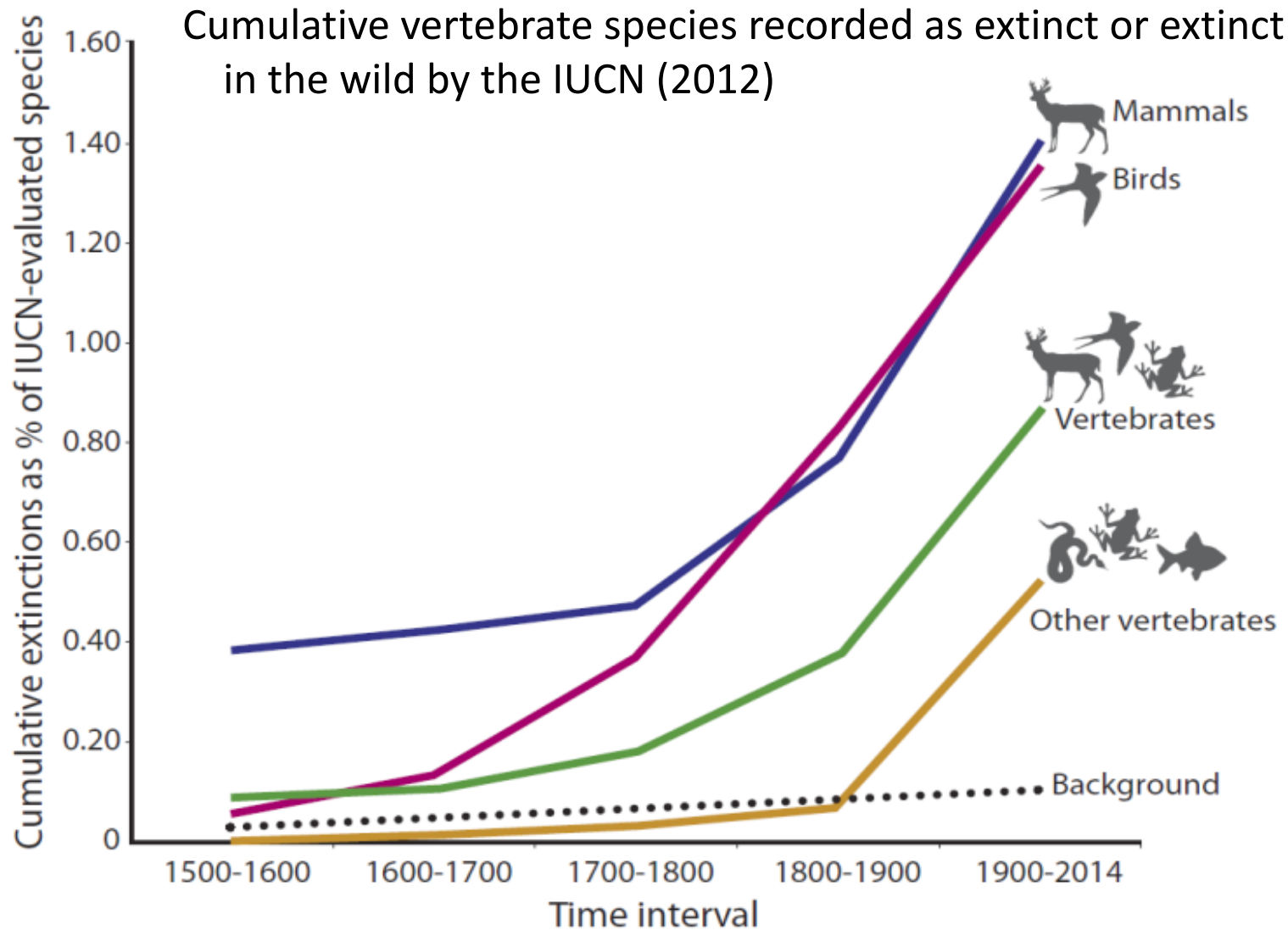


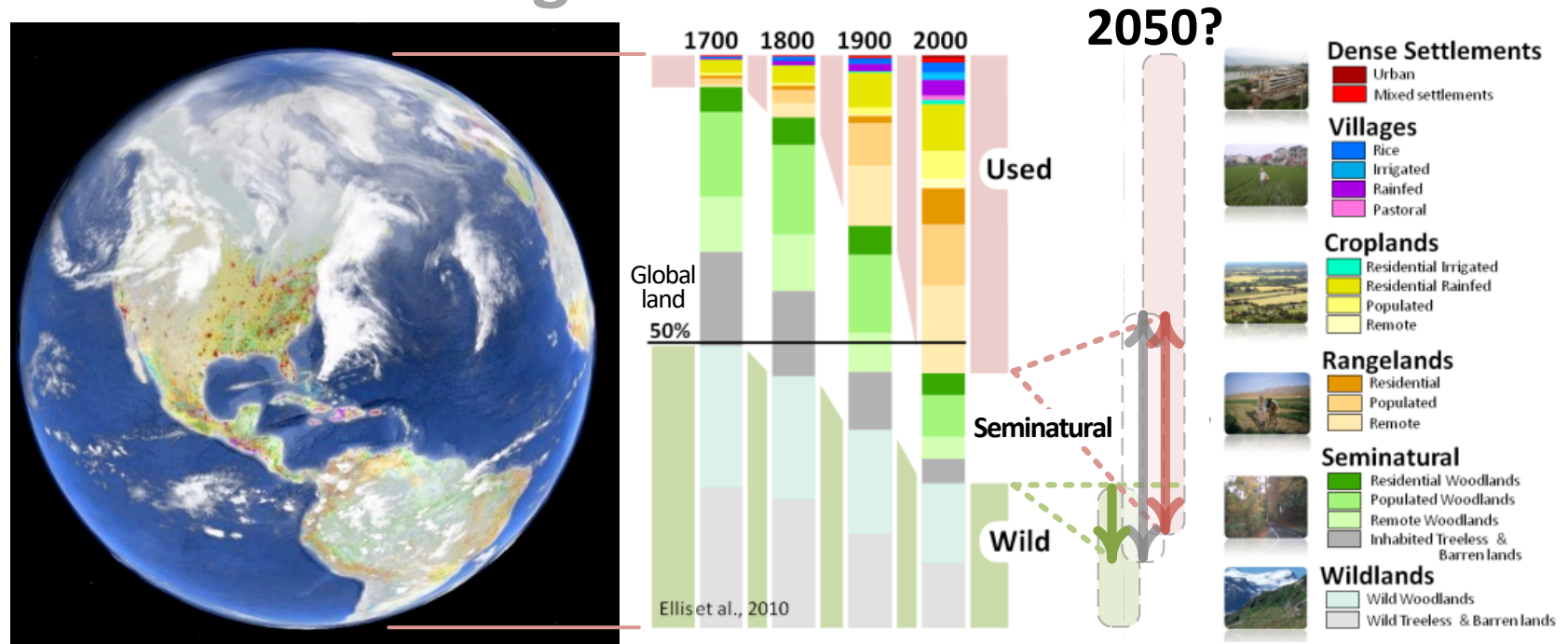
Entering the Sixth Mass Extinction



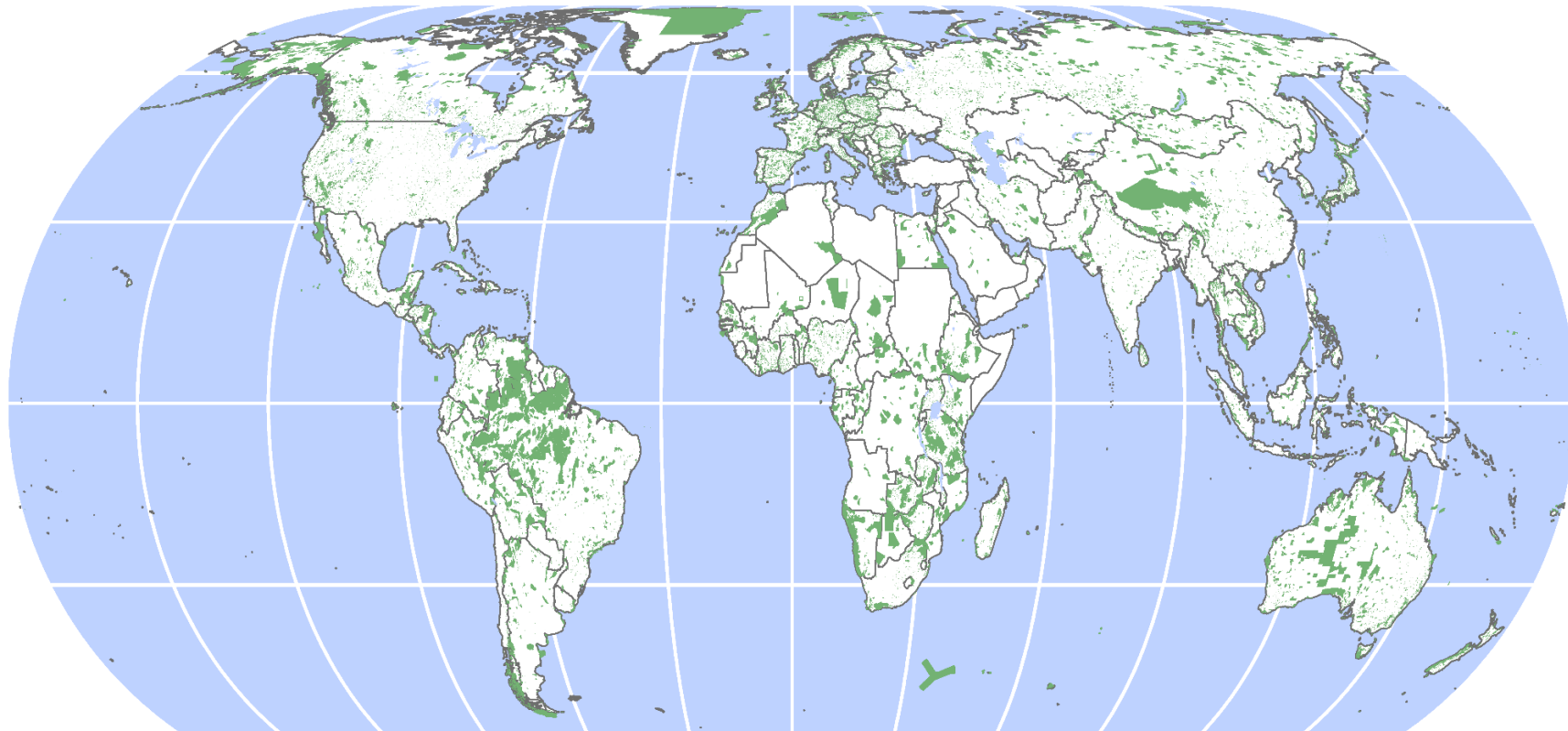
Earth Stewardship

