



# Aspectos ecológicos del pastoreo

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## Review

## Impacts of large herbivores on terrestrial ecosystems

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<https://doi.org/10.1016/j.cub.2023.04.024>

## Review

## The role of large wild animals in climate change mitigation and adaptation

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<https://doi.org/10.1016/j.cub.2022.01.041>

## nature climate change

## Perspective

<https://doi.org/10.1038/s41558-023-01631-6>

## Trophic rewilding can expand natural climate solutions

Received: 20 April 2022

Accepted: 13 February 2023

Published online: 27 March 2023

 Check for updates

Oswald J. Schmitz<sup>1</sup>✉, Magnus Sylvén<sup>2</sup>, Trisha B. Atwood<sup>3</sup>, Elisabeth S. Bakker<sup>4,5</sup>, Fabio Berzaghi<sup>6</sup>, Jedediah F. Brodie<sup>7</sup>, Joris P. G. M. Cromsigt<sup>8,9</sup>, Andrew B. Davies<sup>10</sup>, Shawn J. Leroux<sup>11</sup>, Frans J. Schepers<sup>12</sup>, Felisa A. Smith<sup>13</sup>, Sari Stark<sup>14</sup>, Jens-Christian Svenning<sup>15</sup>, Andrew Tilker<sup>16,17</sup> & Henni Ylänne<sup>18</sup>

# ¿De qué ecosistemas hablamos?

*Journal of Vegetation Science* 16: 261-266, 2005  
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□ Bond

## INVITED PERSPECTIVE

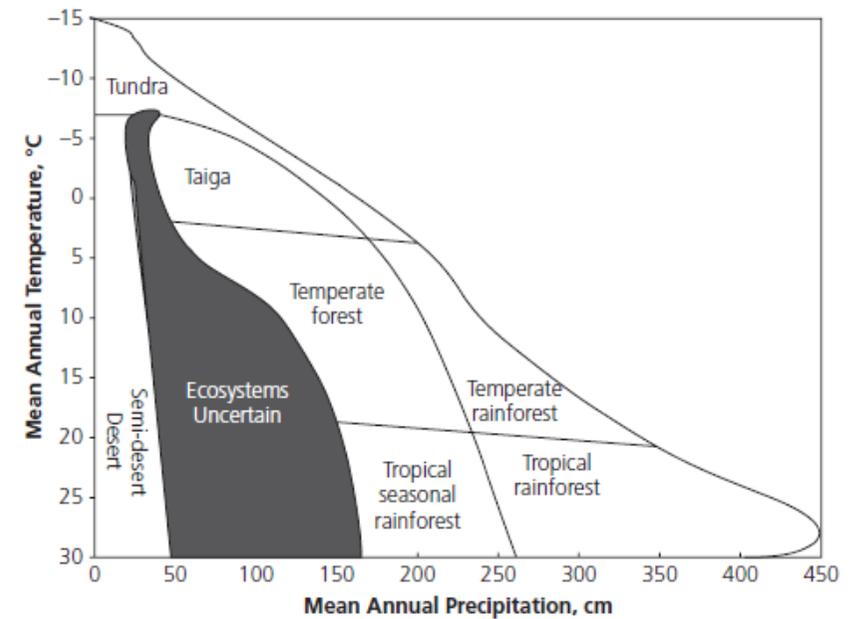
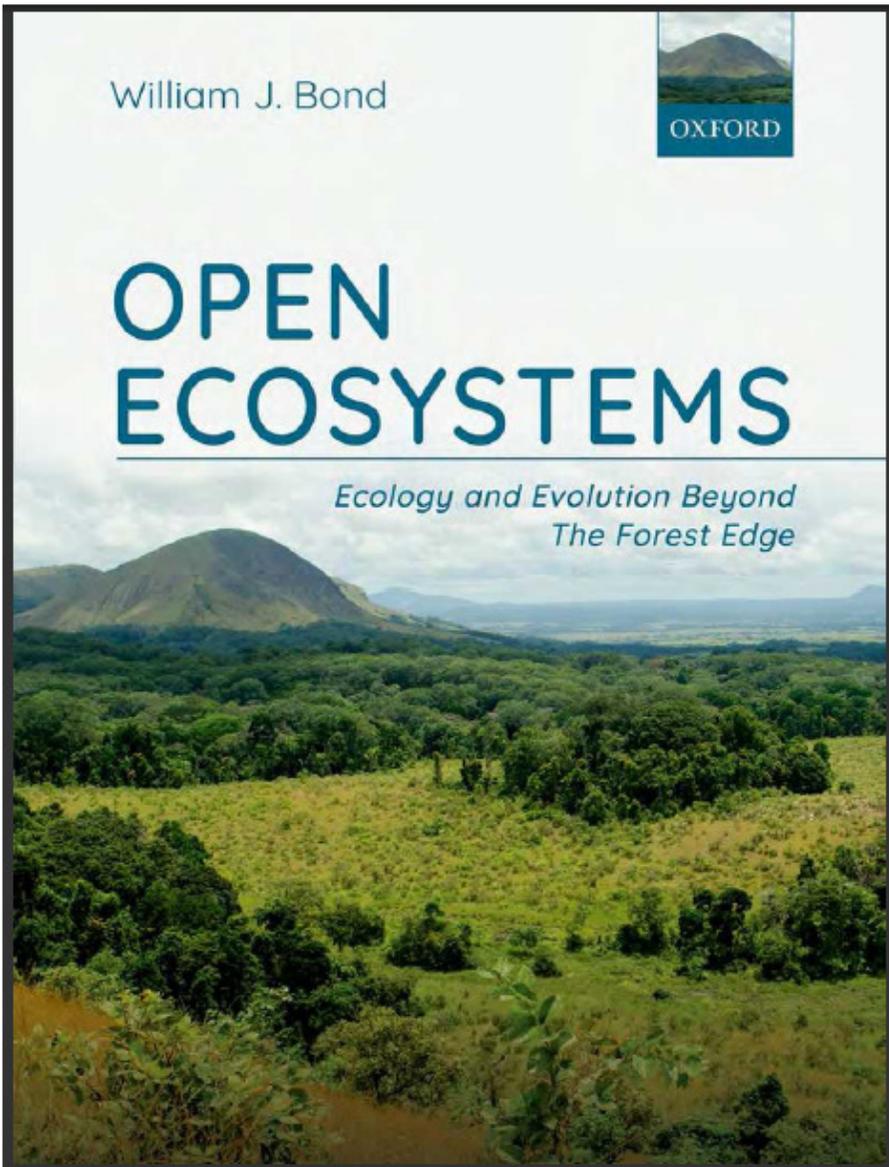
### **Large parts of the world are brown or black: A different view on the ‘Green World’ hypothesis**

**Bond, William J.**

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Fax +27 216504041; E-mail bond@botzoo.uct.ac.za*

**Abstract.** Climate sets the limits to plant growth but does climate determine the global distribution of major biomes? I suggest methods for evaluating whether vegetation is largely climate or consumer-controlled, focusing on large mammal herbivores and fire as influential consumers. Large parts of the world appear not to be at equilibrium with climate. Consumer-controlled ecosystems are ancient and diverse. Their distinctive ecology warrants special attention.





