Synergistic potential between the *Man and the Biosphere Programme* and the *Kunming–Montreal Global Biodiversity Framework*

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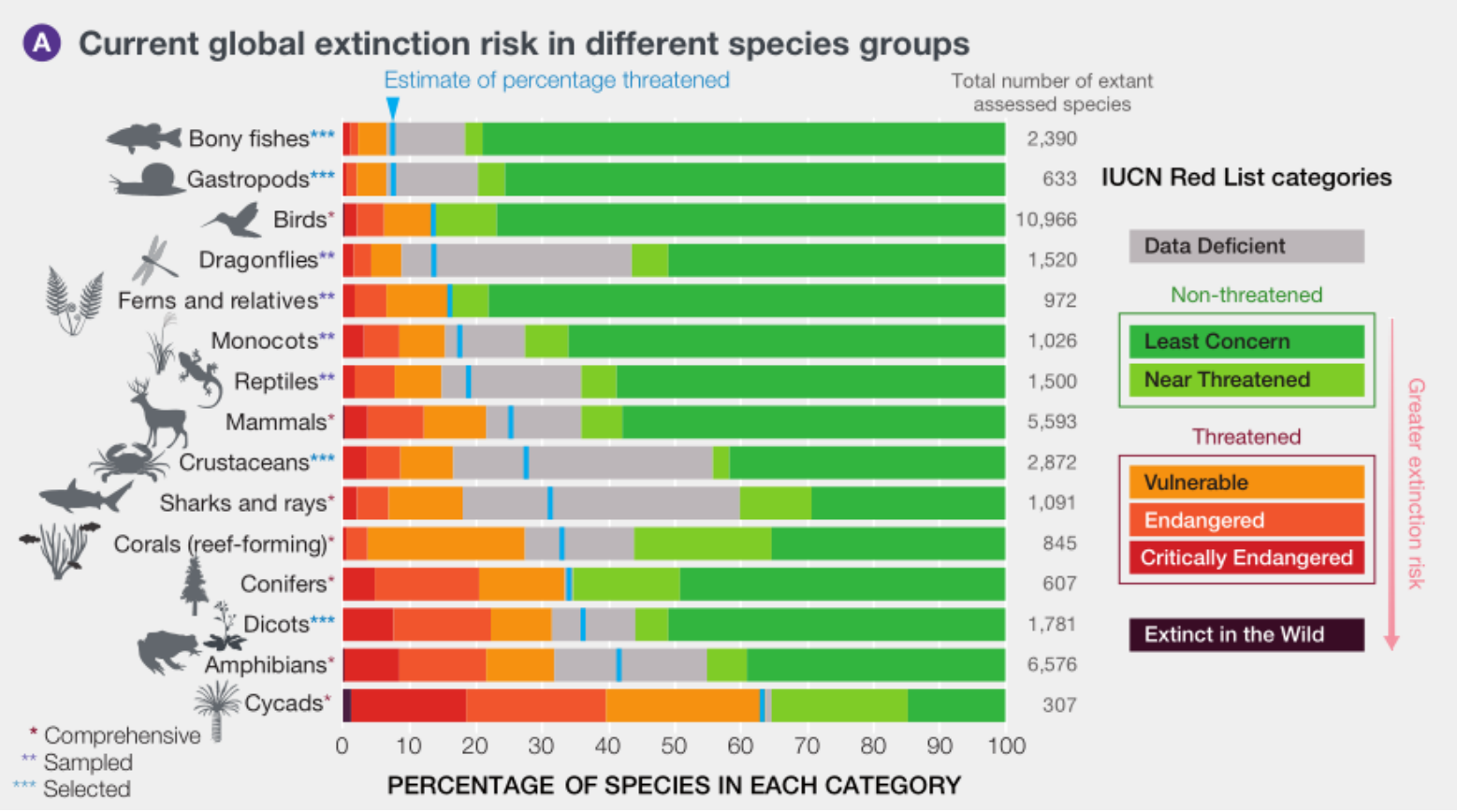
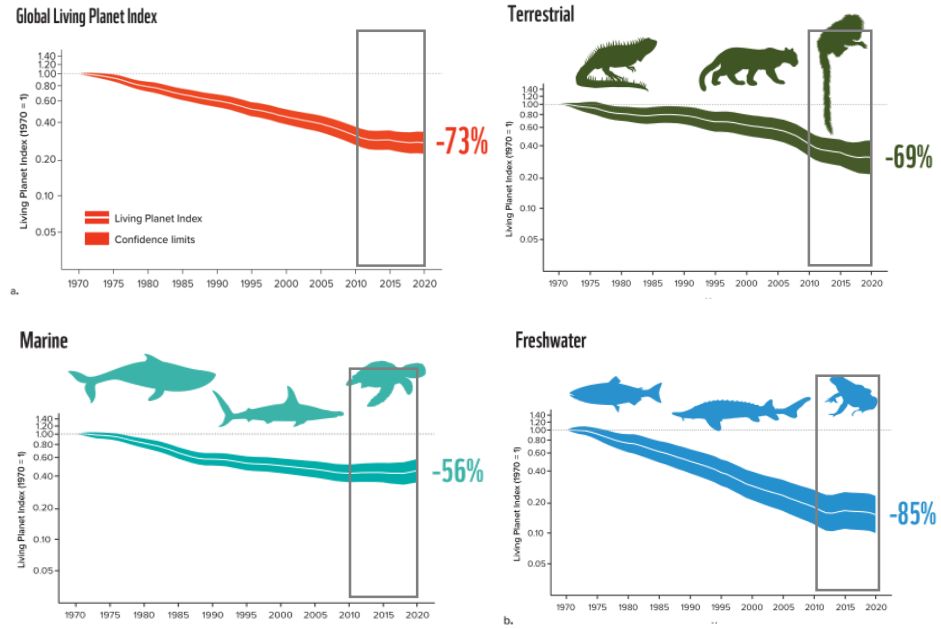
Background

Biodiversity loss

- Species are going extinct **dozens to hundreds of times** faster than the long-term average. The pace is still accelerating. About **25%** of species are currently threatened with extinction.
- Population trends are also deeply worrying. The Living Planet Index has **declined by 73% since 1970**
- **Terrestrial populations** have dropped by about **69%**. **Marine populations** by about **56%**. And **freshwater species** by an astonishing **85%**.



(IPBES, *2019*)



(WWF, *2024*)

Background

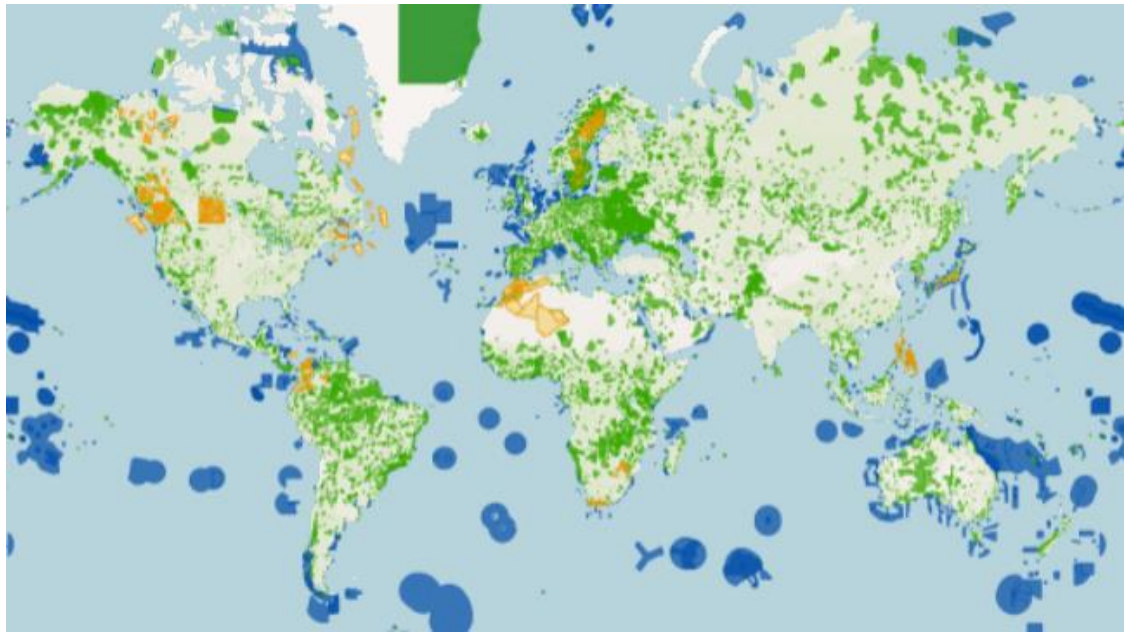
KMGBF

- the Kunming–Montreal Global Biodiversity Framework was adopted at the CBD COP15 and includes **23 targets** to guide biodiversity conservation, restoration, and benefit-sharing by 2030. **Biosphere Reserves are not mentioned directly in Target 3, or in any of the other targets.**
- This omission means that their contributions are often overlooked in global biodiversity governance.
- Yet, Biosphere Reserves are already aligned with many of these goals.

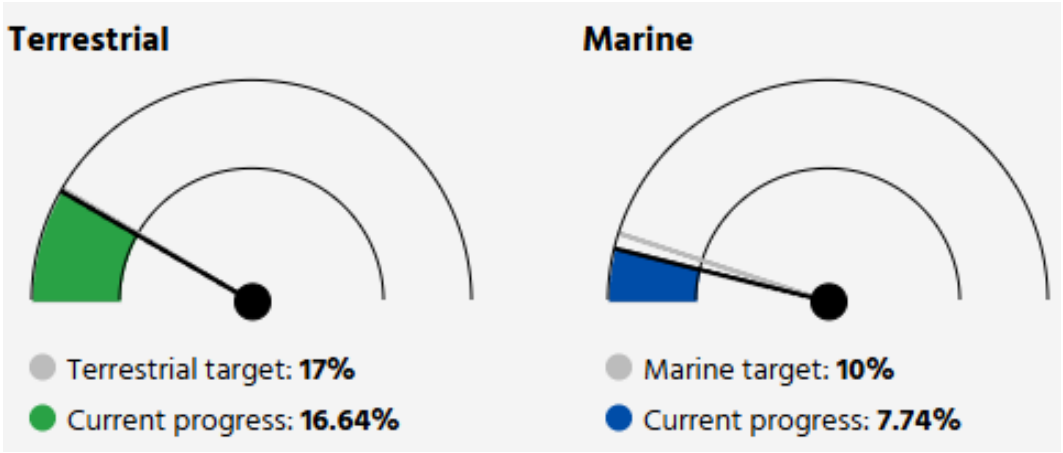
Background

KMGBF Target 3

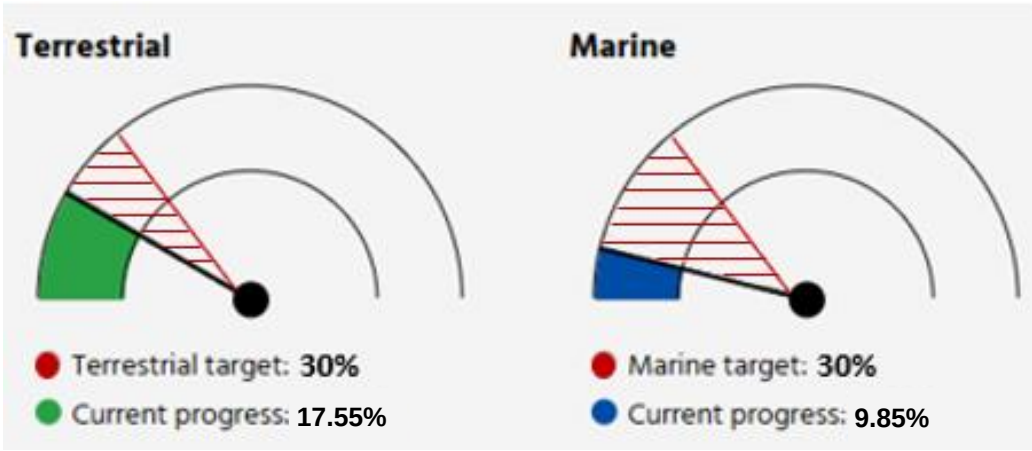
- Target 3 aims to **conserve 30% of terrestrial and marine areas globally by 2030.**
- Current coverage is still below this target, indicating an urgent need for more effective area-based measures.
- This gap underlines the urgent need to accelerate area-based conservation and opens a window of opportunity to **recognize contributions from mechanisms that have not been fully used, such as Biosphere Reserves**.



Archi Target



KMGBF



Development of the WNBR

History

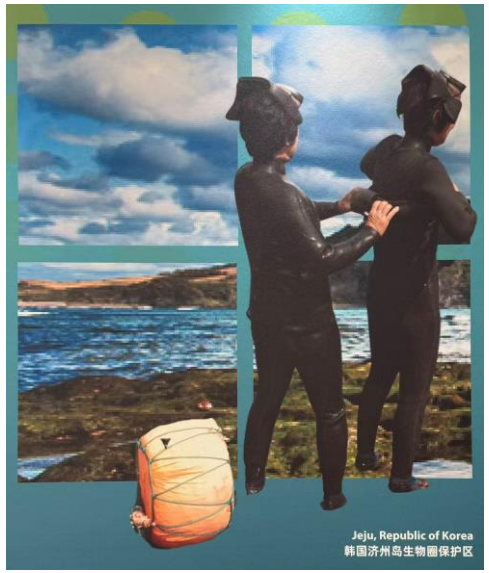
- Biosphere Reserves are sites recognized by UNESCO. Their goal is very simple but also very ambitious: **to protect nature while at the same time allowing people to live and to work sustainably**.
- The cover shown here is from the special issue of Biodiversity Science

- The story starts **in 1968**, when the MAB vision was first set out in Paris, and **in 1976** the world officially recognized the first biosphere reserves. Since then, four global WCBR conferences—held **in Minsk, Seville, Madrid, and Lima**—have helped shape shared ideas and strengthen international cooperation.
- Over the decades, the network has grown into **785** sites across **142** countries, becoming a major platform that connects conservation with sustainable development.

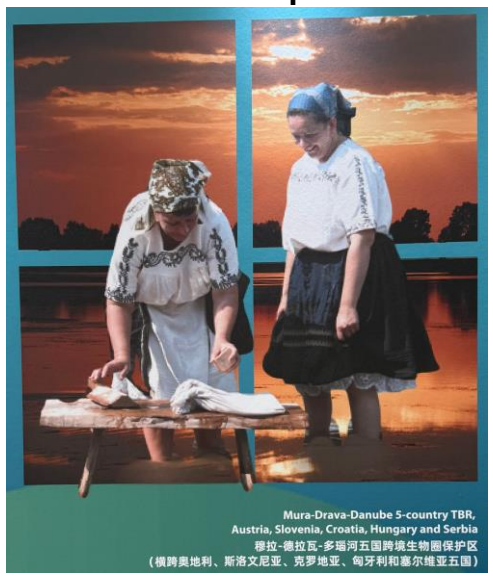
Development of the WNBR

Concept

50+% of all biospheres overlap with another international designation



60+% biosphere reserves are located within transboundary river basins/aquifers



~40% biosphere reserves may face more extreme climate events by 2050

~6% of the world population lives in and around biosphere reserves

1. These designations include **UNESCO World Heritage sites, Global Geoparks, and Ramsar wetlands**. A striking example is Jeju (Republic of Korea), which holds all three.
2. Relying on rivers, lakes, and aquifers that cross borders, **biosphere reserves face shared management challenges, but also unique opportunities to cooperate, protect ecosystems, and ensure sustainable water access for all.**
3. Yet, with **70%** of the world's biosphere reserves offering ecosystem restoration potential and serving as critical blue carbon sinks – including over **12%** of the world's mapped mangrove forests.
4. While around **300 million** people live in biosphere reserves, the ten most populated sites alone are home to over **142 million** people.