What kind of biosphere do “we” want in 2050?

Anthrome Change Scenarios



Protected Lands | 2017

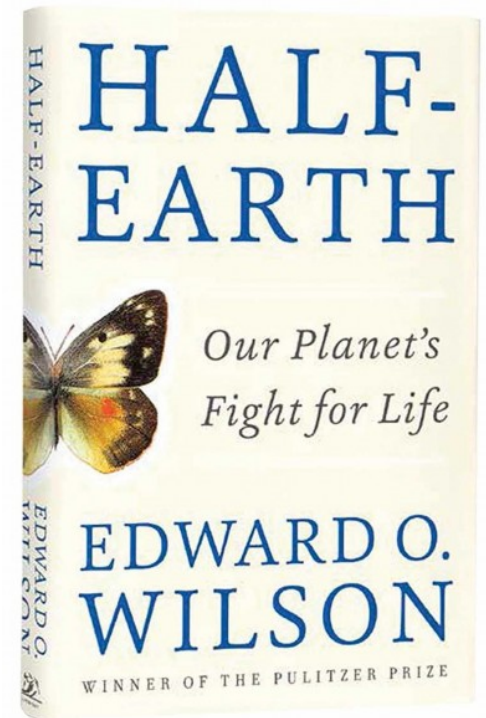
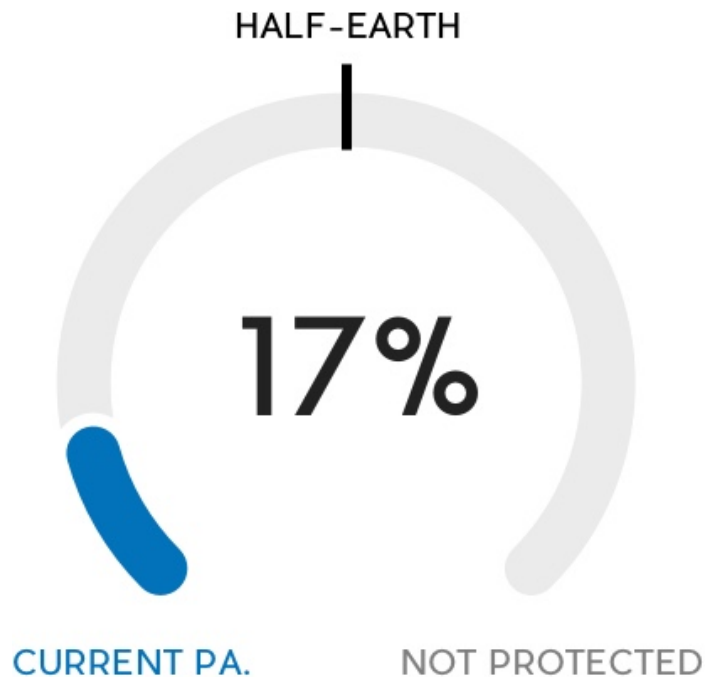