**Figure 2.2** Whittaker's climate envelopes for major world vegetation formations. The shaded area is the climate envelope where ecosystems are uncertain and 'either grassland, or one of the types dominated by woody plants, may form the prevailing vegetation in different areas' (redrawn from Whittaker 1975, p. 65).

# Origen de los ecosistemas abiertos

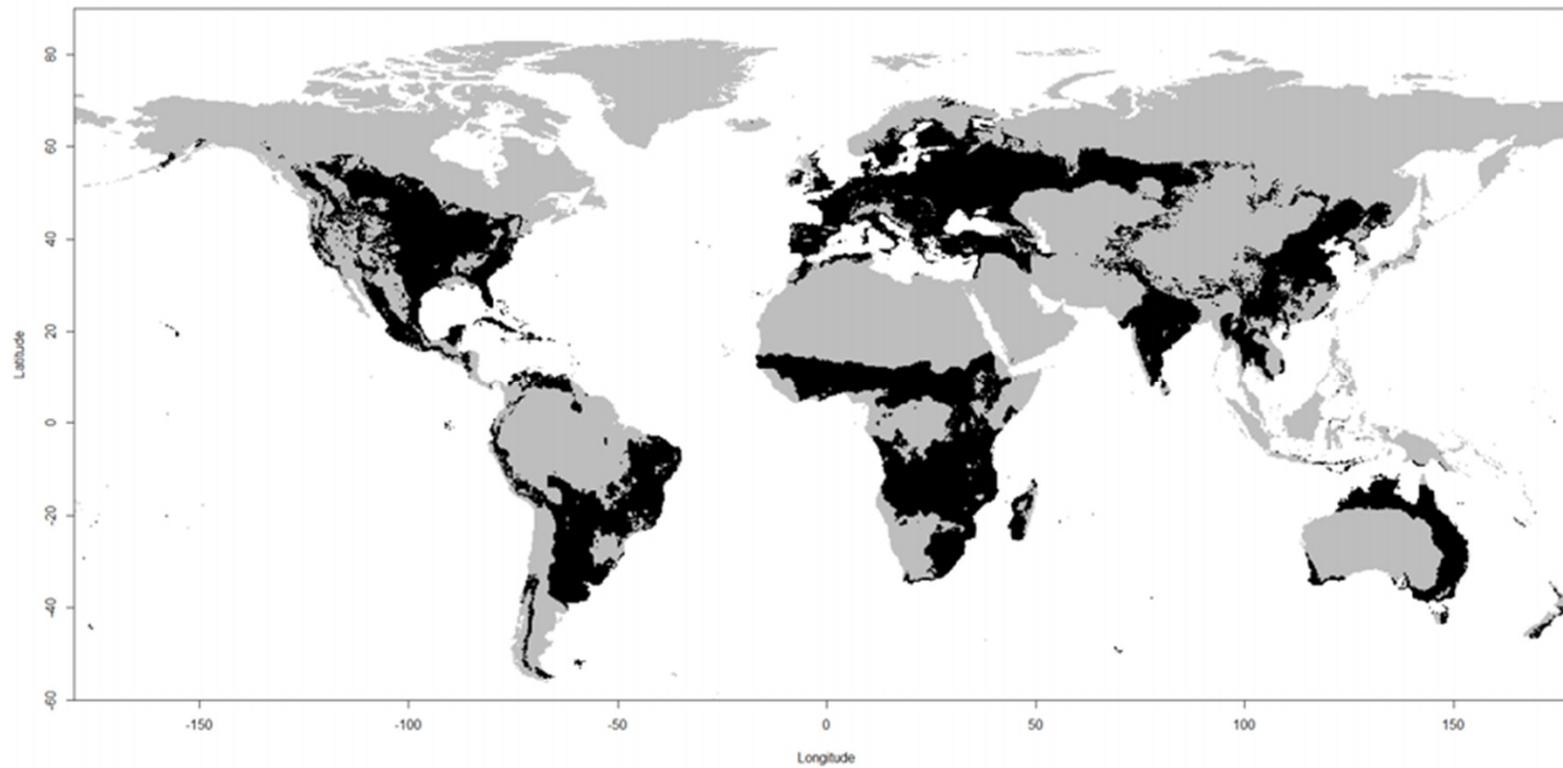
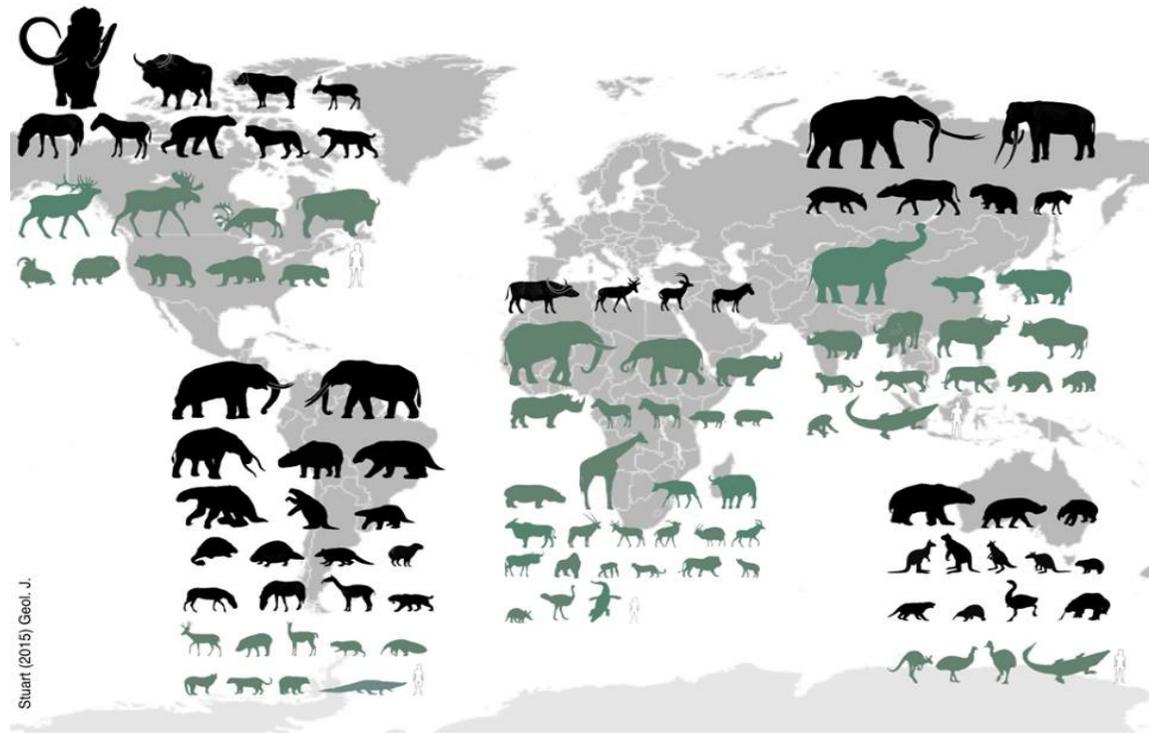