Development of the WNBR

Concept

- BRs play a unique role by integrating biodiversity conservation, sustainable development, and knowledge sharing, aligning with both the UN SDGs and the KMGBF.

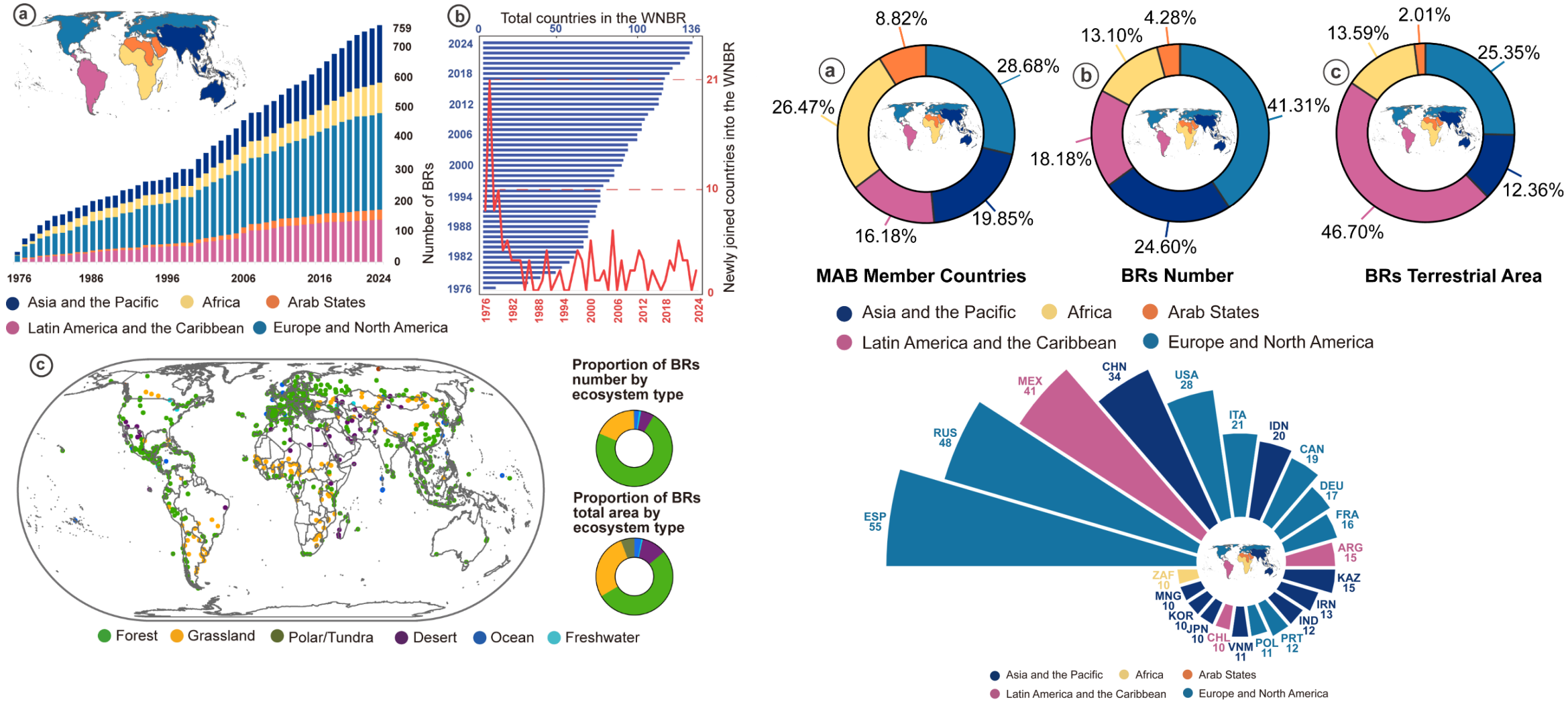
Three functions of Biosphere Reserves

- **A three-zone system**. At **the core,** an area that is fully protected. Around that, **the buffer zone** allows activities such as research and education. And beyond that, **the transition area** supports farming, tourism, and other forms of human use.
- Each Biosphere Reserve has three main functions. **Conservation**—protecting ecosystems, landscapes, and species; **Development**—supporting local communities, their livelihoods, and their traditions. **Logistic support**—providing space for research, for education, and for capacity building.

Many BRs already contribute to other global challenges. They play roles in climate action, poverty reduction, gender equality, and education. This makes BRs **powerful platforms where solutions can be tested, refined, and then scaled up to meet global needs.**

Development of the WNBR

- **Europe and Asia** have large numbers of BRs. By contrast, **Africa, the Arab States, and Latin America** have far fewer. Most BRs are in **forests**. Grasslands, deserts, and wetlands ecosystems are underrepresented.



Development and Distribution of the World Network of Biosphere Reserves (the WNBR)

Development of the WNBR

BRs vs PAs

	PAs	BRs
Primary purpose	Biodiversity conservation	Three functions: conservation, development, knowledge sharing
Governance	Government-led, strictly managed	Multi-stakeholder co-management
Zonation	Single, strictly protected area	Core, Buffer, and Transition zones
Community relations	May have limited or conflicted local connections	Support community engagement and co-benefits
Relationship with SDGs	Target SDGs 3/6/13/14/15 and more	Strong alignment with SDGs and KMGF
Legal status	Officially designated through national laws	Voluntary under UNESCO framework
Biosphere Reserves do not replace traditional protected areas – they complement and extend them, especially in addressing human–nature coexistence		

Research Gaps

1. No Global Comparison of BRs and PAs

Biosphere Reserves have never been systematically compared to Protected Areas at a global scale. This limits our understanding of whether BRs offer comparable or complementary conservation value.

2. Under-recognition of BRs in Global Biodiversity Policies

BRs are not formally included in key global targets such as “30×30” under the KMGBF. This reflects a broader gap in policy visibility and institutional support.

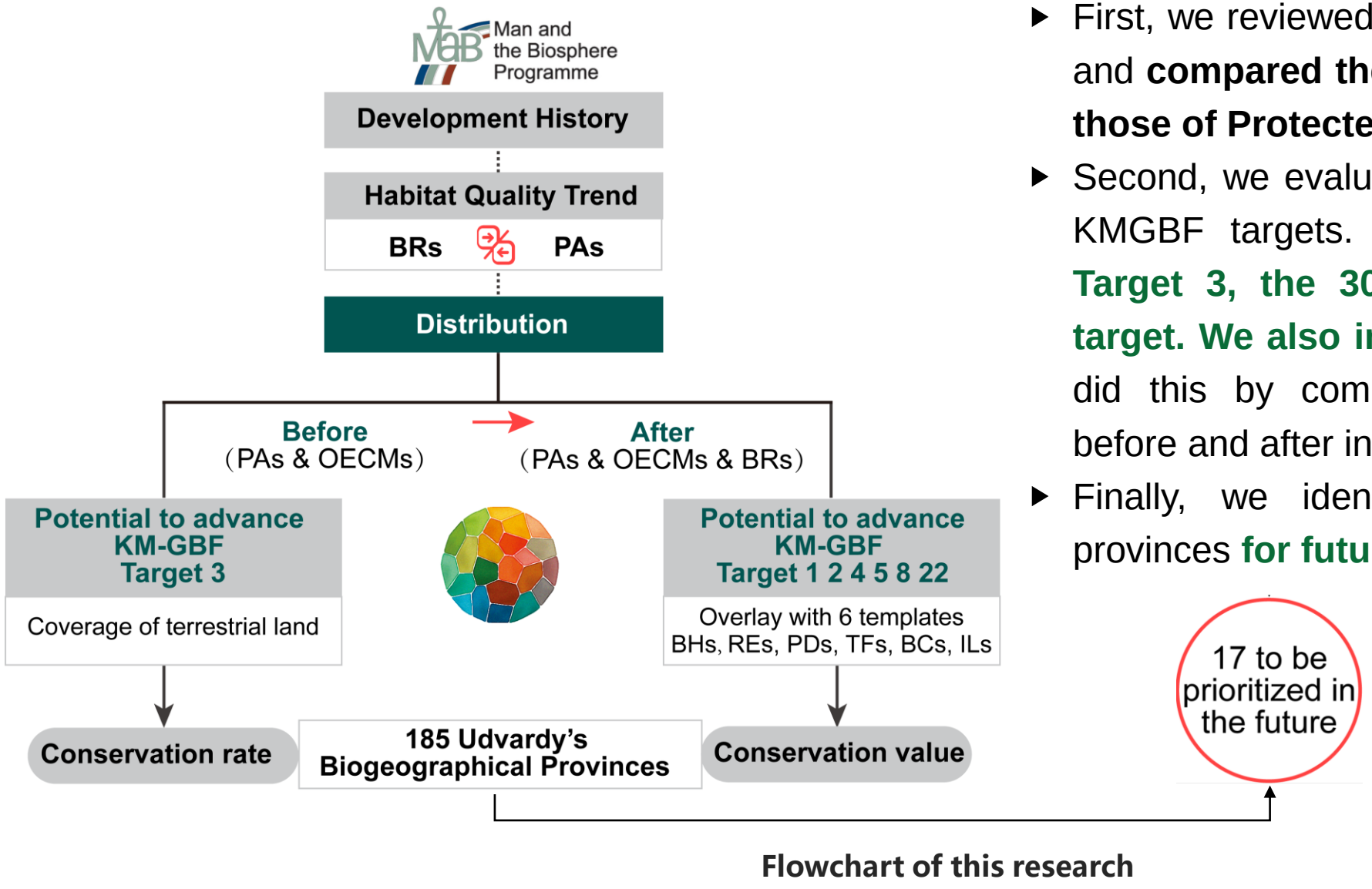
3. Lack of Spatial Priorities for Future BR Expansion

Current nominations rely on country-level decisions rather than science-based prioritization. **WNBR expansion lacks a global spatial strategy aligned with biodiversity and ecosystem needs.**

4. Fragmented Evidence on BR Effectiveness

Most studies of BR effectiveness are local and region-specific. A globally consistent evidence base is still missing to inform international conservation planning.

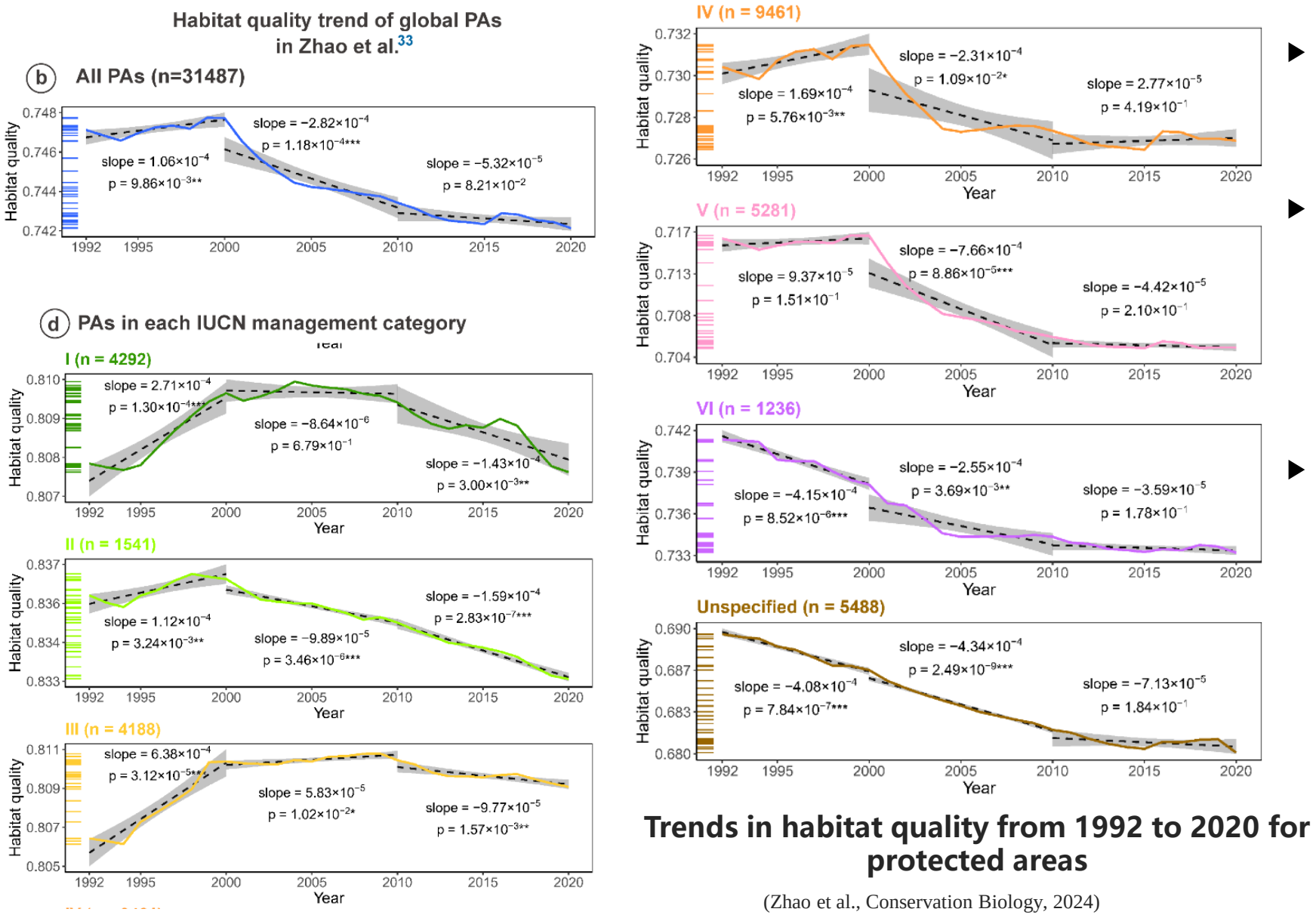
Research Flowchart



Flowchart of this research

- First, we reviewed the history of BR development and **compared their habitat quality trends with those of Protected Areas**.
- Second, we evaluated the contribution of BRs to KMGBF targets. We did **not focus only on Target 3, the 30% land and sea protection target. We also included six other targets**. We did this by comparing conservation coverage before and after including BRs.
- Finally, we identified priority biogeographical provinces **for future BR expansion**.