WDPA dataset June 2017

protectedplanet.net



half the earth for the rest of life





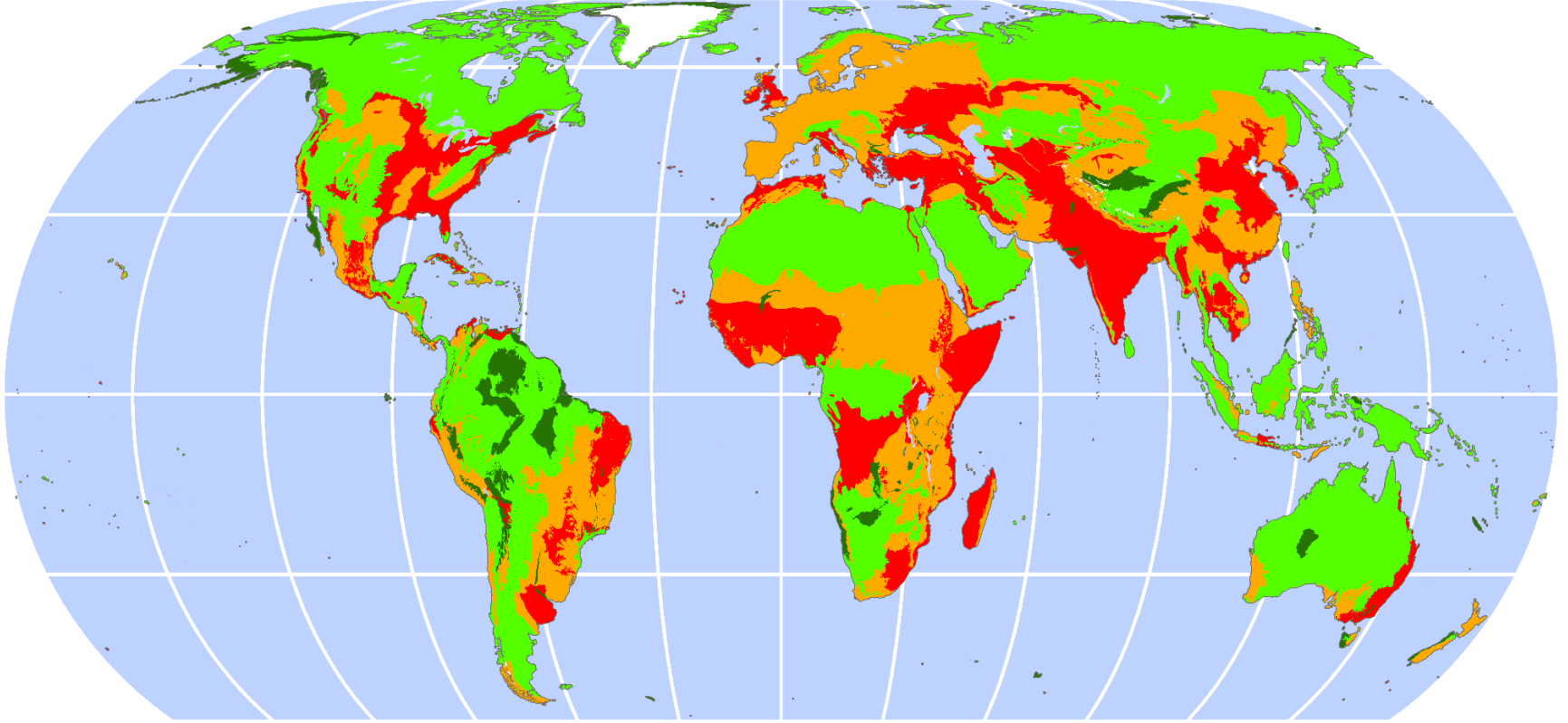
“30% by 2030, the road to 50% by 2050”

A Call for 30% Protection by 2030 Is Uniting Green Groups

AT LEAST **30** PERCENT OF
TERRESTRIAL AND INLAND WATER
AREAS AND **30** PERCENT OF OCEANS
MUST BE CONSERVED BY **2030**.

—Joint Statement on the Post-2020 Global Biodiversity Framework

Ecoregions | Protection Status



Legend

- Half Protected (98)
- Nature Could Reach Half Protected (313)
- Nature Could Recover (228)
- Nature Imperiled (207)