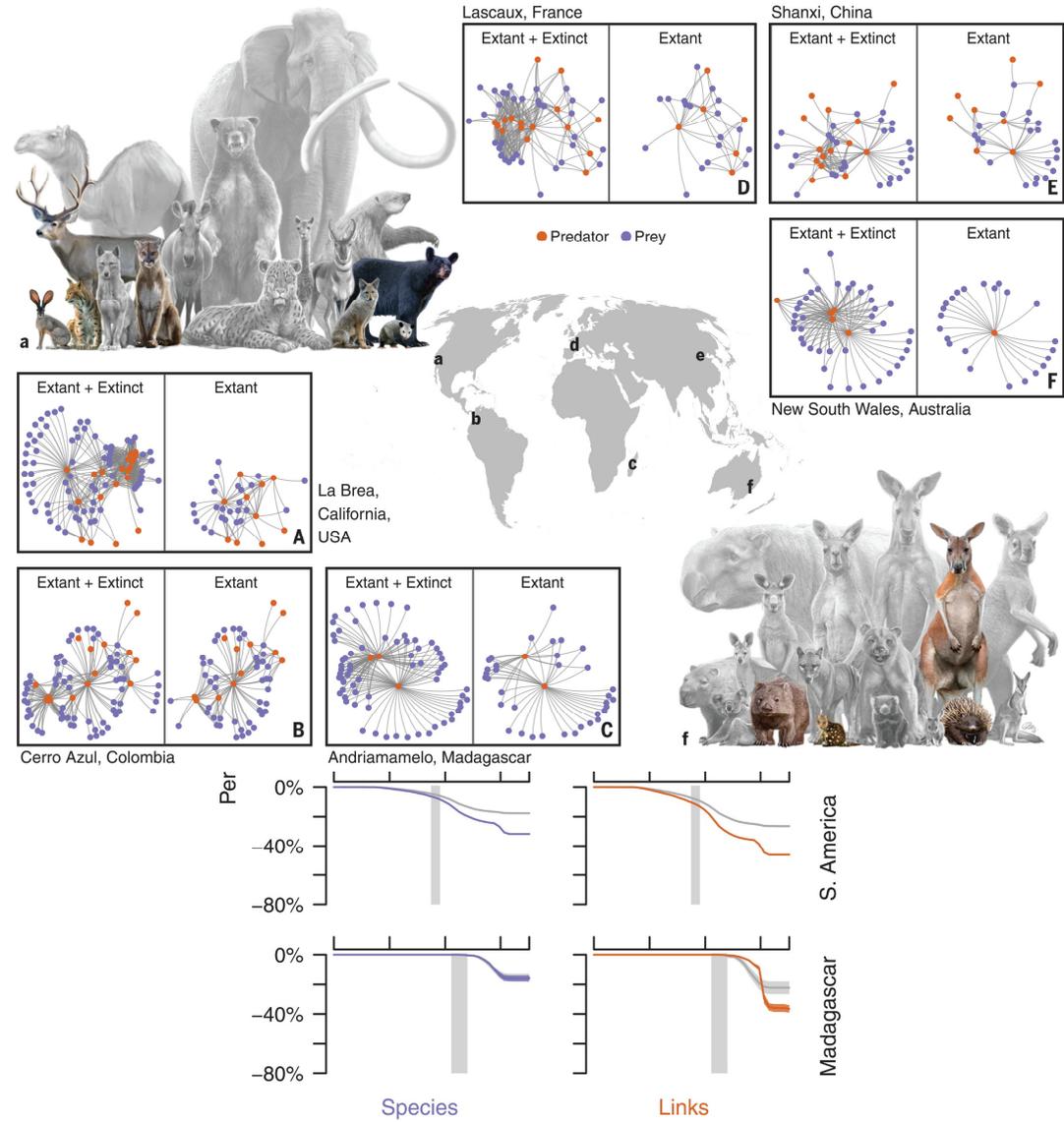


Image source  
Pablo Manzano, own work



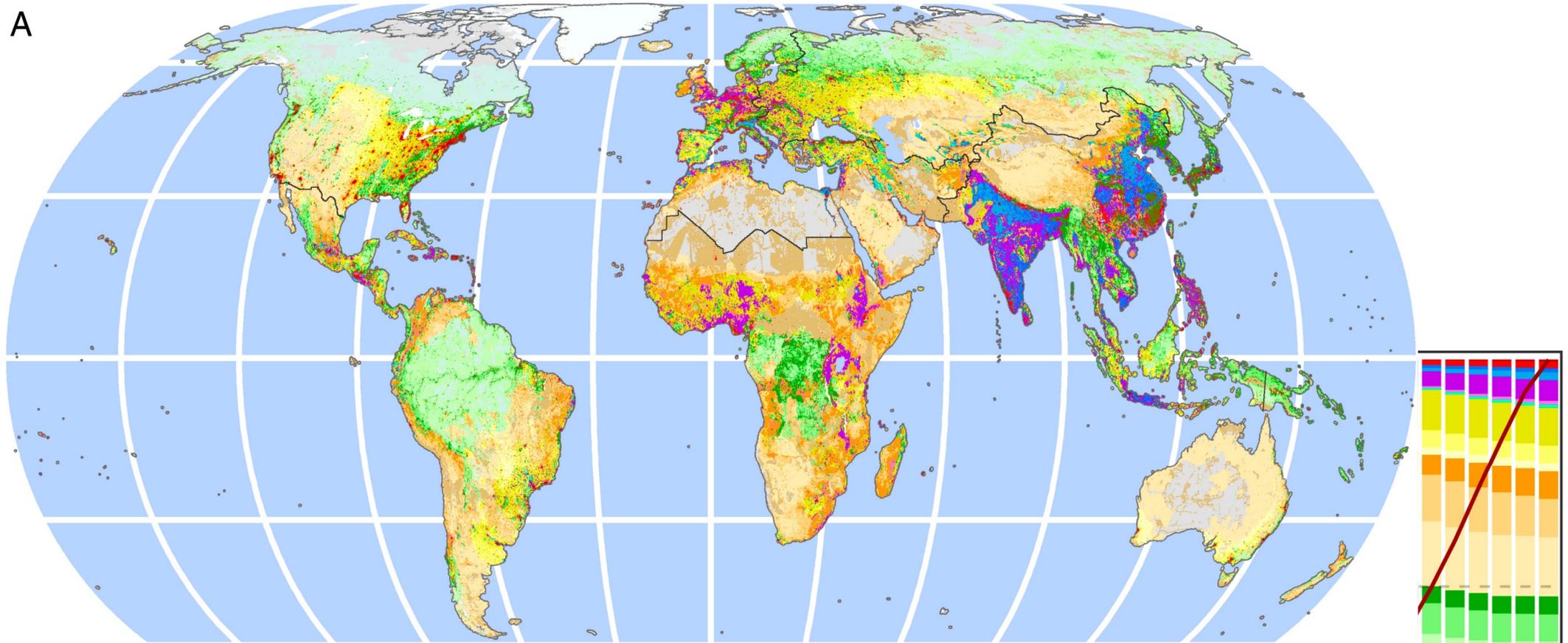
Stuart (2015) Geol. J.

Image source  
Pablo Manzano, own work



Fricke et al. 2022 <https://doi.org/10.1126/science.abn4012>

A



**Intensive**

**Dense Settlements**

- Urban
- Mixed settlements

**Villages**

- Rice villages
- Irrigated villages
- Rainfed villages
- Pastoral villages

**Croplands**

- Residential irrigated croplands
- Residential rainfed croplands