Habitat quality trends in the Protected Areas

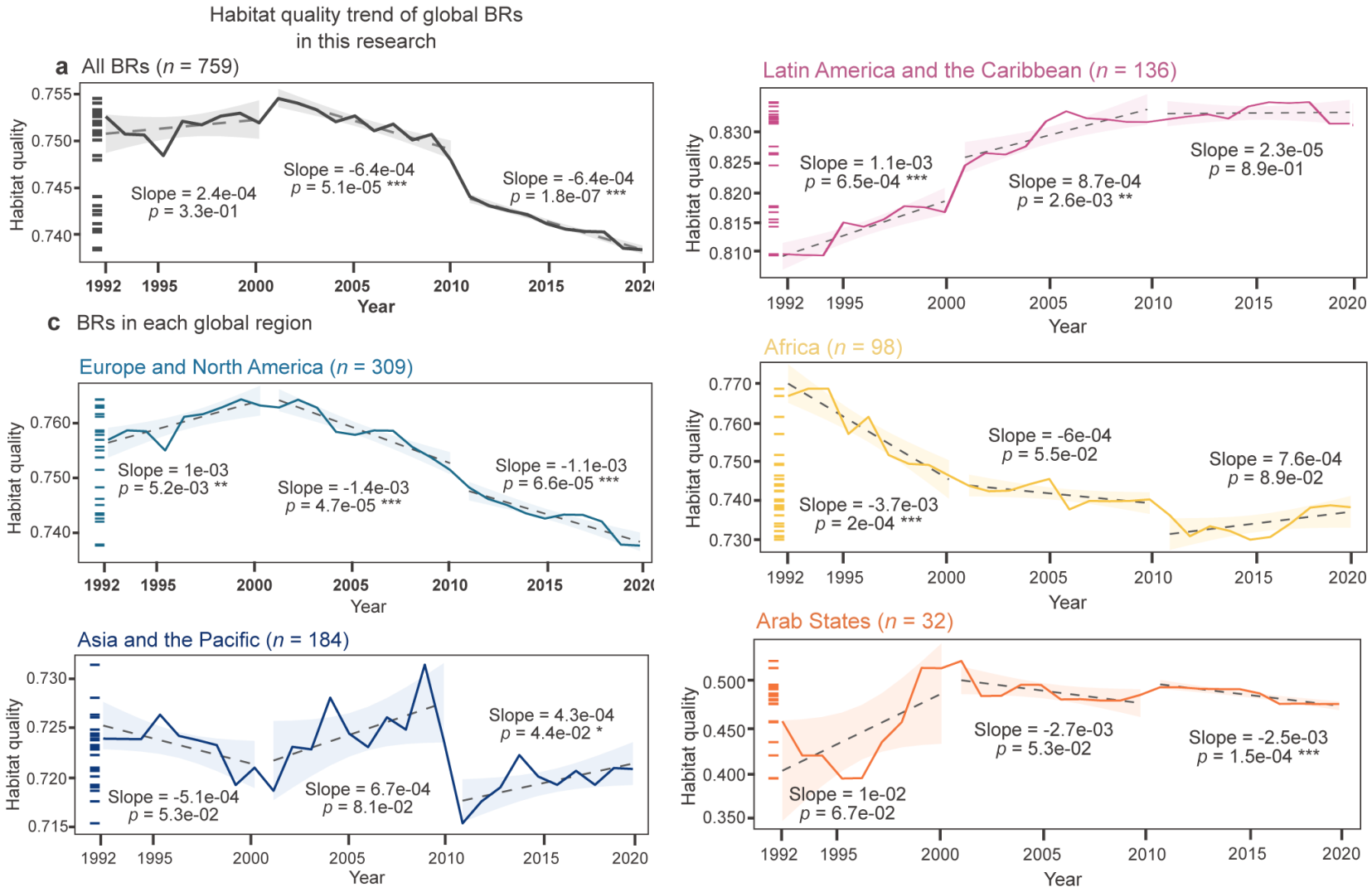


Trends in habitat quality from 1992 to 2020 for protected areas

(Zhao et al., Conservation Biology, 2024)

- Habitat quality trends among PAs varied by management category .
- **Strictly protected PAs (IUCN Categories I and II) maintained the highest habitat quality**, though decline accelerated after 2000.
- **Category IV and V PAs experienced substantial declines**, while Category VI PAs, which allow for sustainable resource use, exhibited one of the sharpest declines.

Habitat quality trends in the Biosphere Reserves

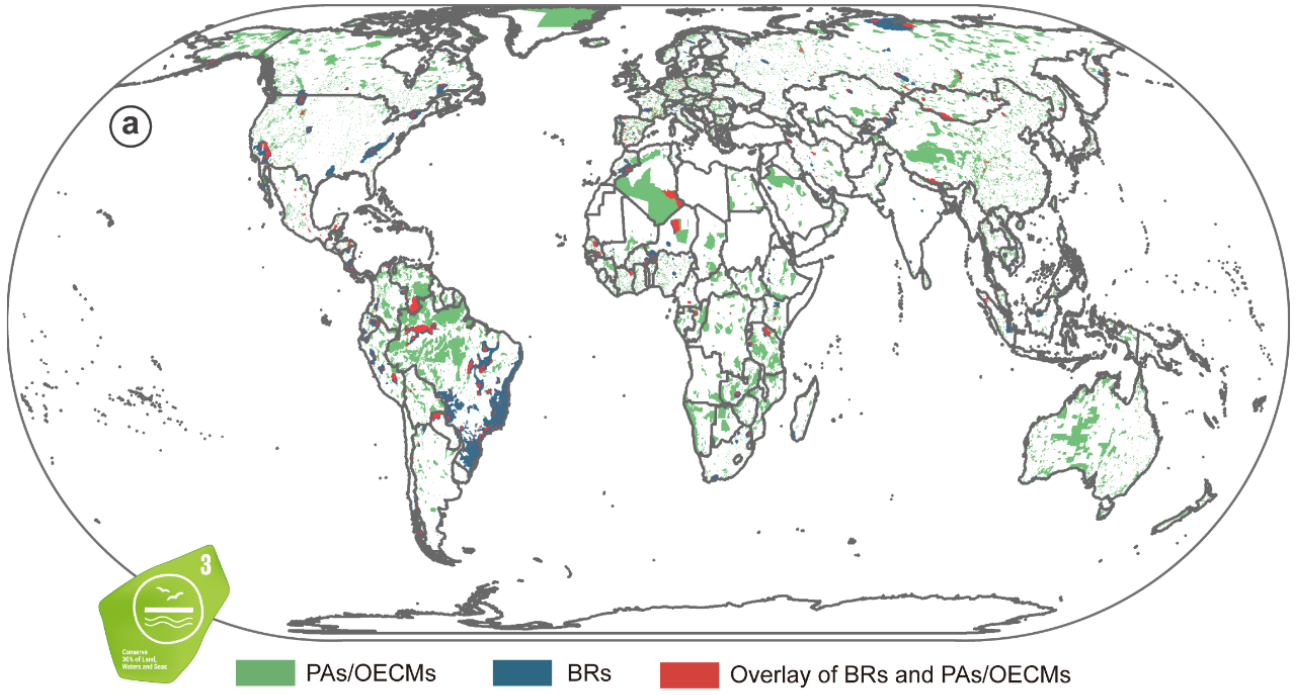


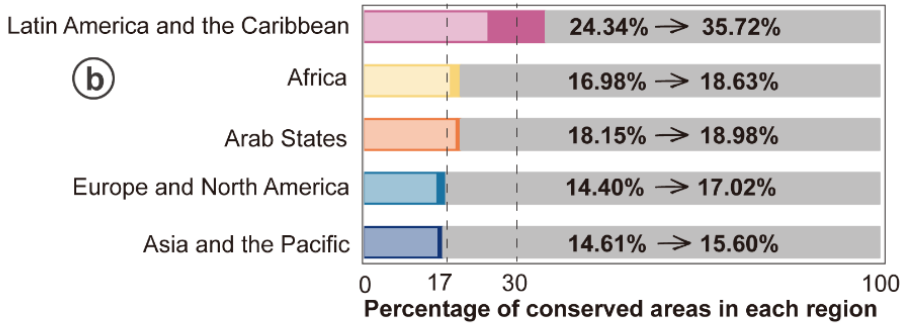
Trends in habitat quality from 1992 to 2020 for biosphere reserves

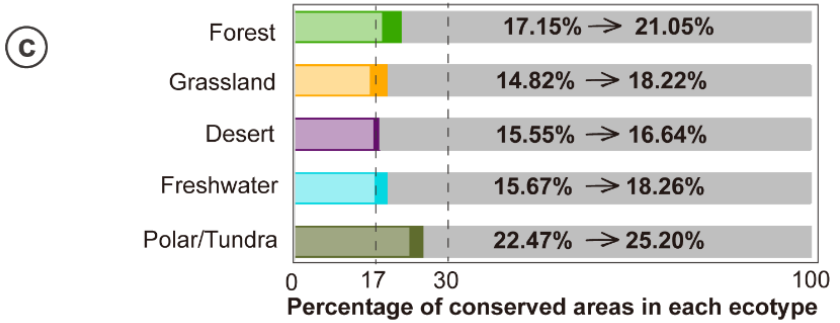
- Habitat quality trends among BRs varied by region.
- **BRs maintained higher habitat quality than Category V PAs in most regions, except the Arab States.**
- In Latin America & the Caribbean, BRs kept habitat quality **close to strictly protected PAs (IUCN I & III)** over the past 20 years.
- Forests and grasslands declined sharply after the early 2000s, while deserts and polar ecosystems stayed relatively stable.
- **BRs can in some regions match the habitat quality levels of certain PA categories.**

Potential of the WNBR in advance 30×30 commitment

- When BRs were added, global terrestrial conservation coverage **increased from 16.57% to 19.65%**, showing a clear additional contribution. **Regionally, the largest improvement was in Latin America and the Caribbean**, where coverage jumped from 24.34% to 35.72%, **exceeding the 30% KMGBF target**.
- **Africa** rose from 16.98% to 18.63%, and **Europe and North America** increased from 14.40% to 17.02%, passing the 17% Aichi Target. **Asia, the Pacific, and the Arab States** showed smaller gains.



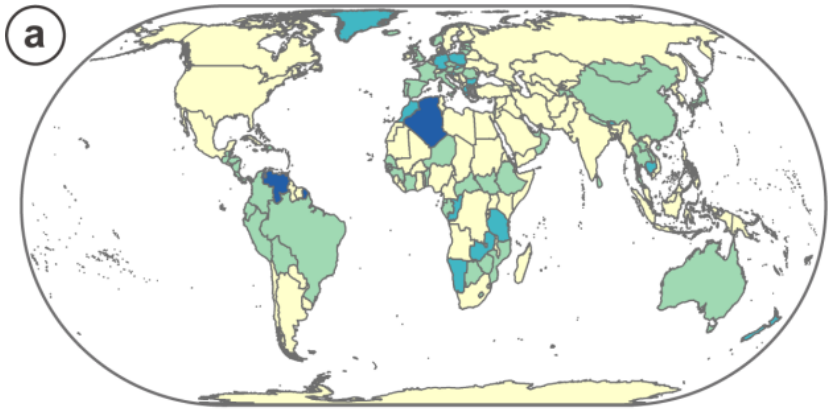




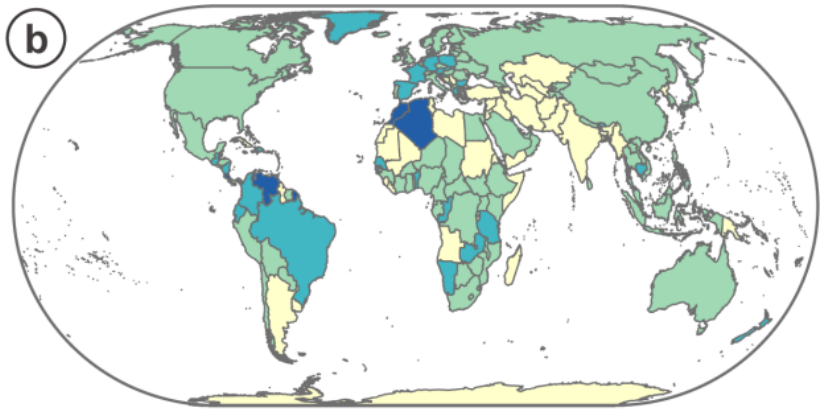
Coverage gains of conserved land with BRs considered

- Across ecosystem types, **grasslands** and **freshwater** systems both **reached the 17% Aichi Target, rising to around 18%**, and forests also showed a noticeable increase.
- Deserts and polar or tundra regions improved more modestly.

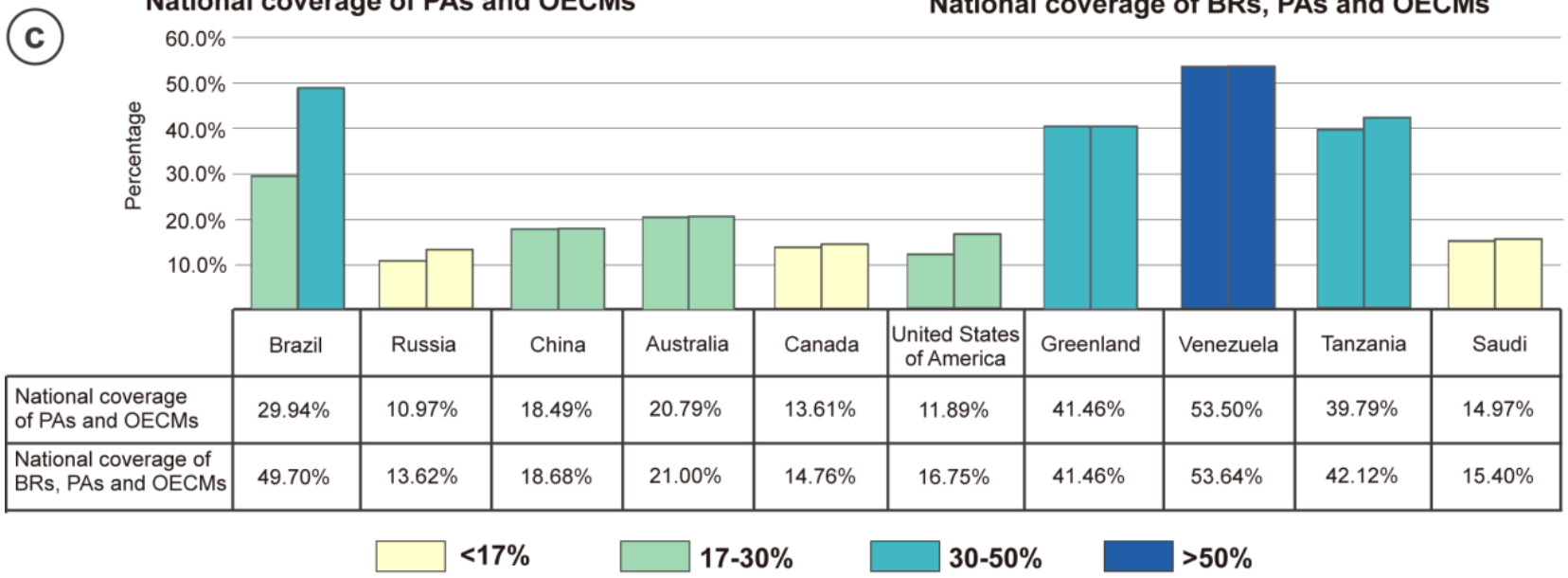
Potential of the WNBR in advance 30×30 commitment