Global Safety Net

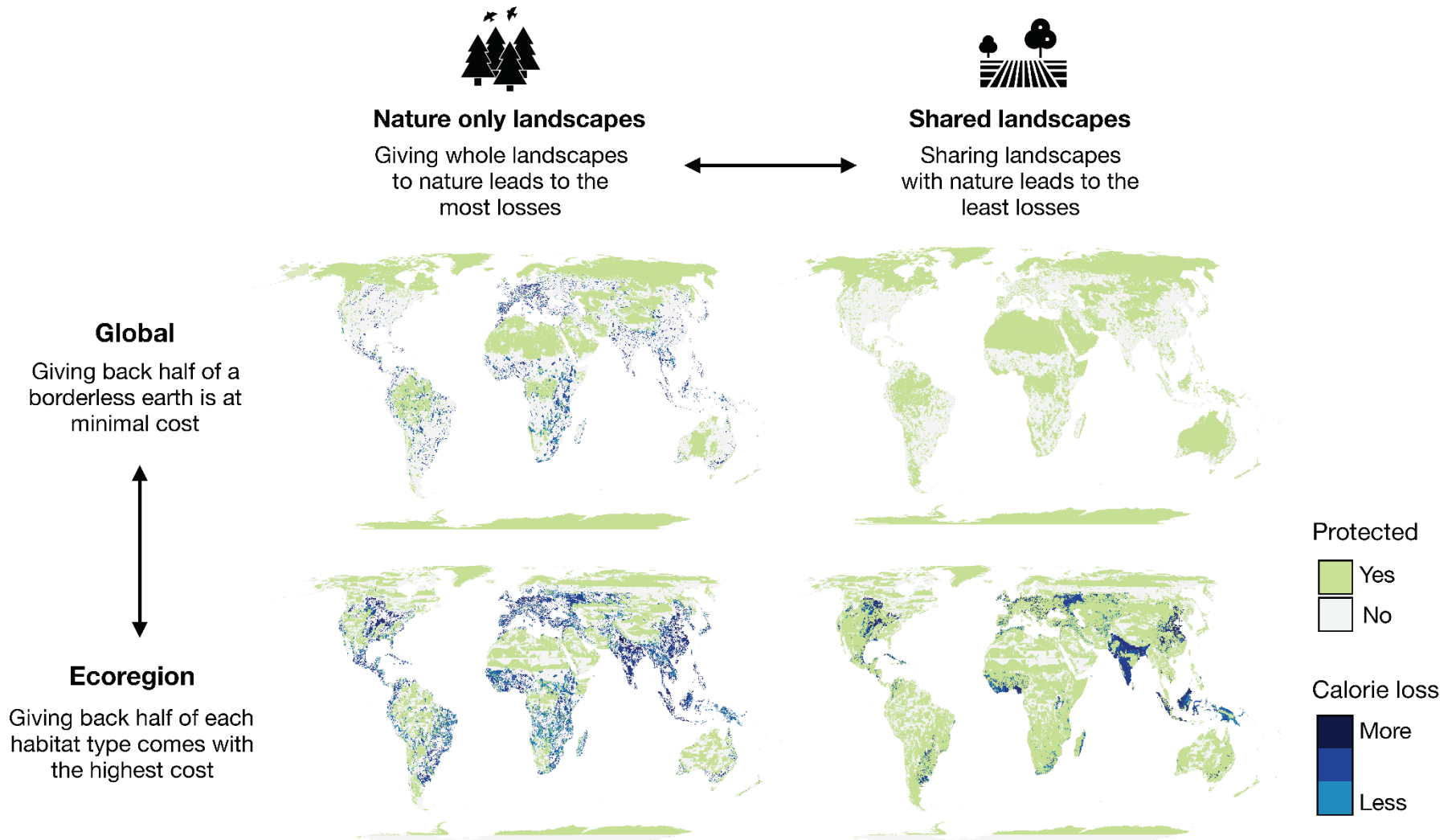
Computationally Optimized Conservation Reserve Design