- Populated croplands
- Remote croplands

**Rangelands**

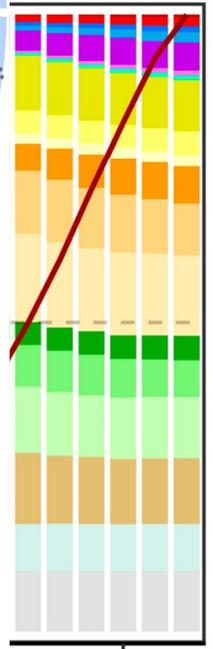
- Residential rangelands
- Populated rangelands
- Remote rangelands

**Cultured**

- Residential woodlands
- Populated woodlands
- Remote woodlands
- Inhabited drylands

**Wildlands**

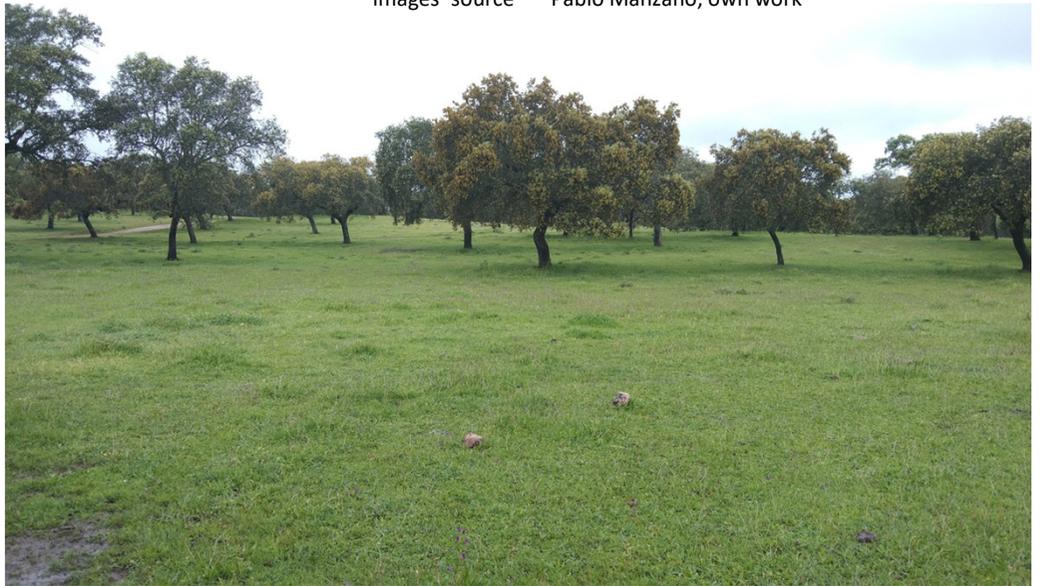
- Wild woodlands
- Wild drylands
- Ice, uninhabited

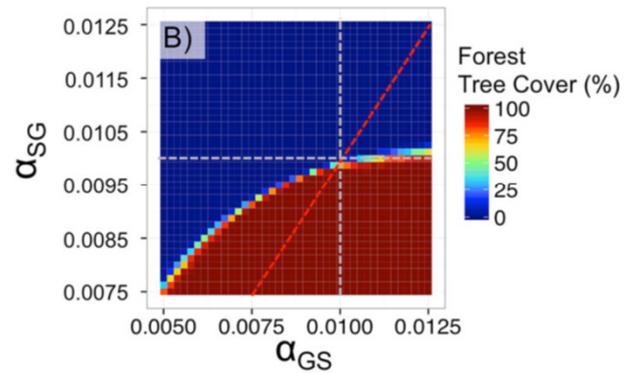
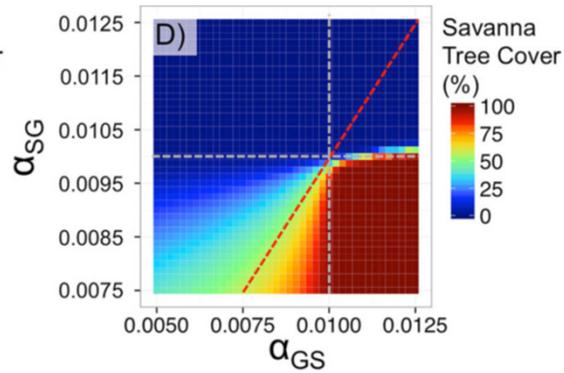
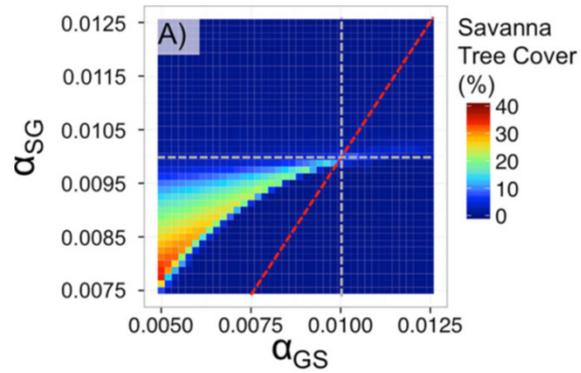