National coverage of PAs and OECMs



National coverage of BRs, PAs and OECMs

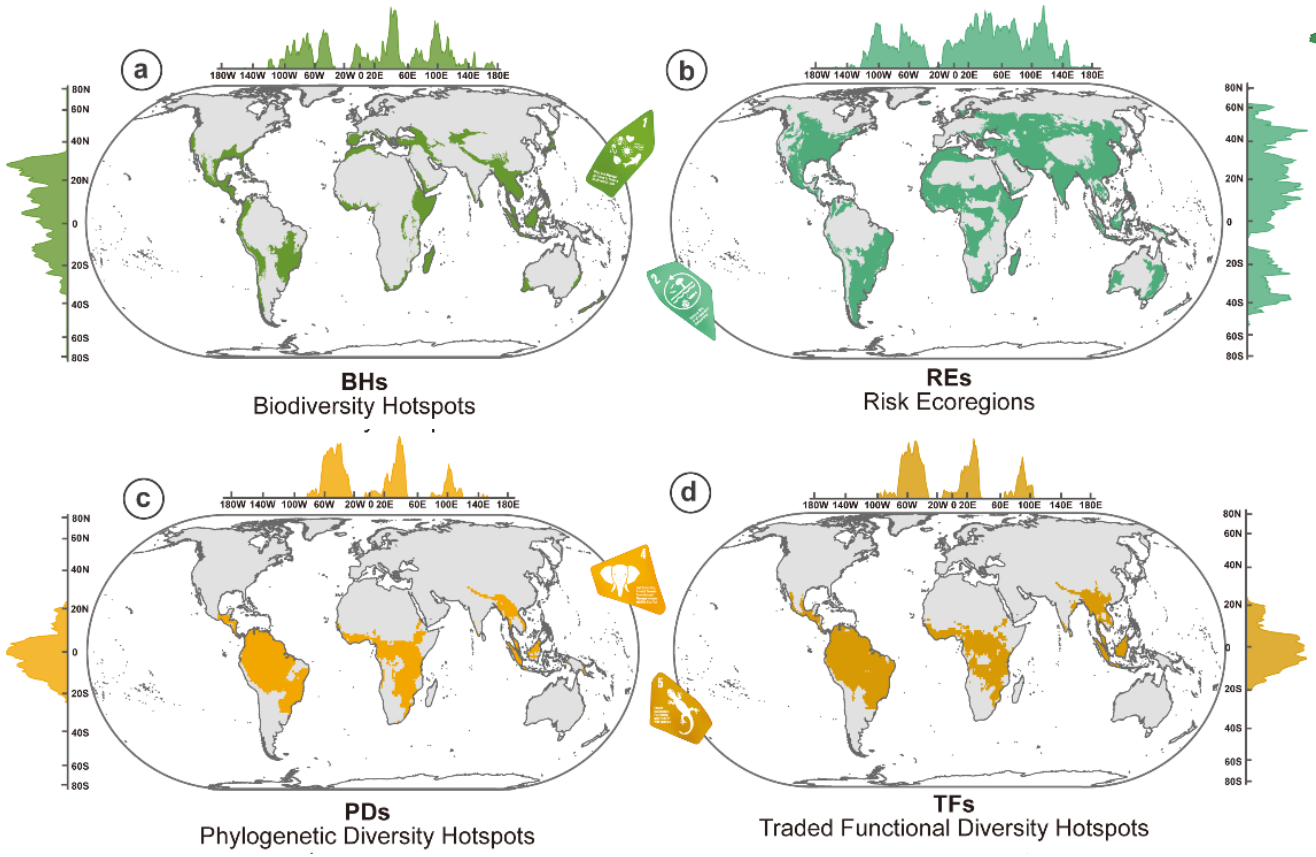


	Brazil	Russia	China	Australia	Canada	United States of America	Greenland	Venezuela	Tanzania	Saudi
National coverage of PAs and OECMs	29.94%	10.97%	18.49%	20.79%	13.61%	11.89%	41.46%	53.50%	39.79%	14.97%
National coverage of BRs, PAs and OECMs	49.70%	13.62%	18.68%	21.00%	14.76%	16.75%	41.46%	53.64%	42.12%	15.40%

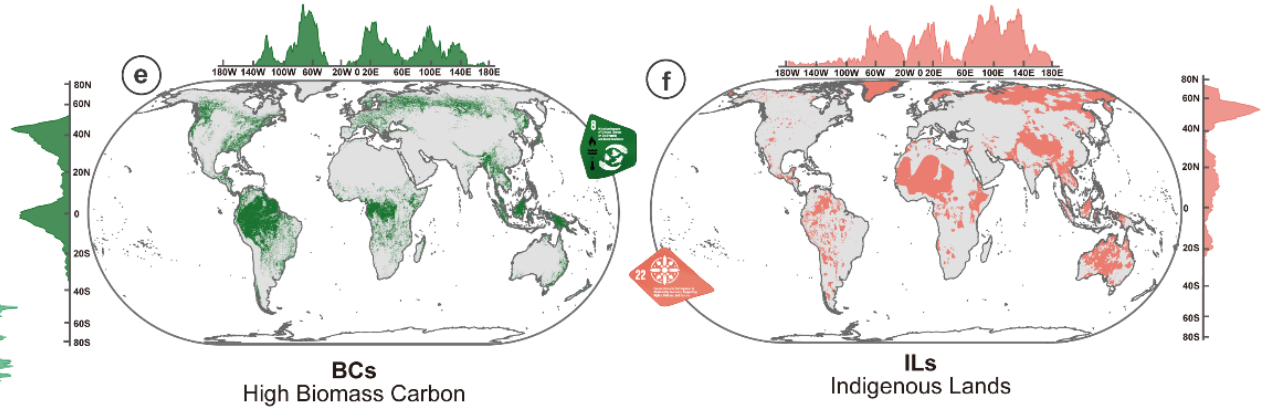
Maps of countries with different percent range conserved before and after including BRs

- This map and bar chart show how BRs affect national conservation coverage. In countries with already large PA networks—such as Brazil—the addition of BRs made a big impact. **In Brazil, total coverage rose from around 30% to nearly 50%.**
- Other countries also crossed major thresholds. In Venezuela, Greenland, and Tanzania, coverage passed 40%, and in some cases even 50%.
- So, while **BRs help many countries move closer to the 30% target**, their impact is uneven. This highlights the need for tailored national strategies that recognize the specific role of BRs.

Six templates representing key action targets

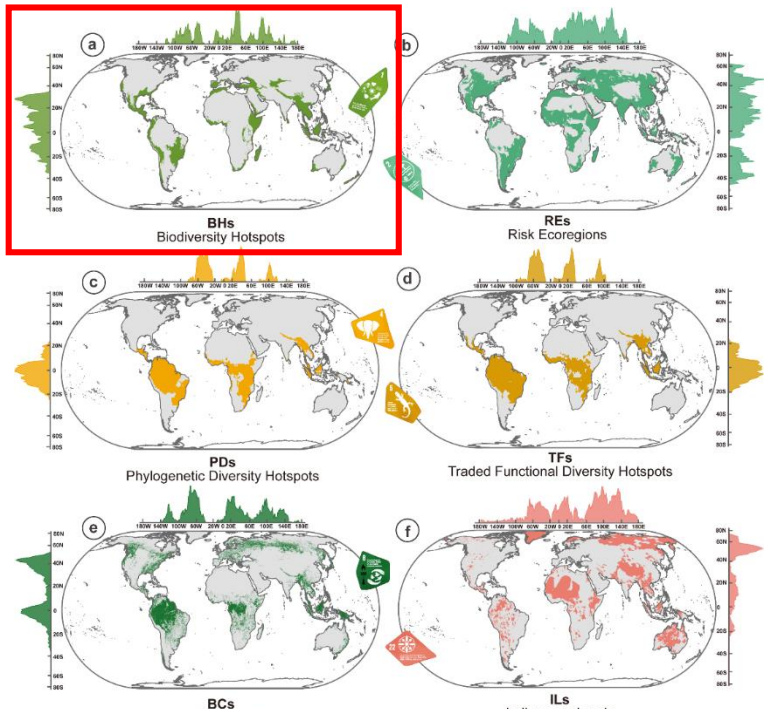


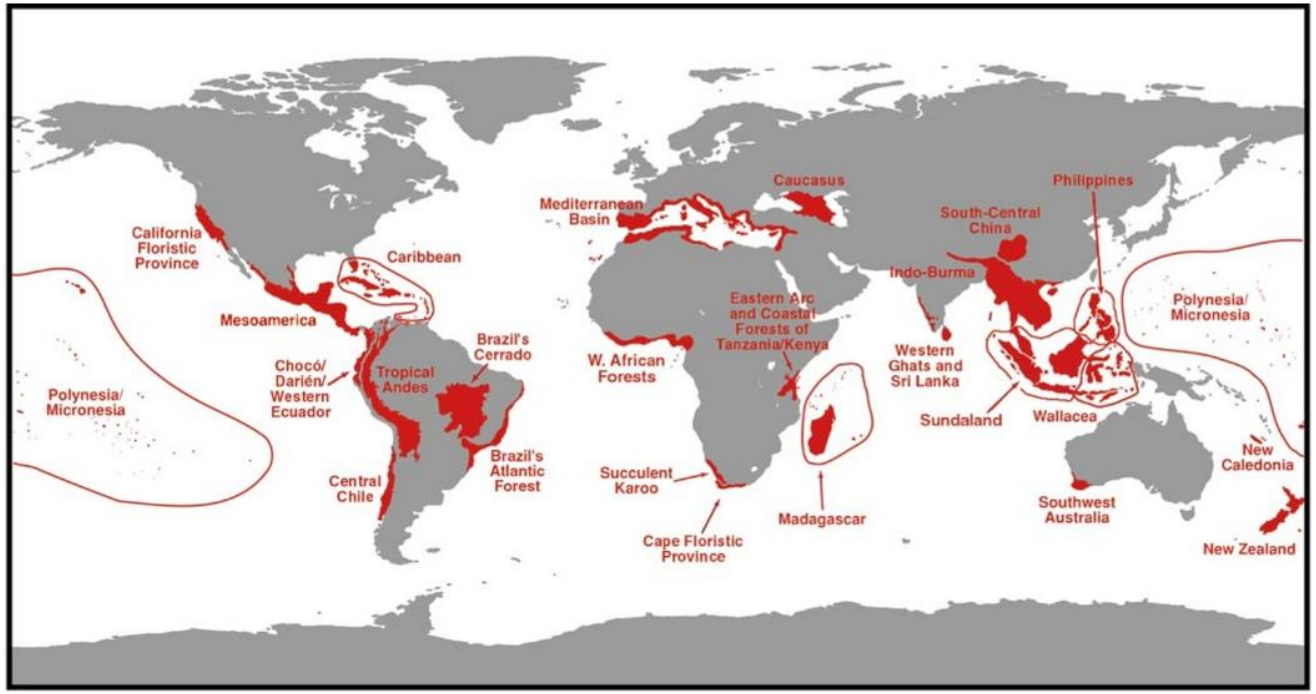
Spatial meta-analysis results of the six global conservation templates



- To understand how the World Network of Biosphere Reserves contributes to the KMGBF beyond area-based targets, we used ***six global spatial templates that represent key action targets***.
- These layers cover species richness, ecosystem risk, genetic diversity, wildlife trade, carbon storage, and inclusive conservation.

BHs — Biodiversity Hotspots template





nature

Biodiversity hotspots for conservation priorities

Norman Myers*, Russell A. Mittermeier†, Cristina G. Mittermeier†, Gustavo A. B. da Fonseca‡ & Jennifer Kent§

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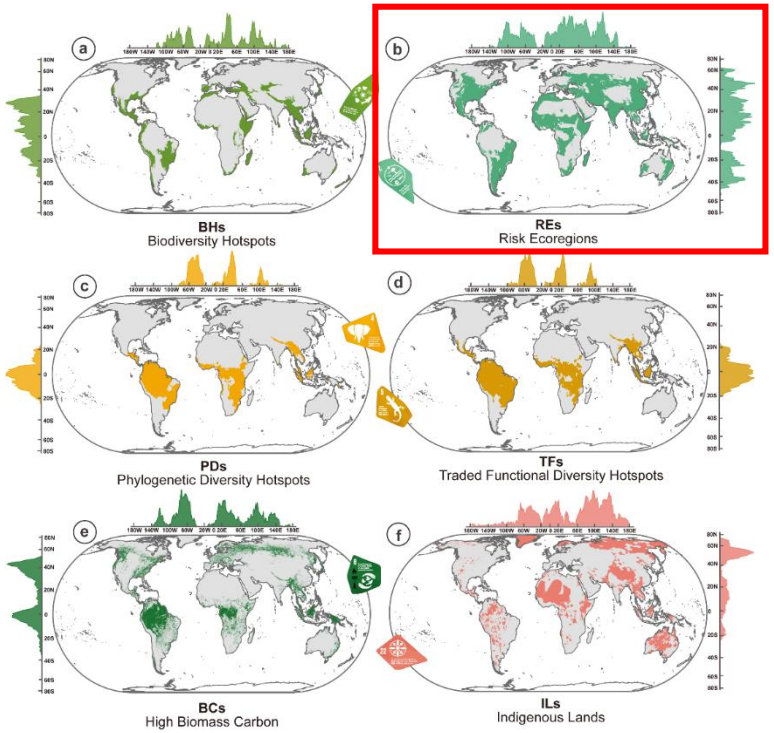
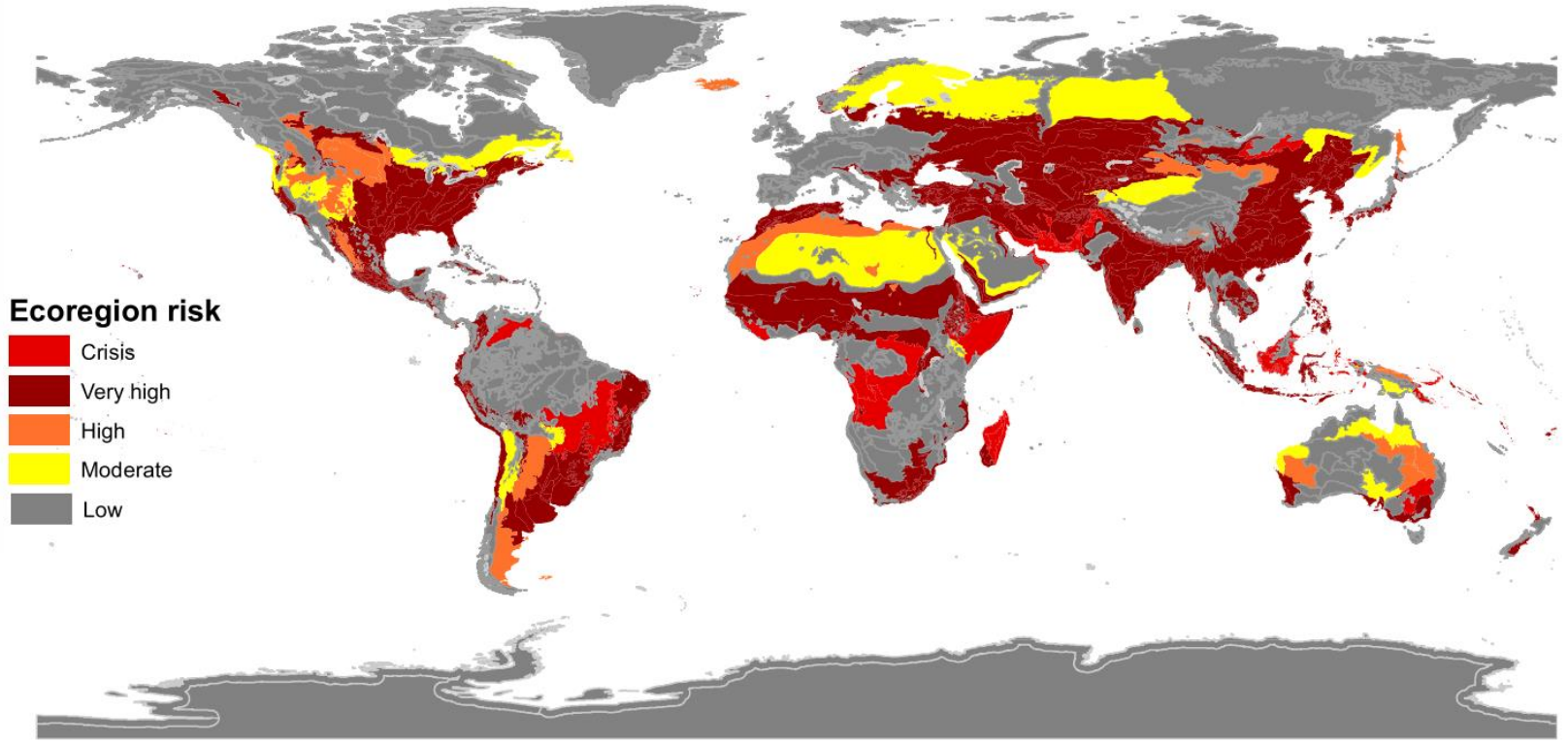
- To appraise potential alignment with KMGBF **Target 1**, we treated Biodiversity Hotspots (BHs) as a 1-km opportunity template.
- BHs are regions that are both biologically rich and highly threatened; although **the 36 BHs occupy ~2.5% of land, they hold over half of endemic plant species and ~43% of endemic vertebrates**.