RESOLVE

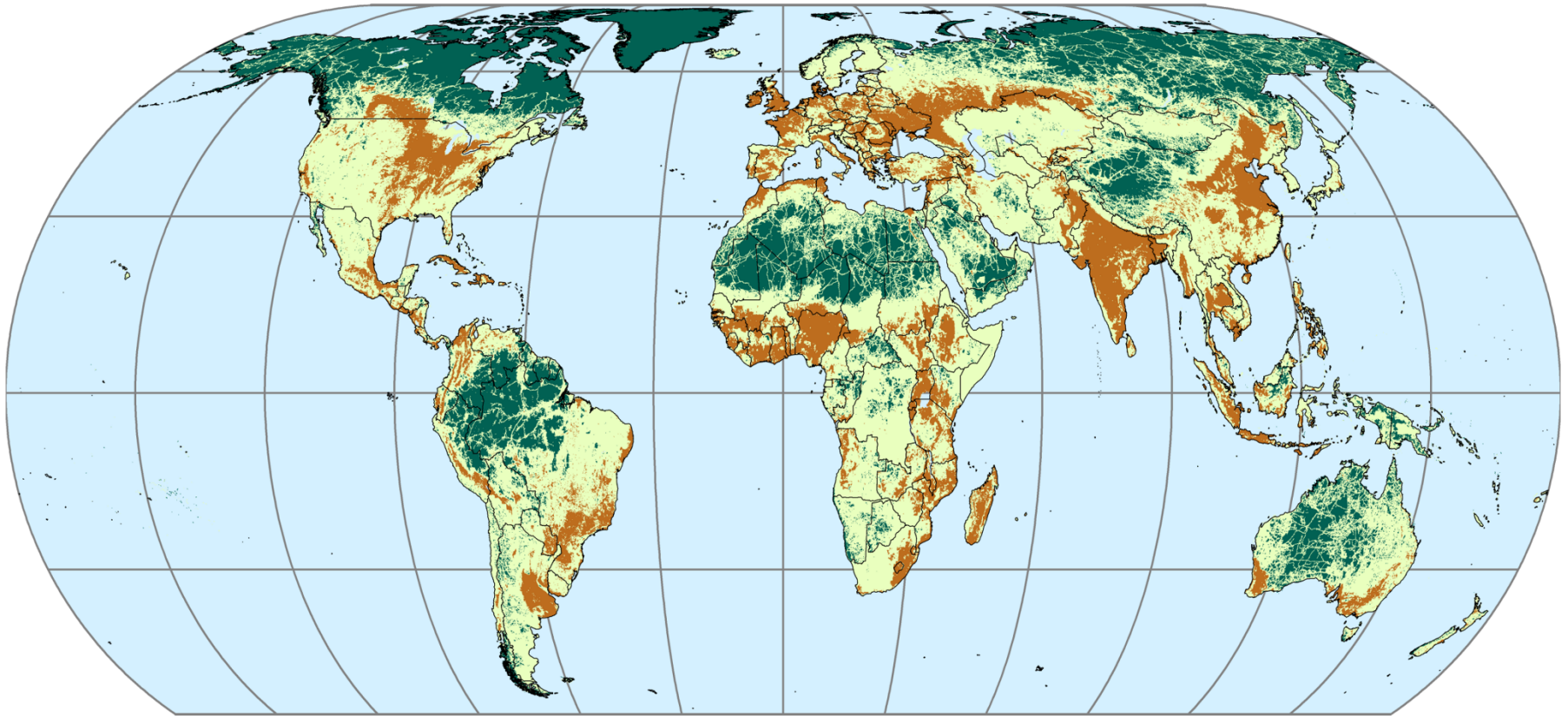


Sharing Earth's Land: Nature Only vs. Shared Landscapes



Three Global Conditions

for biodiversity conservation & sustainable use



17.7%

55.7%

26.5%

Cities and Farms

Shared Lands

Large Wild Areas

Locke *et al.* 2019. Three global conditions for biodiversity conservation and sustainable use: an implementation framework. *National Science Review* (accepted).

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

Garnett et al. 2018. *Nature Sustainability* 1:369-374.