Ellis et al. 2021 <https://doi.org/10.1073/pnas.2023483118>

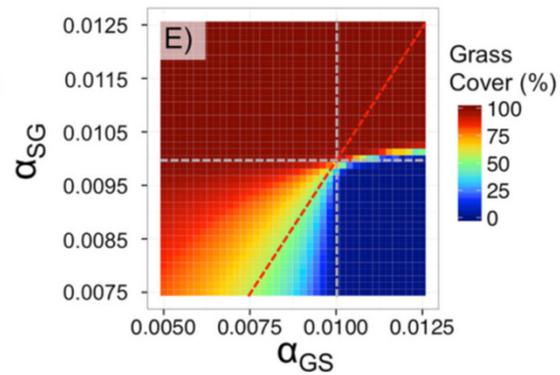
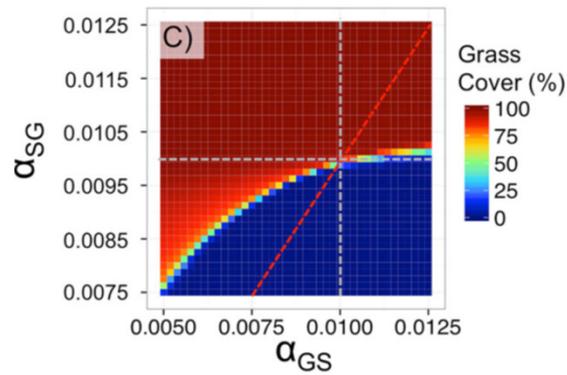


Images' source Pablo Manzano, own work





No  
Forest Trees



Ratajczak et al 2017 Ecosystems  
DOI: 10.1007/s10021-017-0110-7

- Manejo por pueblos indígenas

- Cazadores-recolectores



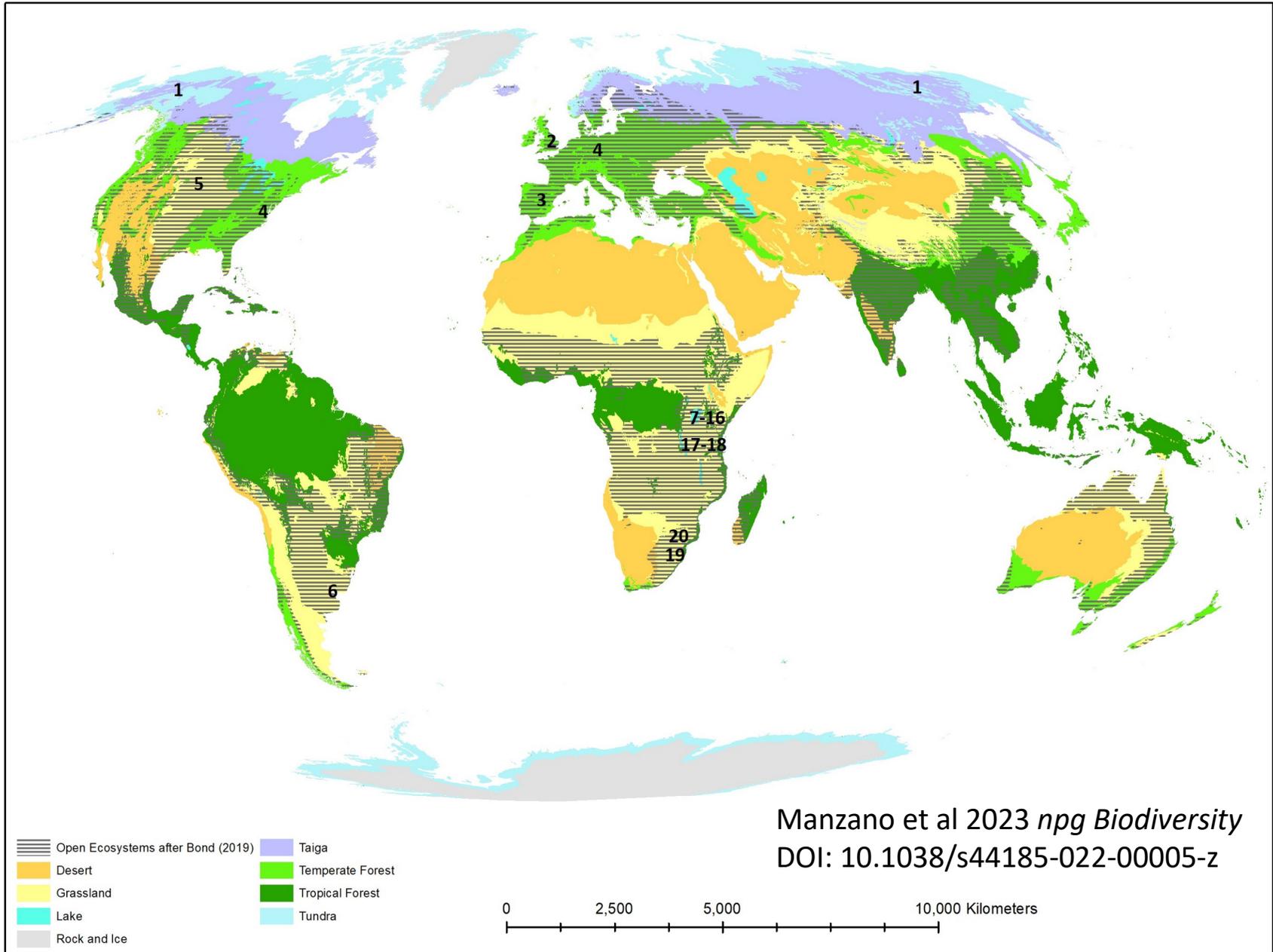
- Pastores



⇒ ¡Todos queriendo crear pasto!

