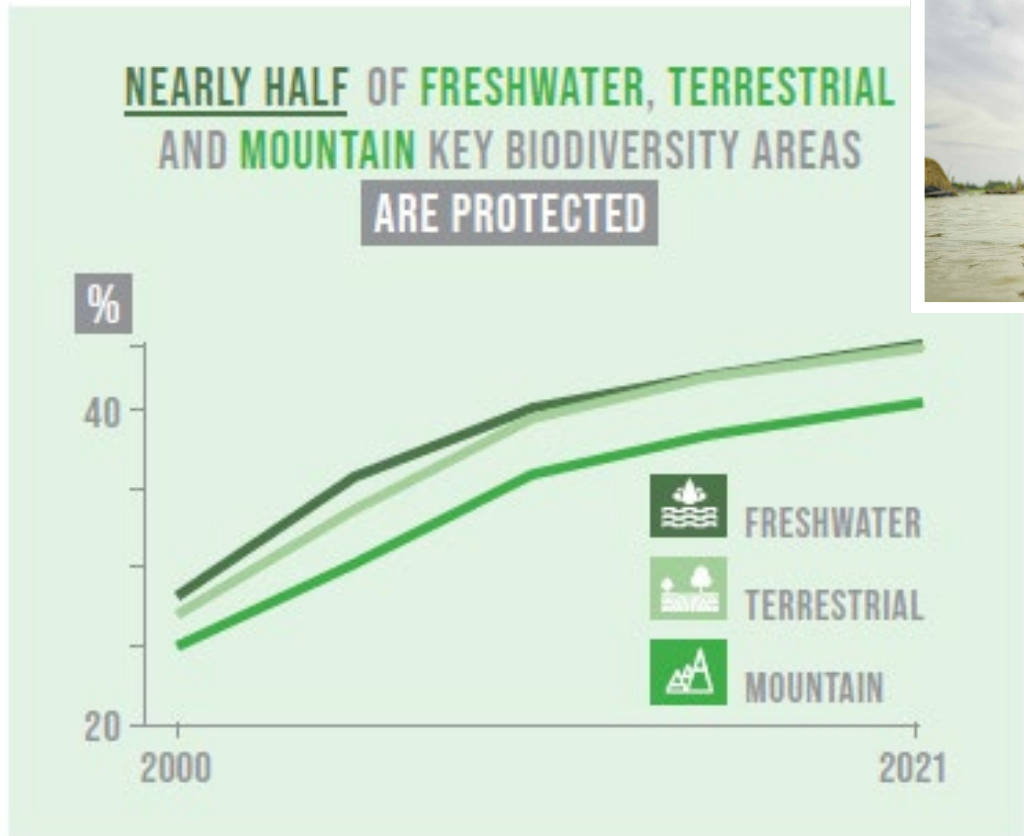
More than 16,300 KBA sites globally



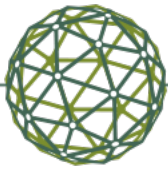


KBAs as global indicators: SDGs, CBD GBF, IPBES

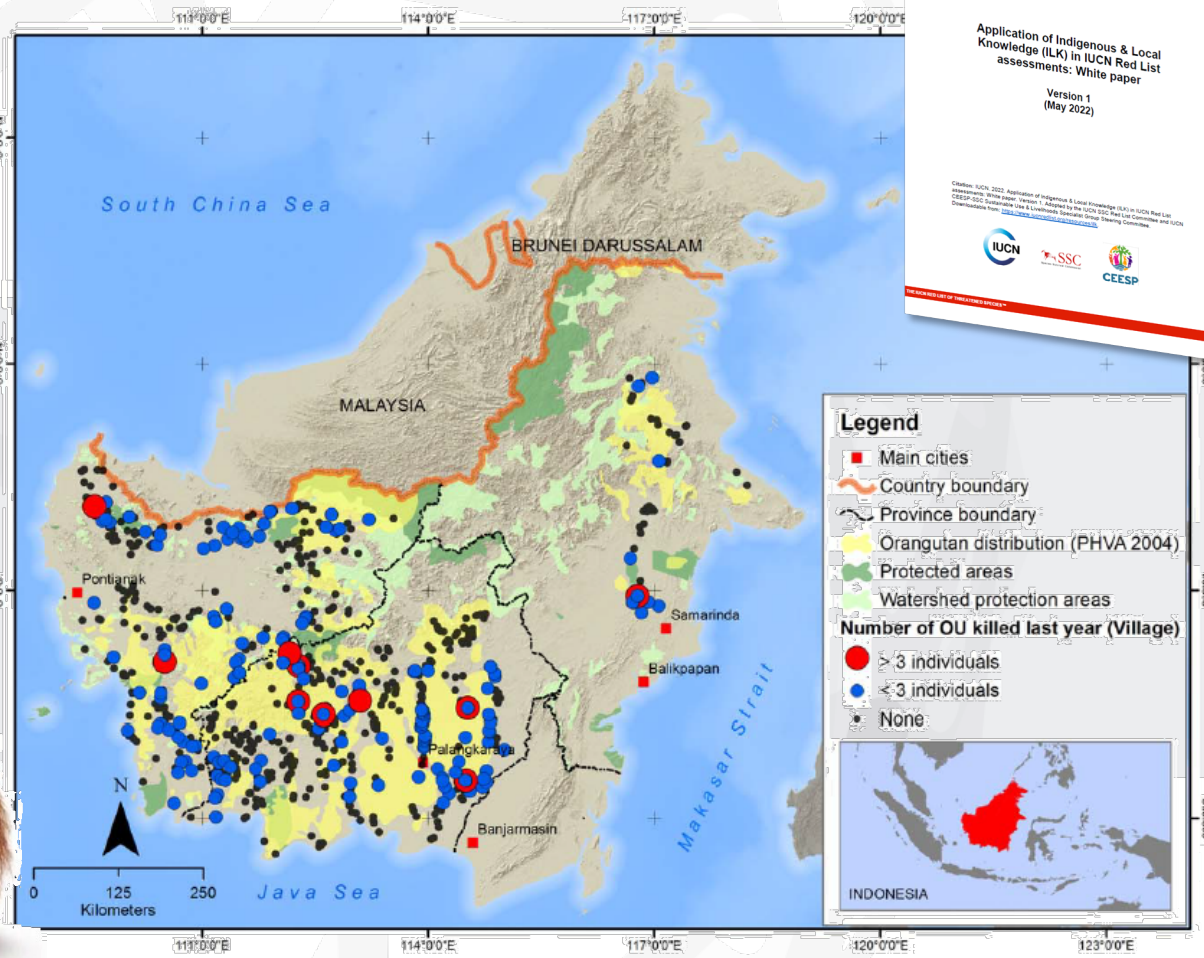
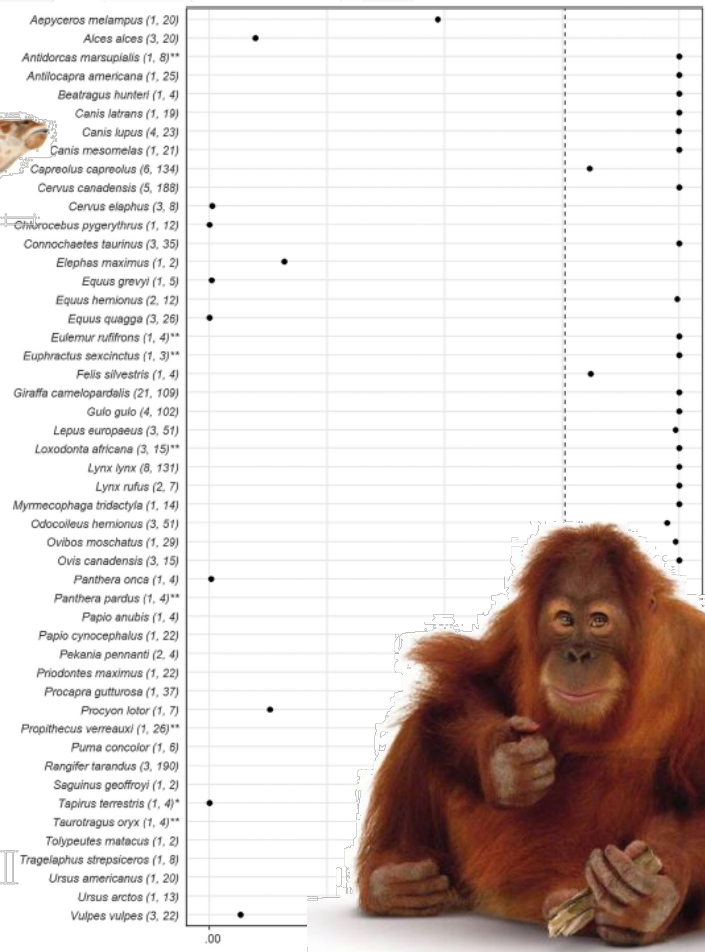
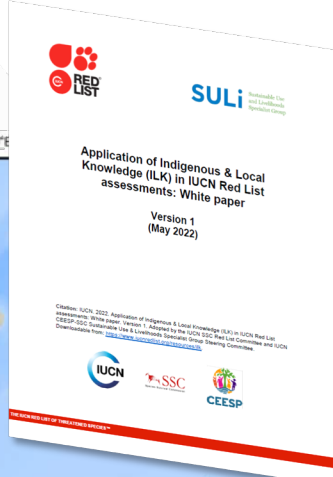
The Sustainable Development Goals Report
2022

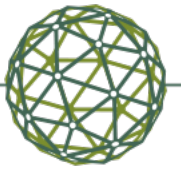


<https://unstats.un.org/sdgs/report/2021>



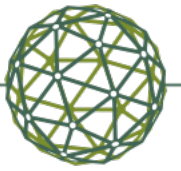
Knowledge frontiers: documenting species distribution, habitats and threats, changes, and synthesis





Data needs for the Red List of Species and Key Biodiversity Areas initiatives

- ❑ Monitoring habitat loss and degradation
 - ❑ Monitoring development of infrastructure
 - ❑ Mapping ecosystems at level 5 - at a national level only in a consistent manner
 - ❑ Mapping of suitable habitat for species
 - ❑ Identify potential management units where KBAs might be established
- Big Data
 - Remote Sensing
 - Satellite imagery
 - eDNA
 - Citizen science
 - Indigenous and local knowledge
 - Social media
 - AI



Data needs for the Red List of Species and Key Biodiversity Areas initiatives

Thank you!