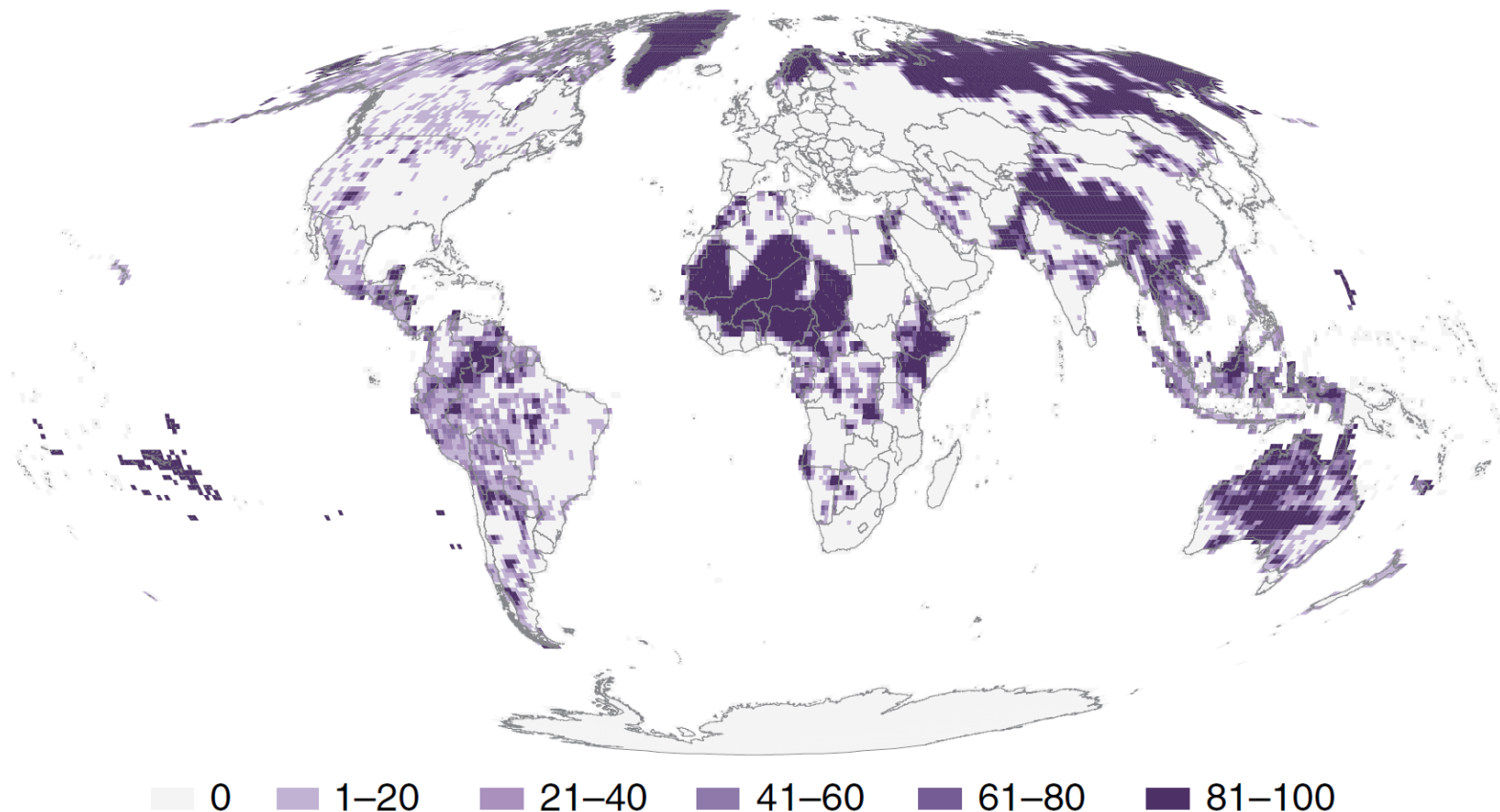


Fig. 1 | Global map of lands managed and/or controlled by Indigenous Peoples (percentage of each degree square mapped as Indigenous in at least one of 127 source documents; Supplementary Information section 2).