REs — Risk Ecoregions template





Conservation Letters
A journal of the Society for Conservation Biology
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LETTER

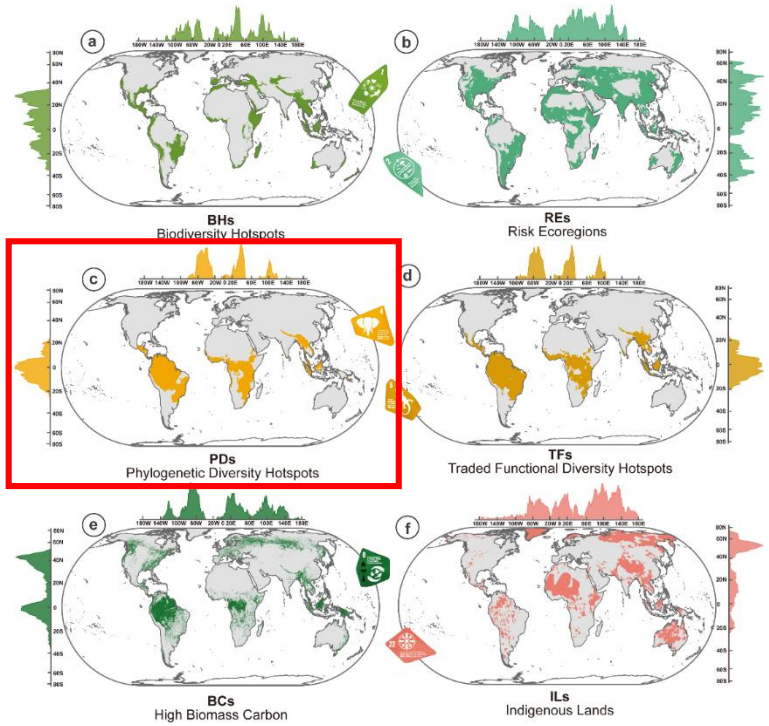
Persistent Disparities between Recent Rates of Habitat Conversion and Protection and Implications for Future Global Conservation Targets

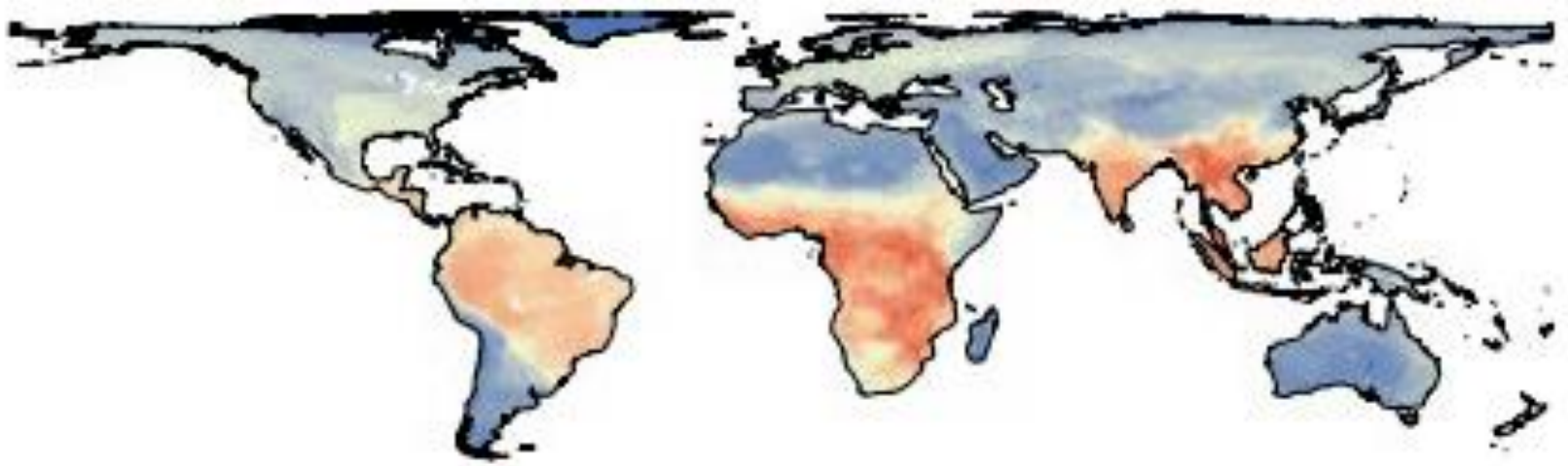
James E.M. Watson[1,2], Kendall R. Jones[1], Richard A. Fuller[3], Moreno Di Marco[1,4], Daniel B. Segan[3], Stuart H.M. Butchart[5,6], James R. Allan[1,4], Eve McDonald-Madden[1,4], & Oscar Venter[7]

(2016)

- For **Target 2**, we used Risk Ecoregions (REs) as an opportunity template, representing **ecoregions with severe habitat conversion and low PA coverage** that are therefore at elevated risk.

PDs — Phylogenetic Diversity Hotspots template





- For KMGBF **Target 4**, which aims to halt extinction, protect genetic diversity, we used Phylogenetic Diversity hotspots (PDs) as an opportunity template, comprising **global phylogenetic diversity maps for birds and mammals**.
- These maps are based on comprehensive, time-calibrated species-level phylogenetic trees. **The bird tree**, derived from Jetz et al. with a Hackett backbone, **includes 9,561 species**, while **the mammal tree** from Upham et al. **includes 5,231 species**.
- **The top 10%** of land areas with the highest phylogenetic diversity were identified for *mammals (PD threshold: 2594.615)* and *birds (PD threshold: 9551.888)*. **Their overlap defined PDs, covering 12.86% of global terrestrial areas**.

nature

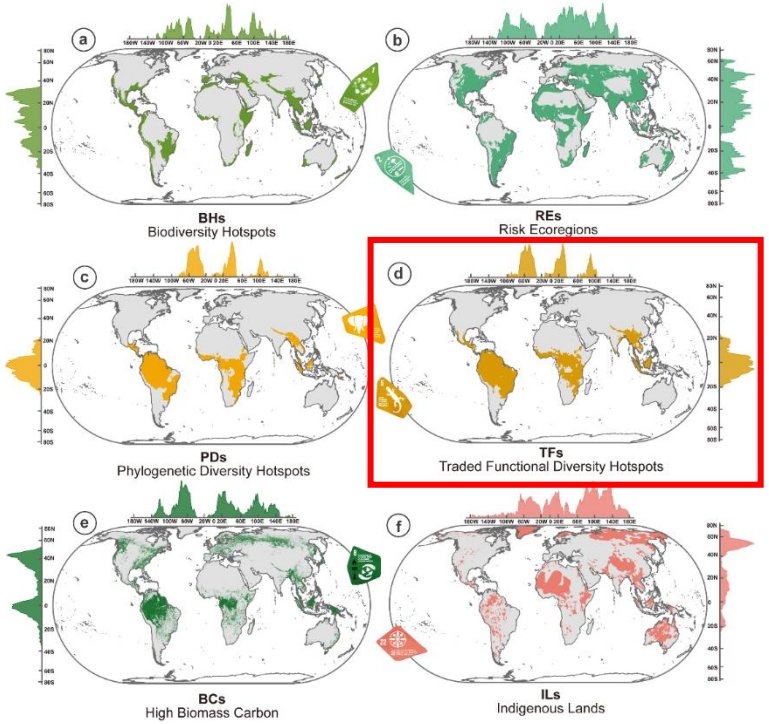
Global hotspots of traded phylogenetic and functional diversity

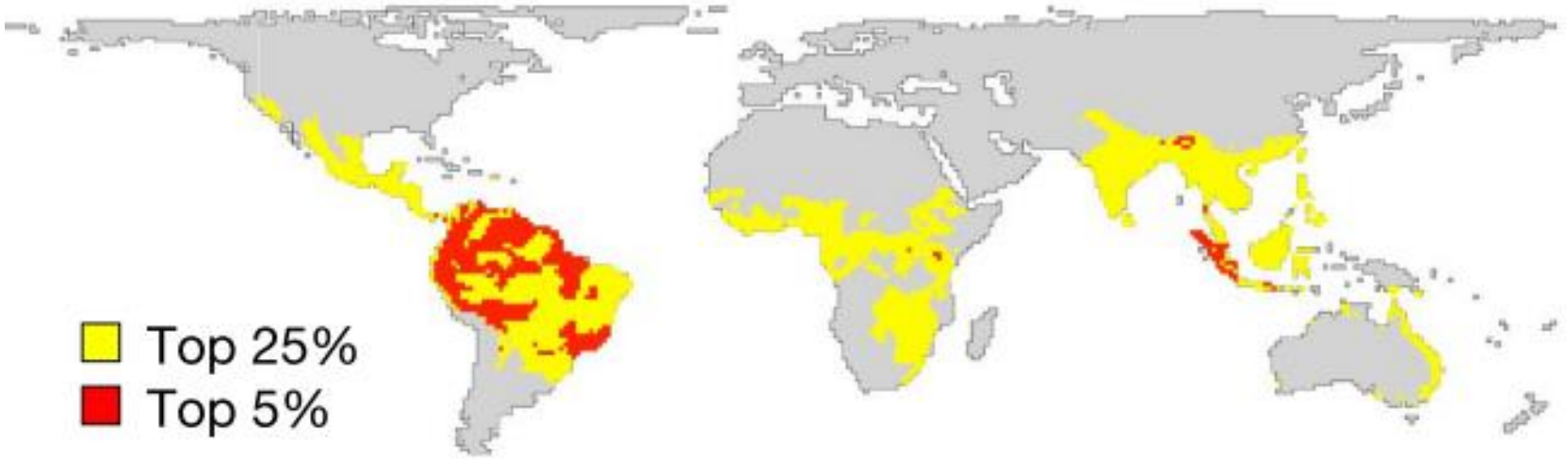
https://doi.org/10.1038/s41586-023-06371-3
Received: 8 February 2022

Liam J. Hughes[1], Mike R. Massam[1], Oscar Morton[1], Felicity A. Edwards[1,3], Brett R. Scheffers[2] & David P. Edwards[1]✉

(2023)

TFs — Traded Functional Diversity Hotspots





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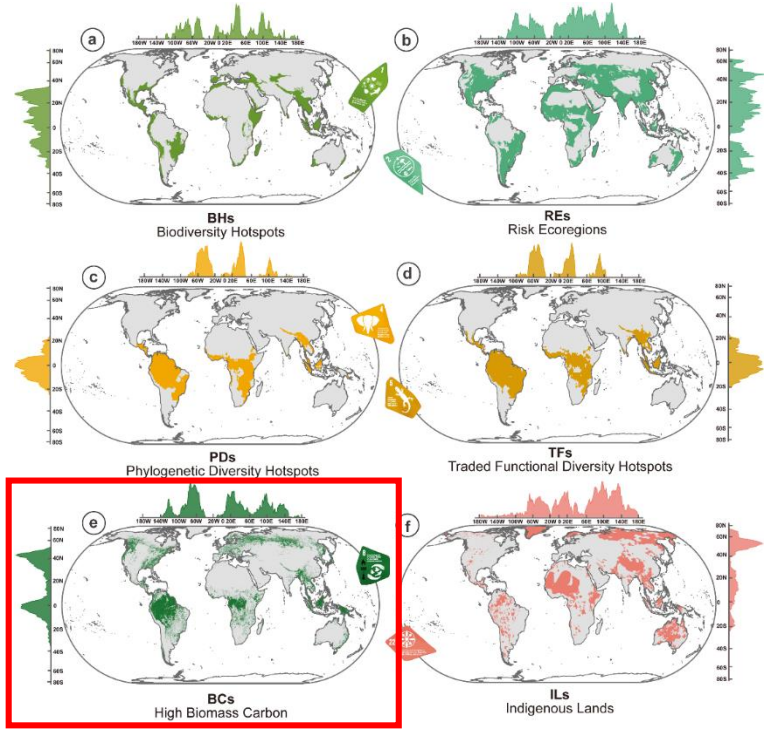
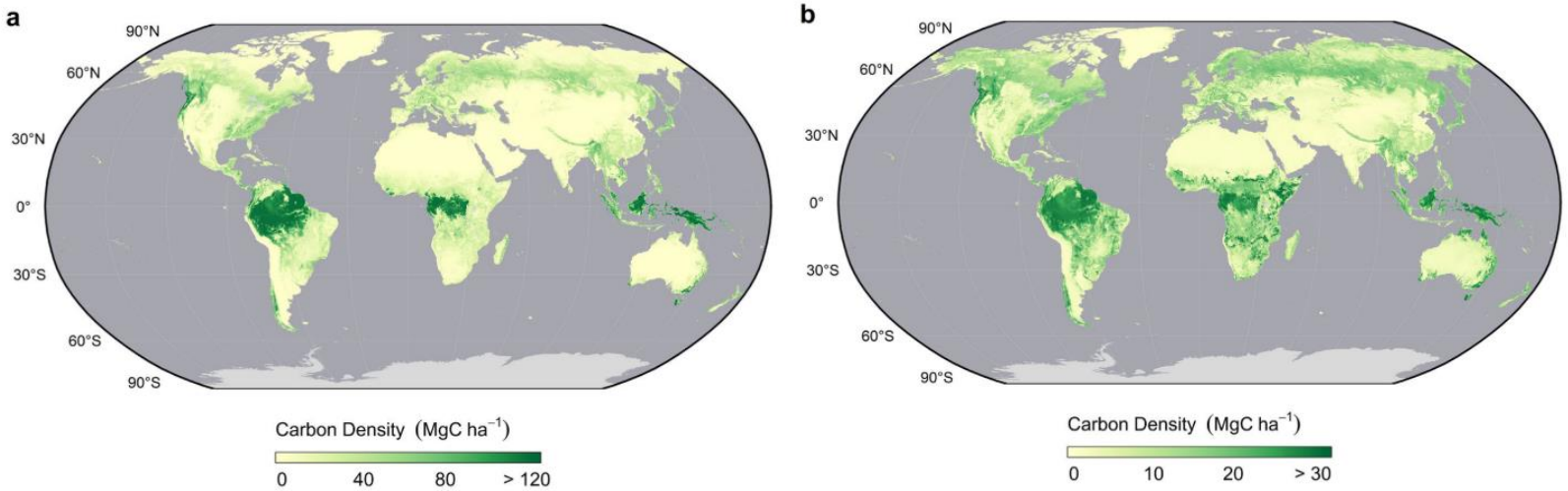
(*2023*)

- To address KMGBF **Target 5**, **which focuses on sustainable harvesting and trade of wild species**, the template **Traded Functional Diversity Hotspots (TFs) for birds and mammals** were used.
- Functional trait data were sourced from Wilman et al. and assigned at the species level, encompassing four key traits: **body mass, dietary composition, foraging strata, and activity period**.
- The top 10% of land areas with the highest traded functional diversity were identified for *mammals (TF threshold: 0.0591)* and *birds (TF threshold: 0.1117)*. Their overlap defined TF hotspots, **covering 14.47% of global terrestrial areas**.