Biome	Area (billions ha)	Vegetation	Soil	TOTAL	ratio (t C/ha)	aerial t C per ha	soil t C per ha
<b>Trop forest</b>	1,76	212	216	428	<b>243,18</b>	120,45	122,73
Temp forest	1,04	59	100	159	152,88	56,73	96,15
<b>Bor forest</b>	1,37	88	471	559	<b>408,03</b>	64,23	343,80
Trop savanna	2,25	66	264	330	146,67	29,33	117,33
Temp grassl	1,25	9	295	304	<b>243,20</b>	7,20	236,00
Deserts & semid	4,55	8	191	199	43,74	1,76	41,98
Tundra	0,95	6	121	127	133,68	6,32	127,37
Wetlands	0,35	15	225	240	685,71	42,86	642,86
Croplands	1,6	3	128	131	81,88	1,88	80,00
TOTAL	15,12	466	2011	2477	163,82		

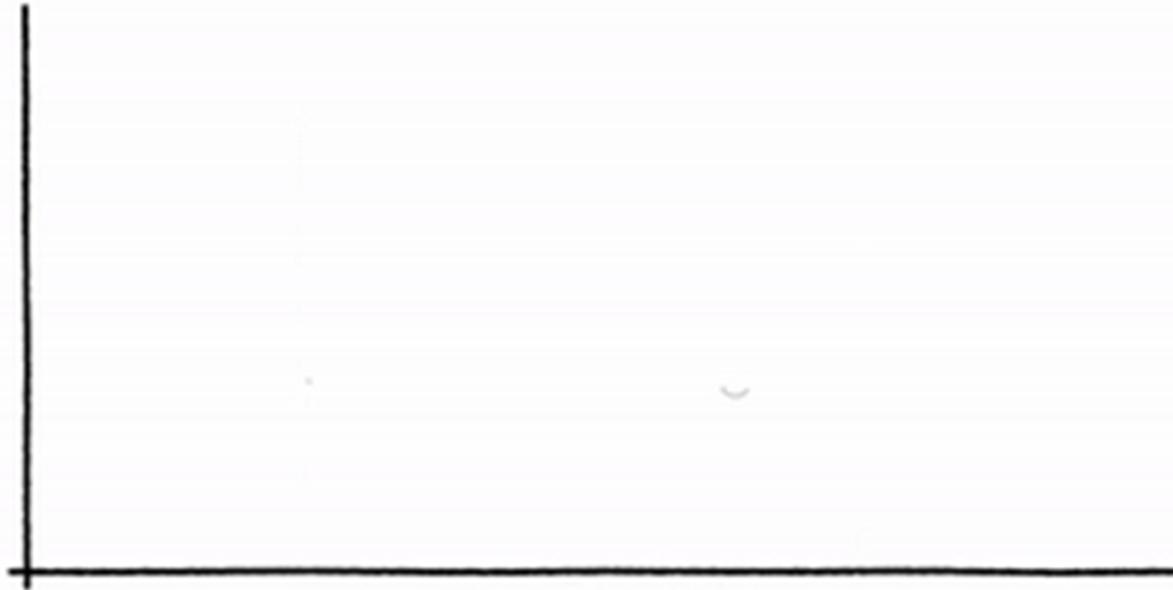
IPCC. 2000. IPCC Special Report. Climate Land Use, Land-Use Change, and Forestry. Summary for Policymakers. WMO, UNEP. ISBN: 92-9169-114-3.  
[archive.ipcc.ch/pdf/special-reports/spm/srl-en.pdf](http://archive.ipcc.ch/pdf/special-reports/spm/srl-en.pdf)

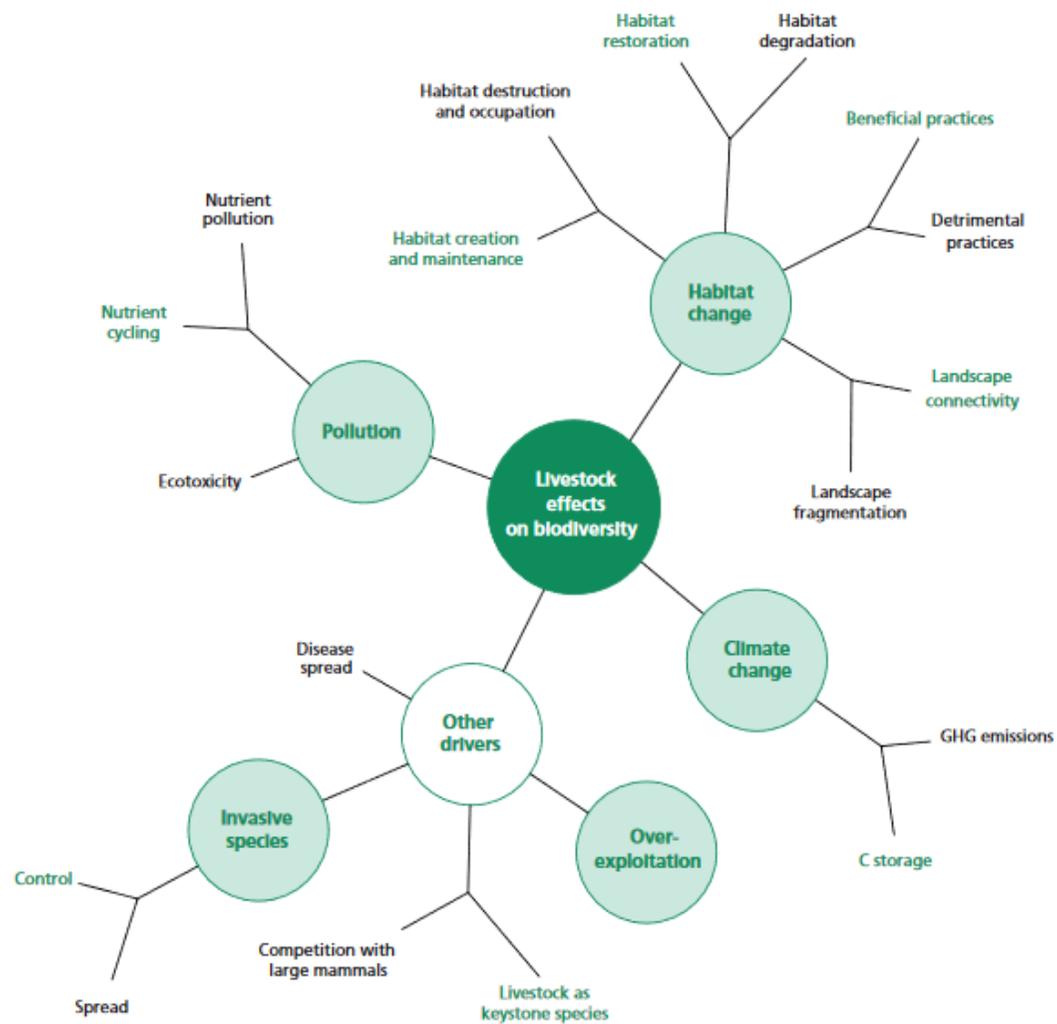


- Open Ecosystems after Bond (2019)
- Desert
- Grassland
- Lake
- Rock and Ice
- Taiga
- Temperate Forest
- Tropical Forest
- Tundra