Restore the lost ecological functions of people

Fig. 1 | The ecological functions and feedbacks of place-based societies.

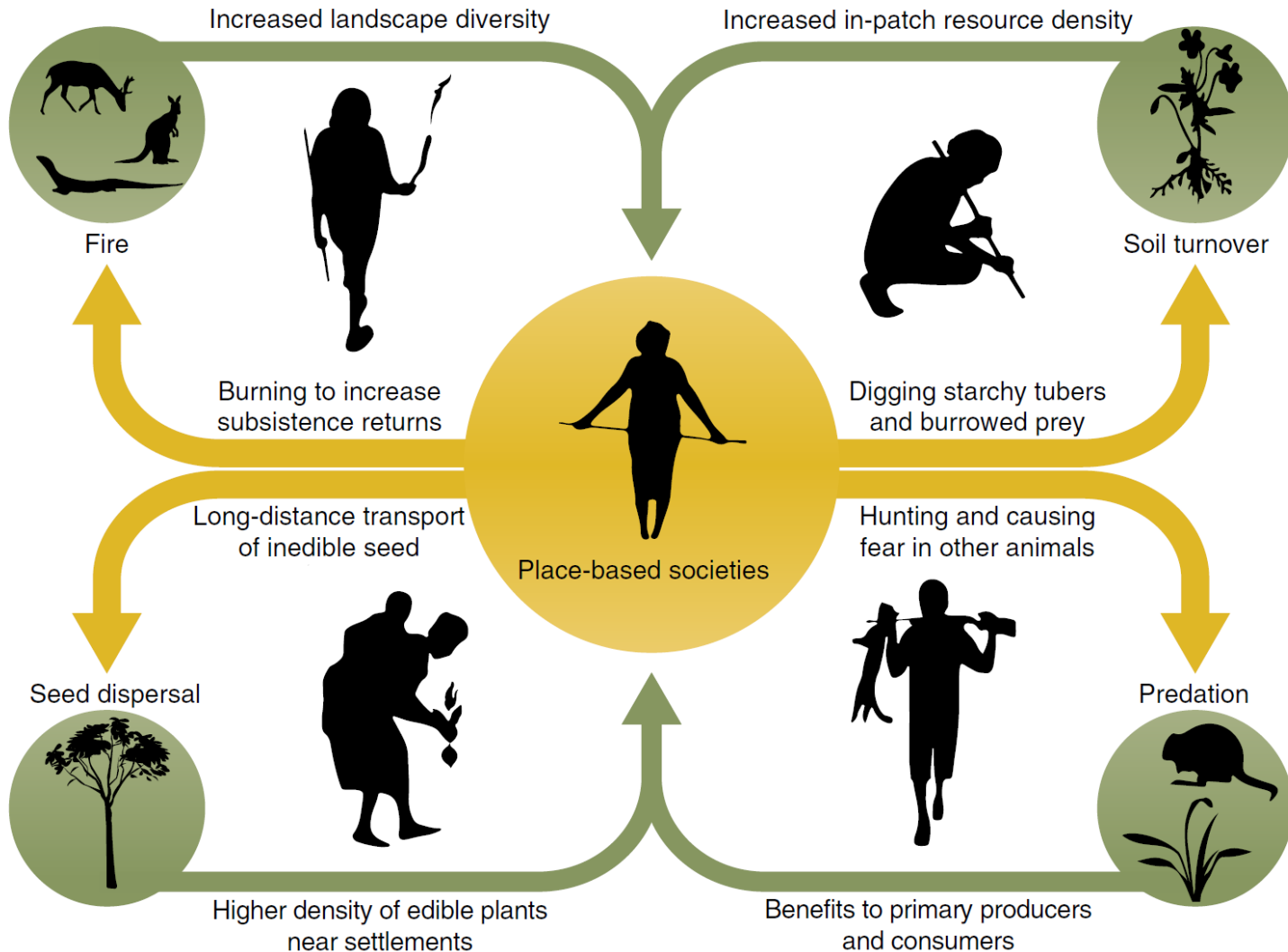
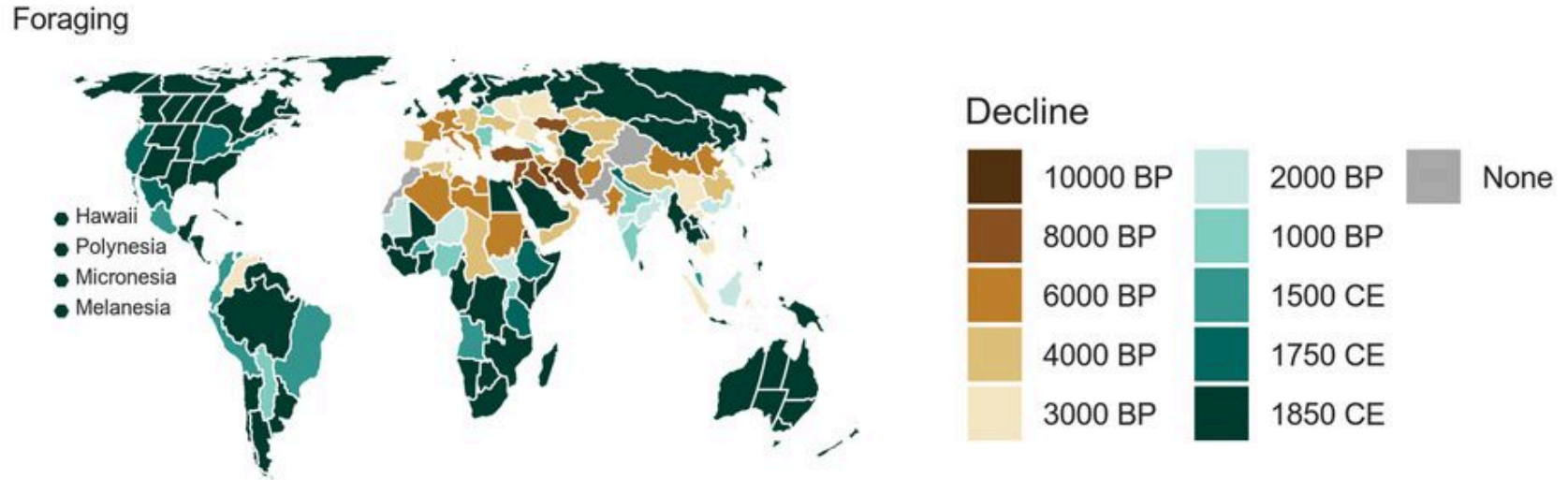