BCs — High Biomass Carbon template





SCIENTIFIC DATA

Check for updates

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DATA DESCRIPTOR

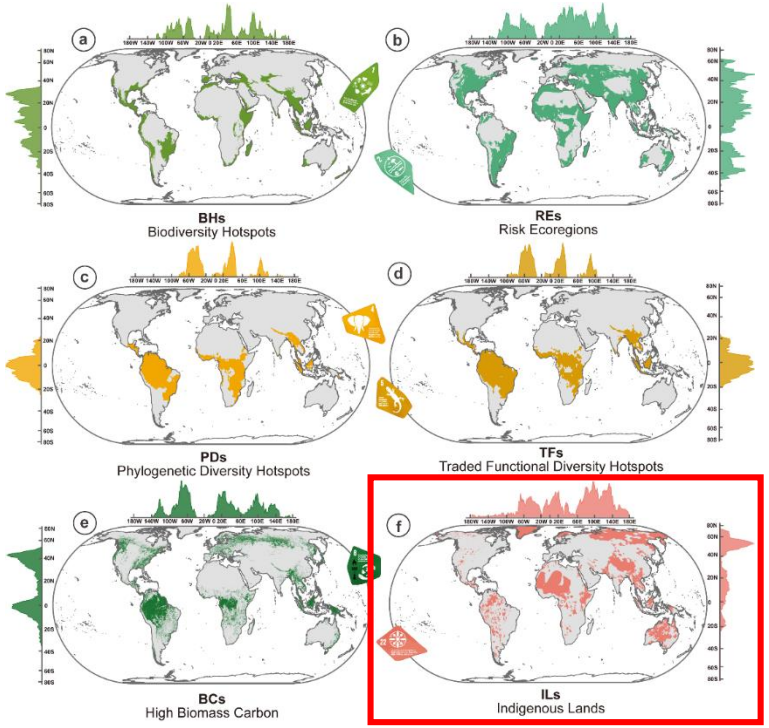
Harmonized global maps of above and belowground biomass carbon density in the year 2010

Seth A. Spawn[1,2]✉, Clare C. Sullivan[1,2], Tyler J. Lark[2] & Holly K. Gibbs[1,2]

(2020)

- For KMGBF **Target 8**, which aims to minimize climate change impacts on biodiversity and enhance resilience, **the template High Biomass Carbon (BCs)** was used as an opportunity template.
- BCs identifies regions **with high aboveground and belowground biomass carbon density** across vegetation types. Conserving these areas preserves carbon storage, **preventing emissions from land-use changes such as deforestation or agricultural expansion**, thereby reducing atmospheric CO_2 and mitigating global warming

ILs — Indigenous Lands template



nature sustainability

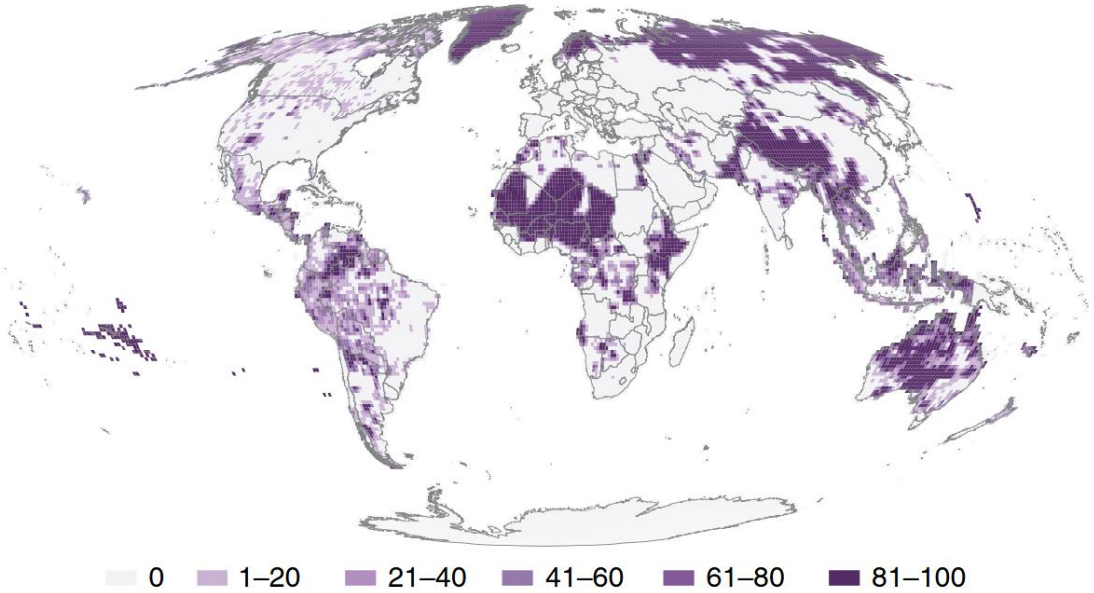
ANALYSIS

https://doi.org/10.1038/s41893-018-0100-6

A spatial overview of the global importance of Indigenous lands for conservation

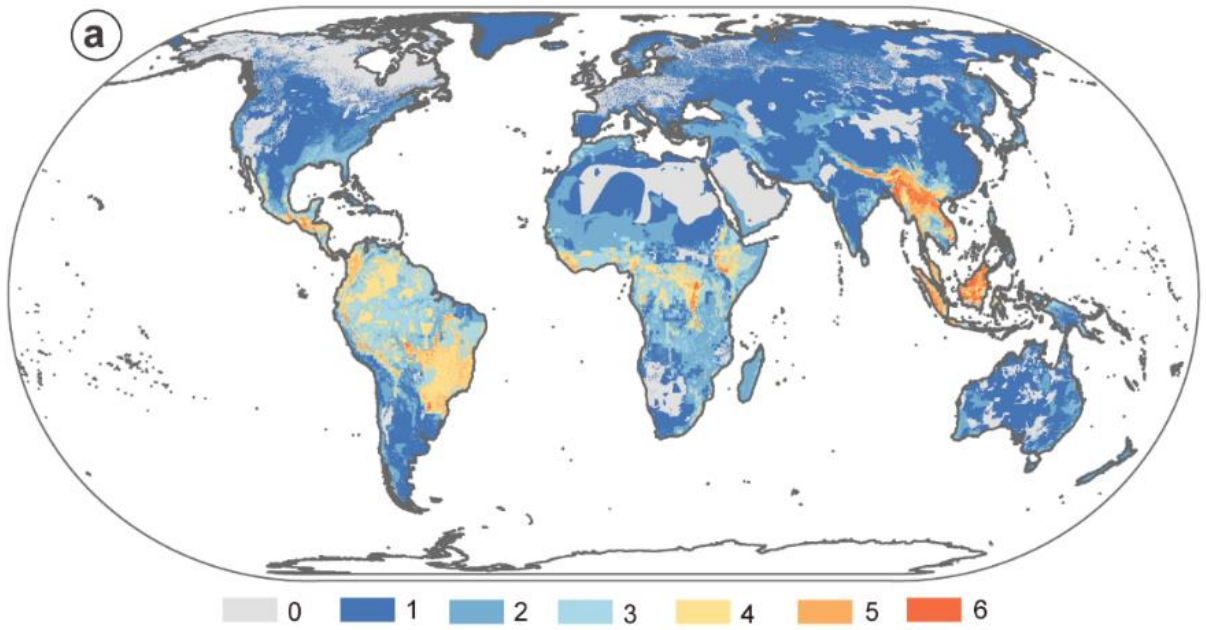
Stephen T. Garnett[1*], Neil D. Burgess[2,3], Julia E. Fa[4,5], Álvaro Fernández-Llamazares[6], Zsolt Molnár[7], Cathy J. Robinson[8,9], James E. M. Watson[10,11], Kerstin K. Zander[8], Beau Austin[1], Eduardo S. Brondizio[12], Neil French Collier[1], Tom Duncan[1], Erle Ellis[13], Hayley Geyle[1], Micha V. Jackson[1,14], Harry Jonas[15], Pernilla Malmer[16], Ben McGowan[1], Amphone Sivongxay[1] and Ian Leiper[1]

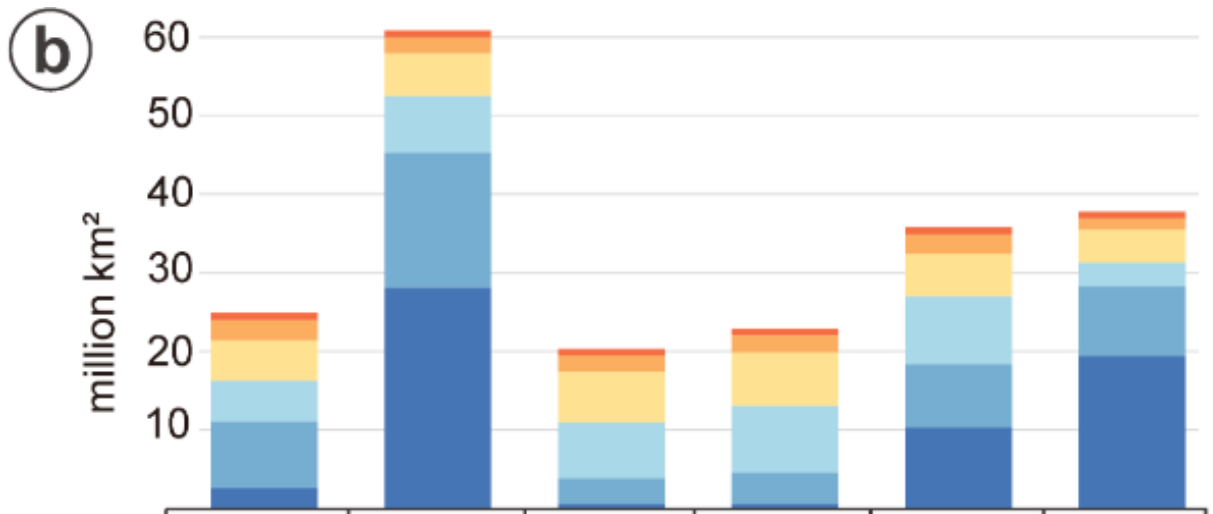
(2018)



- For **Target 22**, which aims to ensure inclusive participation in biodiversity decisions while respecting rights, cultures, and justice, **the template Indigenous Lands (ILs)** was used as an opportunity template.
- Indigenous communities **hold ancestral rights to lands they have managed sustainably for generations**. Ensuring their participation protects their rights, respects their knowledge, and enhances ecosystem resilience through practices like rotational farming and controlled fishing.

Spatial meta-analysis of the six templates





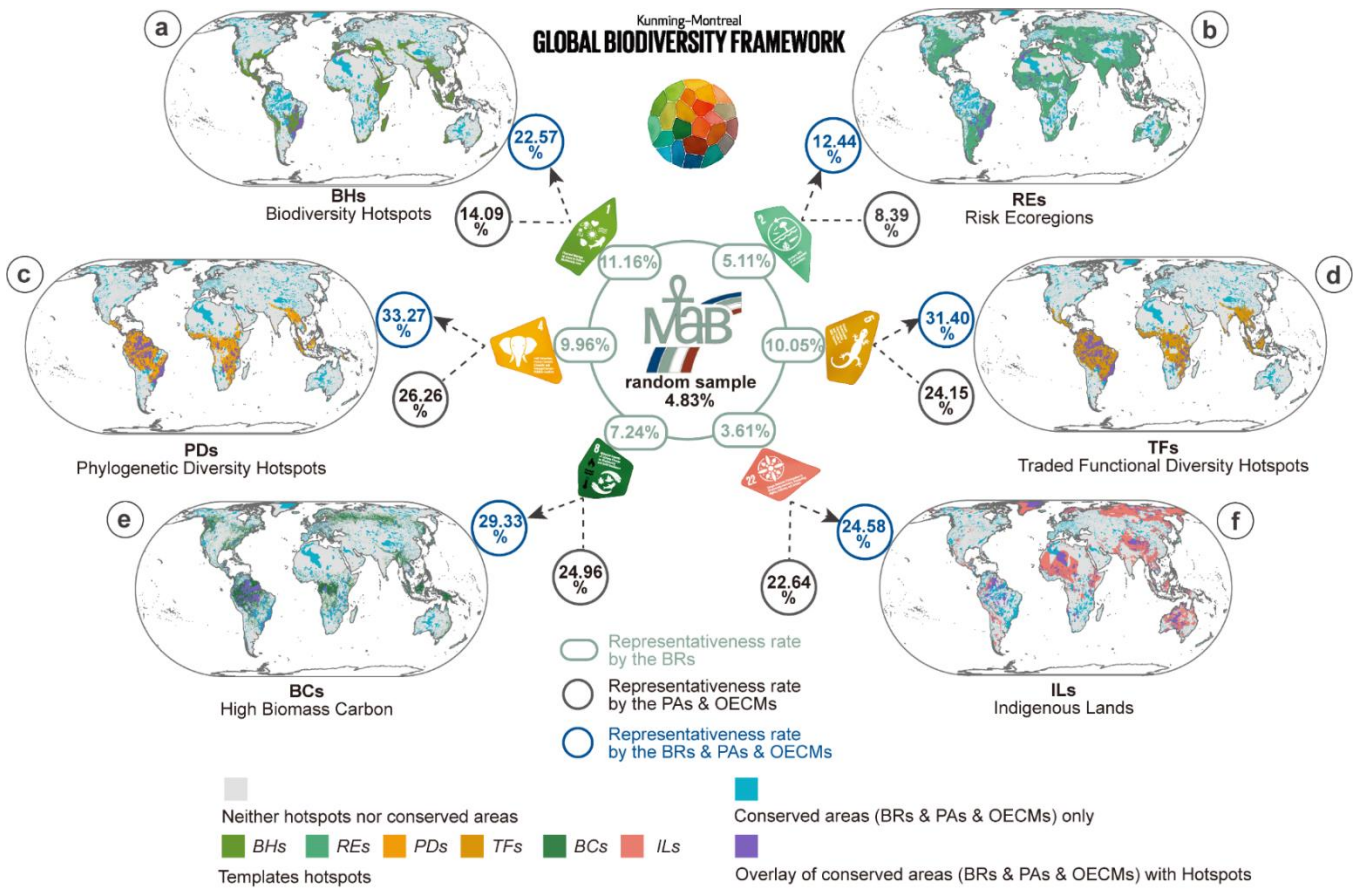
	BHs	REs	PDs	TFs	BCs	ILs
1	10.26%	46.15%	2.39%	2.00%	28.61%	51.37%
2	33.92%	28.25%	16.20%	17.86%	22.39%	23.30%
3	20.88%	11.86%	35.36%	37.18%	23.96%	8.08%
4	21.08%	8.83%	31.46%	29.59%	15.32%	10.99%
5	10.18%	3.40%	10.68%	9.90%	6.78%	3.84%
6	3.67%	1.50%	3.90%	3.47%	2.94%	2.41%

Spatial meta-analysis results of the six global conservation templates

- When we overlay these templates, **most places are covered by only one or two layers**, and areas covered by all six are extremely rare.
- Among the six templates, **Risk Ecoregions and Indigenous Lands cover the largest areas, but they also have the least overlap with other layers**.
- In contrast, Phylogenetic Diversity Hotspots and Biodiversity Hotspots show the highest overlap with other templates.

Potential of the WNBR in advance other KMGBF targets

- First, we compared how much of each template falls inside BRs, using the global BR area—**4.83%**—**as our baseline for a random distribution**.