0      2,500      5,000      10,000 Kilometers

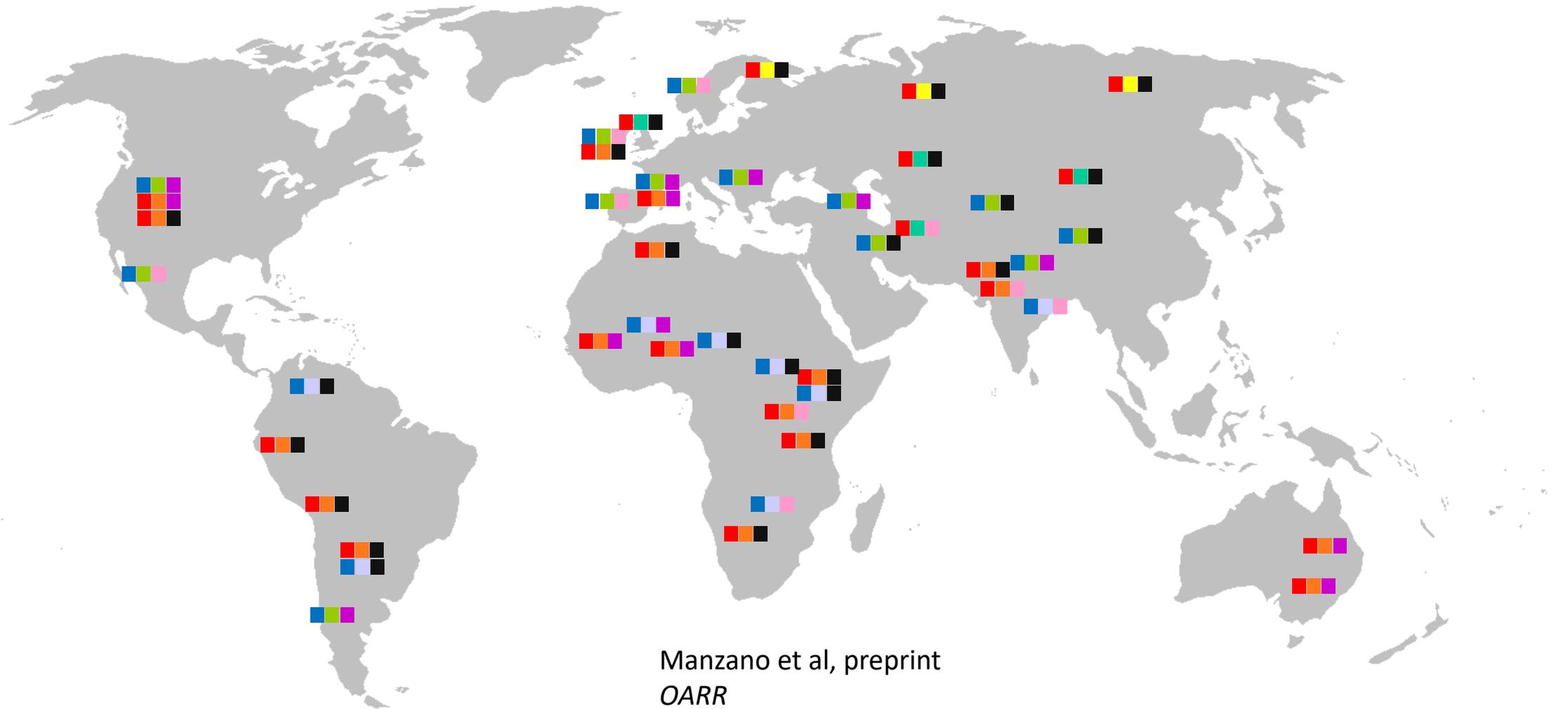
[https://youtu.be/KYDk5xlQ7\\_4](https://youtu.be/KYDk5xlQ7_4)