Global representativeness rates of BRs, PAs, and OECMs for six target templates under the KMGBF

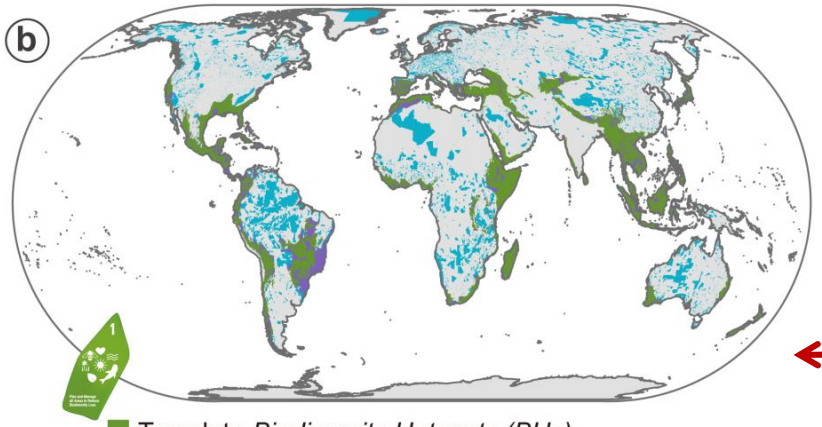
- Overall, **BRs performed better than random for five of the six templates**: they cover **11.16%** of biodiversity hotspots, **5.11%** of risk ecoregions, **9.96%** of phylogenetic diversity hotspots, **10.05%** of traded functional diversity, and **7.24%** of high-biomass carbon areas. Only Indigenous Lands were lower, at **3.61%**.
- Second, we checked the coverage provided *by existing PAs and OECMs*.
- Third, we looked *at the combined BR–PA–OECM network*.
- When BRs were added to PAs and OECMs, **representativeness increased sharply**. Coverage of **biodiversity hotspots** rose from 14.09% to 22.57%, **phylogenetic diversity** from 26.26% to 33.27%, and **traded functional diversity** from 24.15% to 31.40%.

Potential of the WNBR in advance other KMGBF targets

(a)

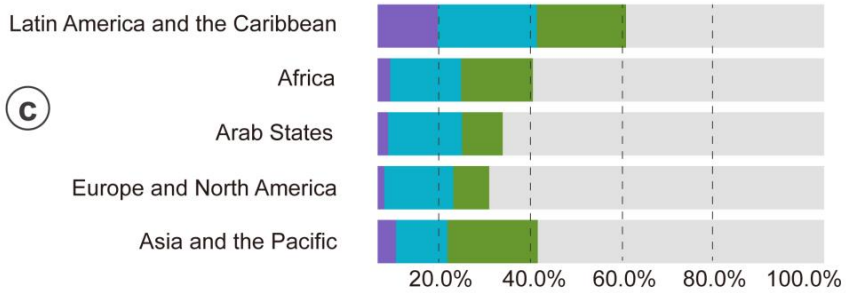
	Latin America and the Caribbean	Africa	Arab States	Europe and North America	Asia and the Pacific
Representativeness rate by PAs & OECMs	12.82%	12.82%	15.93%	12.07%	14.38%
Representativeness rate by BRs	3.49%	3.49%	6.02%	5.92%	4.41%
Representativeness rate by BRs & PAs & OECMs	15.23%	15.23%	20.52%	15.45%	17.31%

(b)



Template *Biodiversity Hotspots (BHs)*
Conserved areas (BRs & PAs & OECMs) only
Overlay of conserved areas (BRs & PAs & OECMs) with *BHs*
Neither template hotspots nor conserved areas

(c)



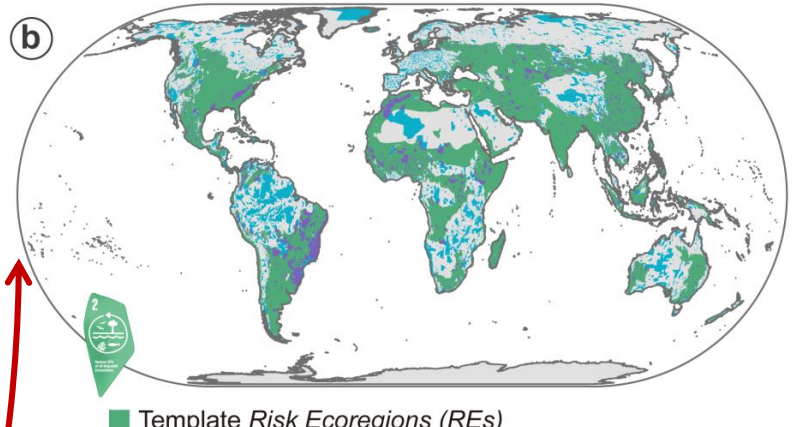
In **Latin America** and the Caribbean, BRs covered about 30.7% of biodiversity hotspots. When BRs added, BH protection in this region jumped from 15.63% to 40.45%. In **the Arab States**, BH coverage increased from 15.93% to 20.52%.

For Risk Ecoregions, bringing BRs in improved protection levels: up to 26.89% in Latin America, 12.19% in Africa, 12.58% in the Arab States, 9.14% in Europe and North America, and 8.88% in Asia and the Pacific.

(a)

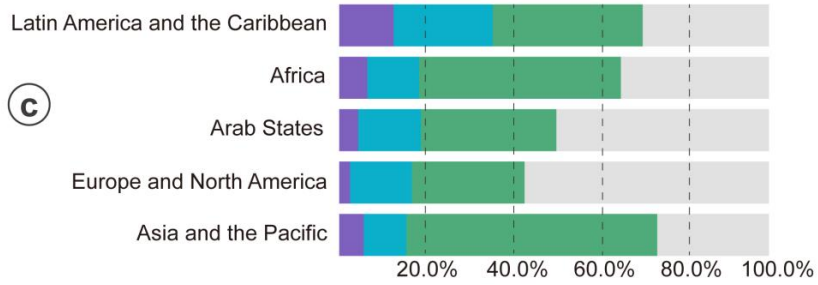
	Latin America and the Caribbean	Africa	Arab States	Europe and North America	Asia and the Pacific
Representativeness rate by PAs & OECMs	9.72%	10.26%	10.71%	6.12%	7.83%
Representativeness rate by BRs	20.37%	2.87%	3.07%	3.61%	1.60%
Representativeness rate by BRs & PAs & OECMs	26.89%	12.19%	12.58%	9.14%	8.88%

(b)



Template *Risk Ecoregions (REs)*
Conserved areas (BRs & PAs & OECMs) only
Overlay of conserved areas (BRs & PAs & OECMs) with *REs*
Neither template hotspots nor conserved areas

(c)



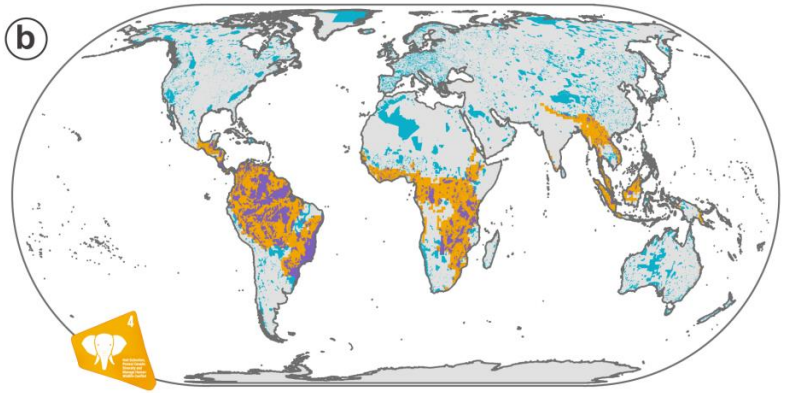
Representativeness rates of conserved areas for the template Biodiversity Hotspots (BHs) and Risk Ecoregions (REs)

Potential of the WNBR in advance other KMGBF targets

a

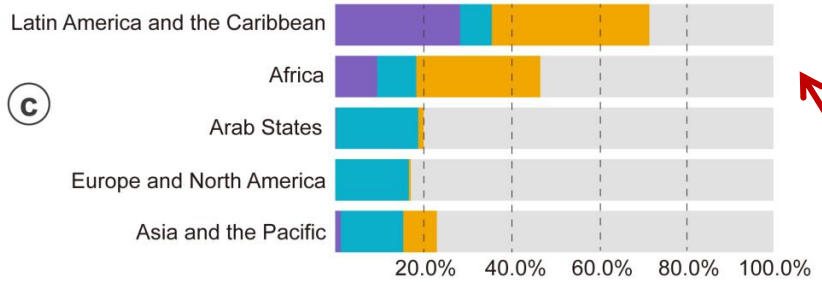
	Latin America and the Caribbean	Africa	Arab States	Europe and North America	Asia and the Pacific
Representativeness rate by PAs & OECMs	32.07%	23.68%	21.97%	14.76%	12.39%
Representativeness rate by BRs	16.37%	3.25%	0.05%	10.54%	4.09%
Representativeness rate by BRs & PAs & OECMs	44.05%	25.47%	22.02%	15.77%	15.23%

b



Template *Phylogenetic Diversity Hotspots (PDs)*
Conserved areas (BRs & PAs & OECMs) only
Overlay of conserved areas (BRs & PAs & OECMs) with *PDs*
Neither template hotspots nor conserved areas

c



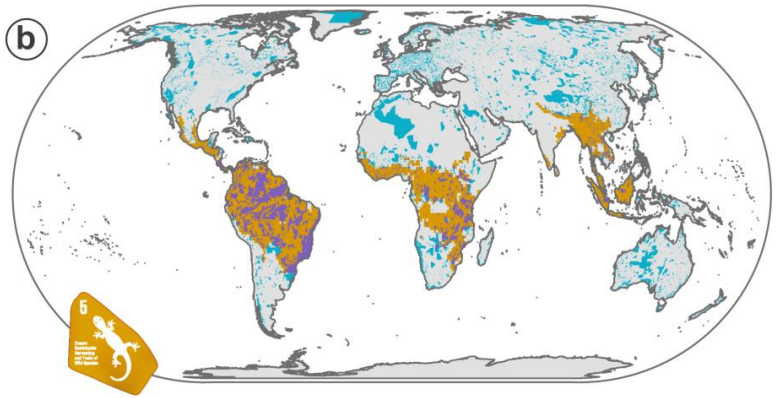
For Phylogenetic Diversity hotspots, **gains were small in the Arab States and in Europe–North America**, because PDs are very sparse there. In Europe and North America, coverage increased only slightly—from 14.76% to 15.77%—and in the Arab States there was no change at all.

But in regions where PDs are more common, adding BRs made a real difference: PD coverage reached 44.05% in Latin America and the Caribbean, 25.47% in Africa, and 15.23% in Asia and the Pacific.

a

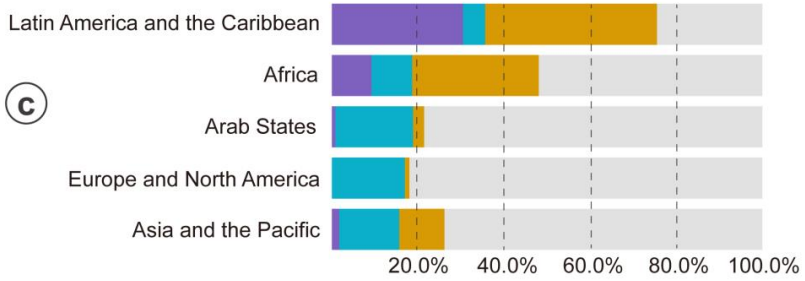
	Latin America and the Caribbean	Africa	Arab States	Europe and North America	Asia and the Pacific
Representativeness rate by PAs & OECMs	30.18%	22.28%	24.55%	9.46%	11.96%
Representativeness rate by BRs	17.47%	2.98%	0.71%	4.43%	3.49%
Representativeness rate by BRs & PAs & OECMs	43.26%	23.89%	25.23%	9.98%	14.44%

b



Template *Traded Functional Diversity Hotspots (TFs)*
Conserved areas (BRs & PAs & OECMs) only
Overlay of conserved areas (BRs & PAs & OECMs) with *TFs*
Neither template hotspots nor conserved areas

c



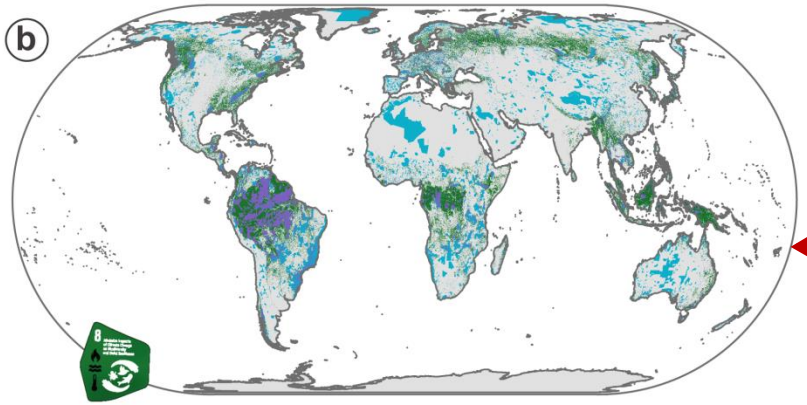
Representativeness rates of conserved areas for the template Phylogenetic Diversity Hotspots (PDs) and Traded Functional Diversity Hotspots (TFs)

Potential of the WNBR in advance other KMGBF targets

a

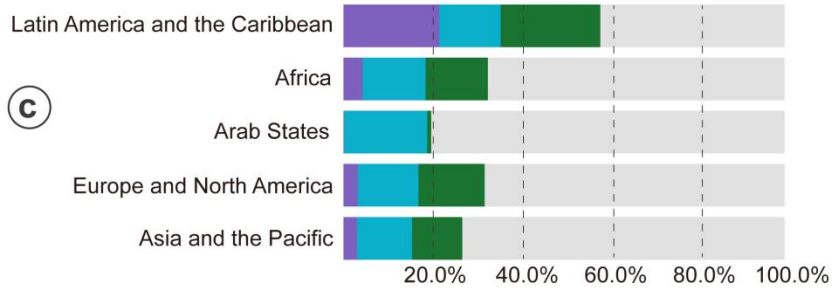
	Latin America and the Caribbean	Africa	Arab States	Europe and North America	Asia and the Pacific
Representativeness rate by PAs & OECMs	41.08%	22.39%	10.74%	14.19%	19.66%
Representativeness rate by BRs	13.88%	2.25%	2.72%	5.66%	3.39%
Representativeness rate by BRs & PAs & OECMs	49.11%	23.41%	12.68%	18.04%	21.76%

b



Template *High Biomass Carbon Density (BCs)*
Conserved areas (BRs & PAs & OECMs) only
Overlay of conserved areas (BRs & PAs & OECMs) with *BCs*
Neither template hotspots nor conserved areas

c



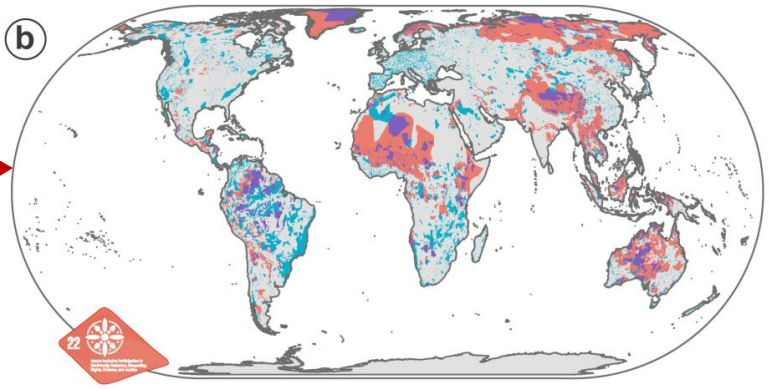
For high-biomass carbon areas, Latin America and the Caribbean again showed the strongest effect: **BC protection increased from 41.08% to 49.11% after adding BRs**.

In Latin America and the Caribbean and in the Arab States, ILs coverage went above 50% once BRs were included. But **in the Arab States**, because BRs overlap a lot with existing PAs and OECMs, **the actual increase was small—only 2.33%, even though BRs alone cover about 10% of ILs**.

a

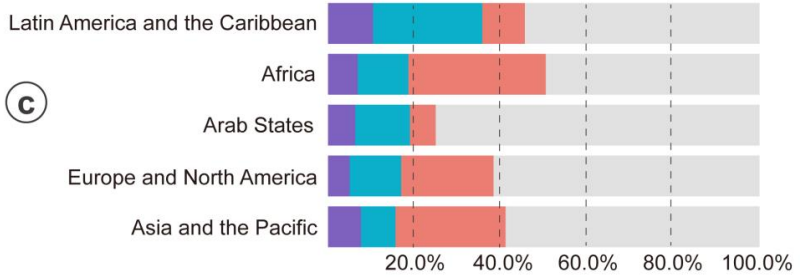
	Latin America and the Caribbean	Africa	Arab States	Europe and North America	Asia and the Pacific
Representativeness rate by PAs & OECMs	48.52%	16.04%	49.83%	16.50%	22.42%
Representativeness rate by BRs	8.36%	3.78%	10.03%	3.38%	1.42%
Representativeness rate by BRs & PAs & OECMs	51.33%	19.03%	52.16%	19.26%	23.13%

b



Template *Indigenous Lands (ILs)*
Conserved areas (BRs & PAs & OECMs) only
Overlay of conserved areas (BRs & PAs & OECMs) with *ILs*
Neither template hotspots nor conserved areas

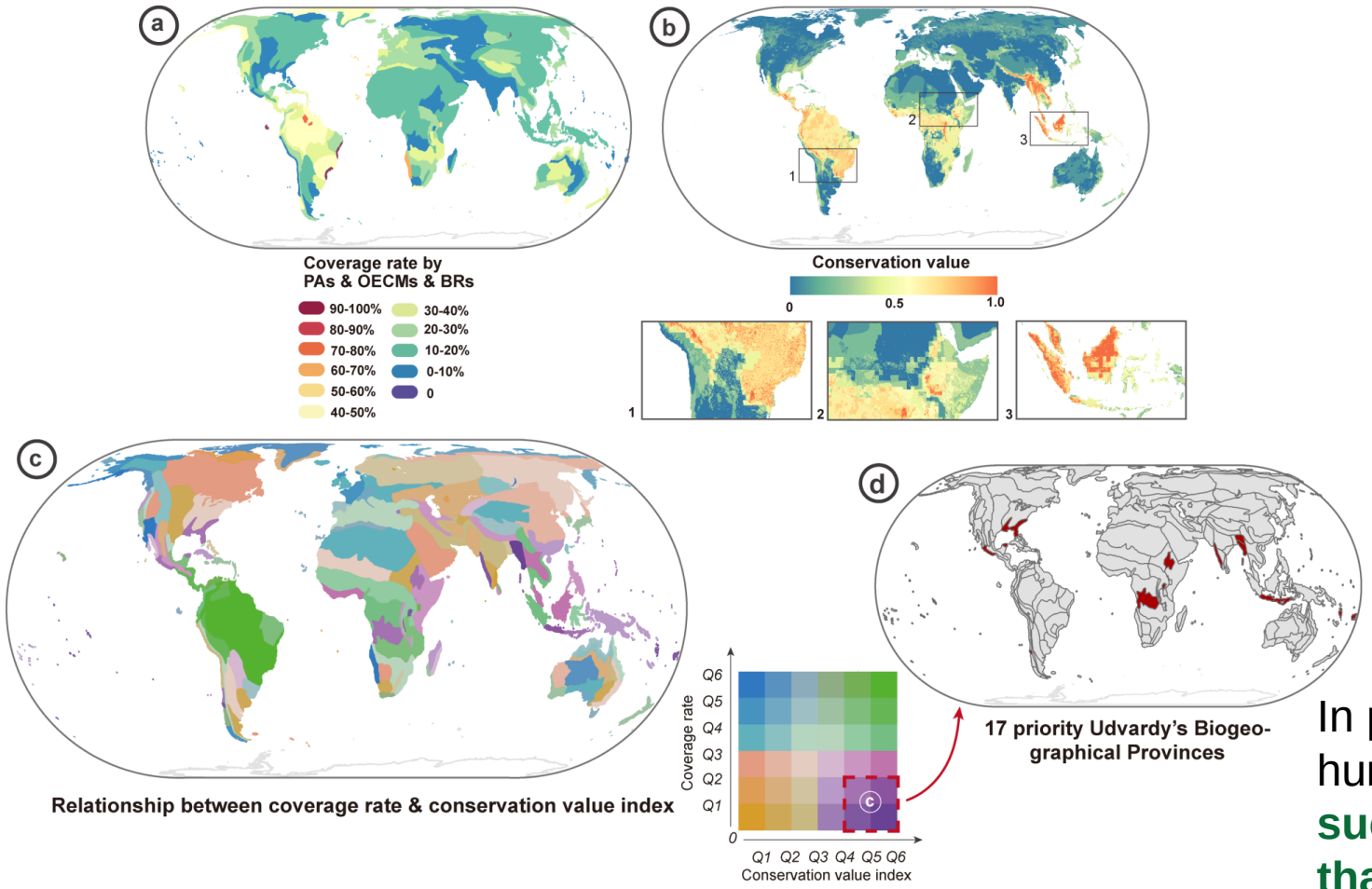
c



Representativeness rates of conserved areas for the template High Biomass Carbon Density (BCs) and Indigenous Lands (ILs)

Post-2025 expansion priorities for the WNBR

- We then **combined coverage and conservation value using a 6×6 quantile matrix**, **ranking provinces from Q1 to Q6**. Based on this, we identified **17 biogeographical provinces** that have high conservation value but low coverage.

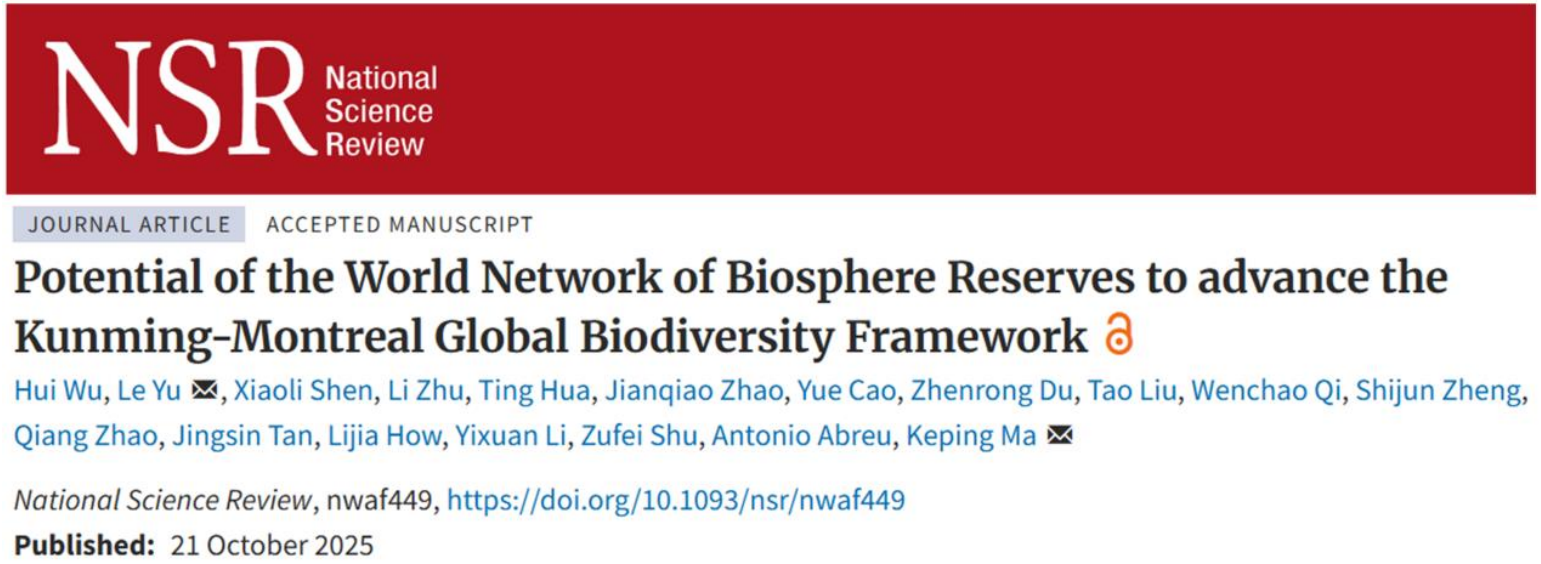


Post-2025 expansion priorities for the WNBR

- Coverage by BRs, PAs, and OECMs is highest in parts of South America, southern Africa, and Australia. In contrast, many provinces in Southeast Asia, Central Asia, and parts of North America still have less than 10% coverage.
- When we looked at conservation value, **the highest-value regions were mainly in the tropics**, especially northern and central South America, central Africa, and Southeast Asia, mostly within 20°N to 20°S.

In provinces such as the Brazilian Planalto, human footprint scores were very high. **In such places, BRs may be more suitable than traditional strict PAs.**

Take-Home messages



- **BRs can significantly boost KMGBF Target 3 progress**

Including BRs in conservation accounting increases global terrestrial coverage toward the "30 by 30" target **from 16.57% to 19.65%**, highlighting their strategic potential for advancing KMGBF Target 3.

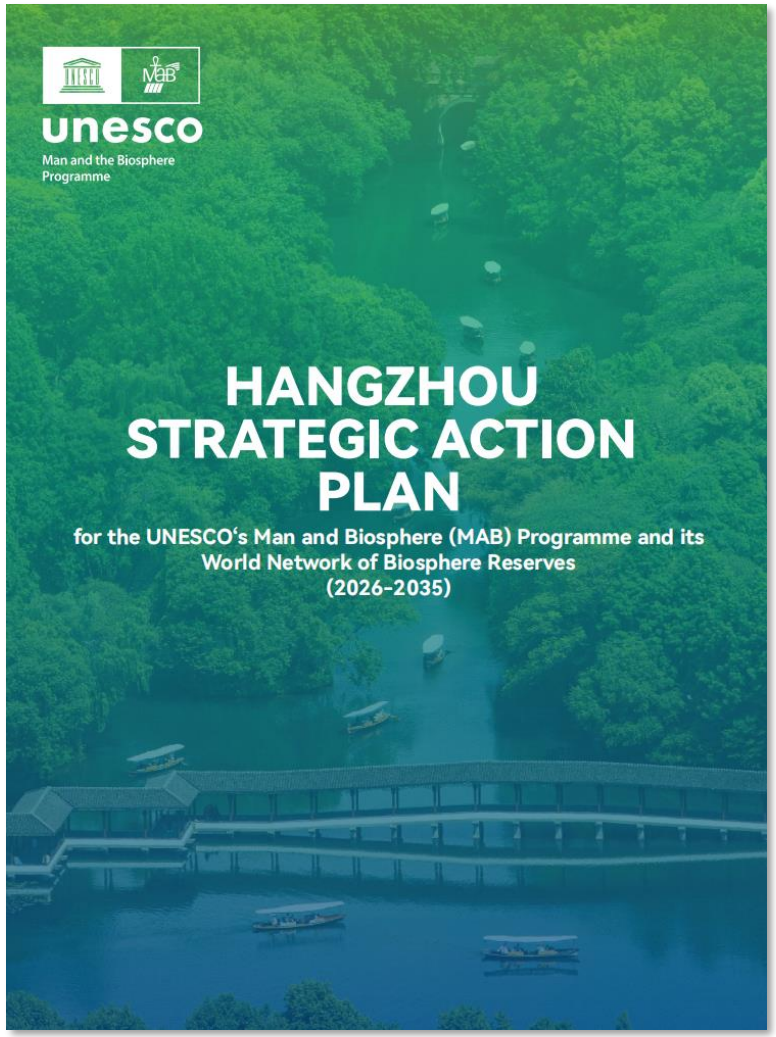
- **Multifunctional benefits extend beyond Target 3**

Integrating BRs into the global conservation network increases coverage **by +8.47% for BHs, +4.05% for REs, +7.01% for PDs, and +7.25% for TFs**. It also adds **+4.37% for high-biomass carbon areas** and **+1.95% for Indigenous Lands**, supporting multiple KMGBF targets.

- **Strategic guidance is needed for future BR expansion**

This study identifies **17 priority biogeographical provinces** for post-2025 BR expansion, offering a science-based roadmap to align BR development with global biodiversity priorities.

Toward future: Hangzhou Strategic Action Plan



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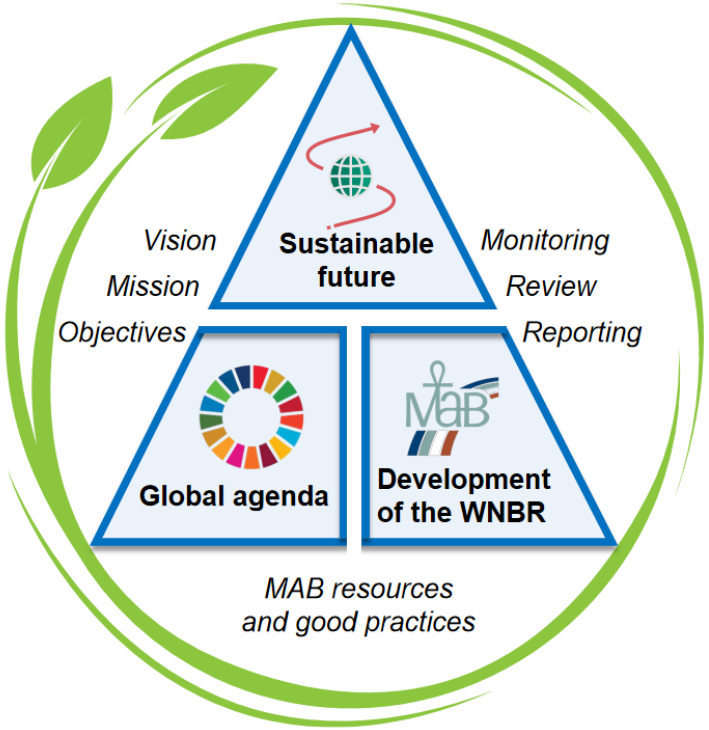
世界生物圈保护区专题

联合国教科文组织人与生物圈计划杭州战略行动计划勾画出世界生物圈保护区未来十年蓝图

马克平[1,2*]



(Ma, K, *in review*)

- The Fifth World Congress of Biosphere Reserves released two landmark outcomes—the **Hangzhou Strategic Action Plan (2026–2035)** and the **Hangzhou Declaration**.
- These outcomes signal a new starting point from Hangzhou
- the Plan is built on three pillars — **vision, mission, and objectives** — all aiming toward a sustainable future.
- **Monitoring, review, and reporting** are essential for turning the Plan into real progress.
- **The global agenda and the development of the WNBR, together with the MAB Programme's knowledge and best practices, form the foundation that supports the entire Action Plan.**

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NORTHEAST ASIA BIODIVERSITY RESEARCH CENTER
中俄生物多样性联合研究中心
Sino-Russia Joint Center for Biodiversity Research

Thanks for your attention!

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