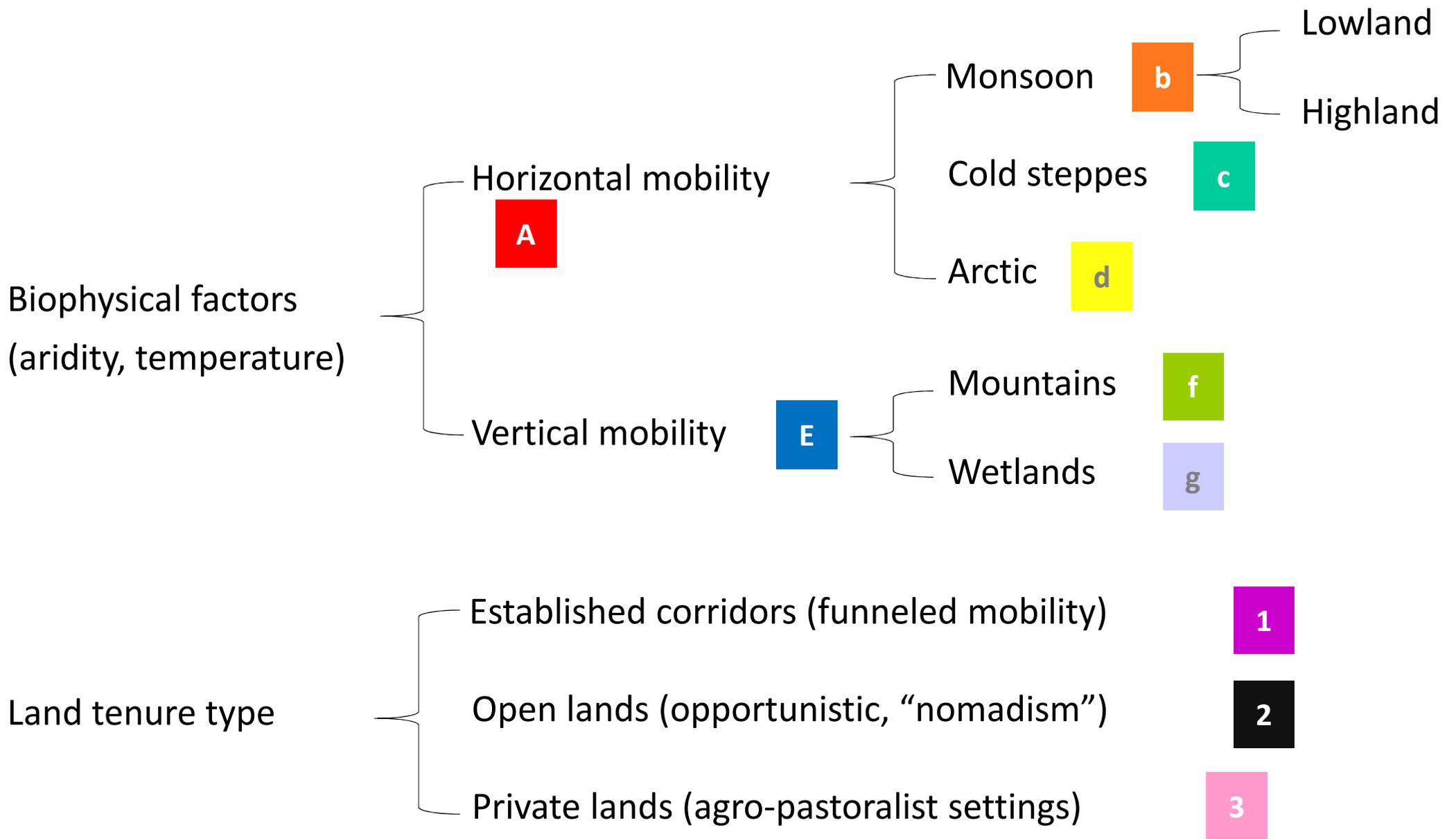


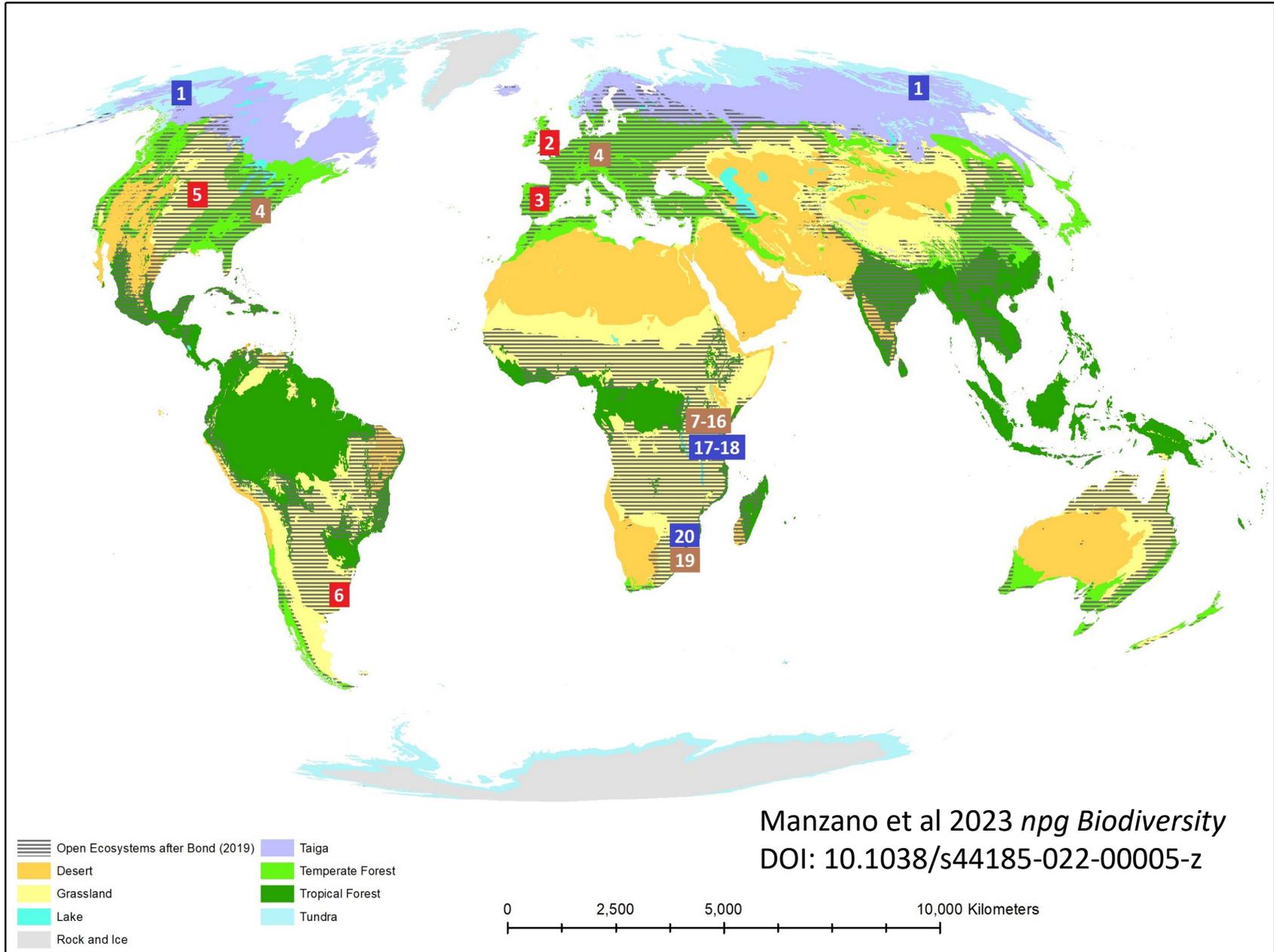


Teillard et al 2016 <https://www.fao.org/3/av151e/av151e.pdf#page=34>

# Tipos de pastoreo móvil







PeerJ

## Herbivore corridors sustain genetic footprint in plant populations: a case for Spanish drove roads

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One Earth



CellPress

Perspective

### Toward a holistic understanding of pastoralism

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<https://doi.org/10.1016/j.oneear.2021.04.012>

## Mobile pastoralism in the Mediterranean: Arguments and evidence for policy reform and its role in combating climate change

February 2018



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