Fig. 4B Regional onsets of decline of foraging.



Earth Stewardship

ENGAGE +
INSPIRE AND SHARE

- Media campaigns
- Exhibits, Film and Concerts
- Track progress toward the goal of Half-Earth

LEAD +
PROVIDE LEADERSHIP AND KNOWLEDGE

- Data Analysis & Target Mapping
- Knowledge Platform
- Model Conservation Work

RESEARCH +
GET THE SCIENCE RIGHT

- Champion Biodiversity Research
- Support and Perpetuate Conservation Efforts
- Nurture Scholarship for Future Stewardship



half the earth for the rest of life

eowilsonfoundation.org/half-earth-project



Earth Stewardship



Land Use Intensification

Increasing population density drives intensification of land use

Ester Boserup (1965)



Foraging	Long Fallow	Short Fallow	Annual cropping	Multicropping
ha/person	2 - 6	1 - 2	0.3 – 0.6	0.05 - 0.3
Cropping cycle (crops:years)	1:20 - 1:7	1:7 - 1:3	1:2 - 1:1	2:1 - 5:1
Population density (persons/km ²)	<15	5 – 65	65 - 250	>250

Pleistocene >>> Holocene

Land Use Intensification by Hunter-Gatherers

Adaptive technologies to sustain growing populations on limited land

Pre-Agricultural

Dietary Broadening



Proto-Agricultural

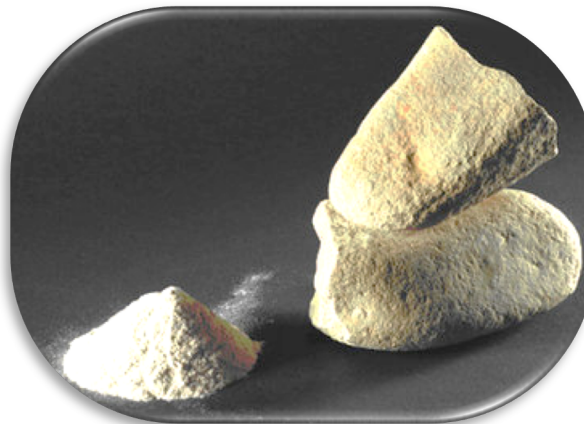
Burning for Hunting/Foraging



Propagating Favored Species

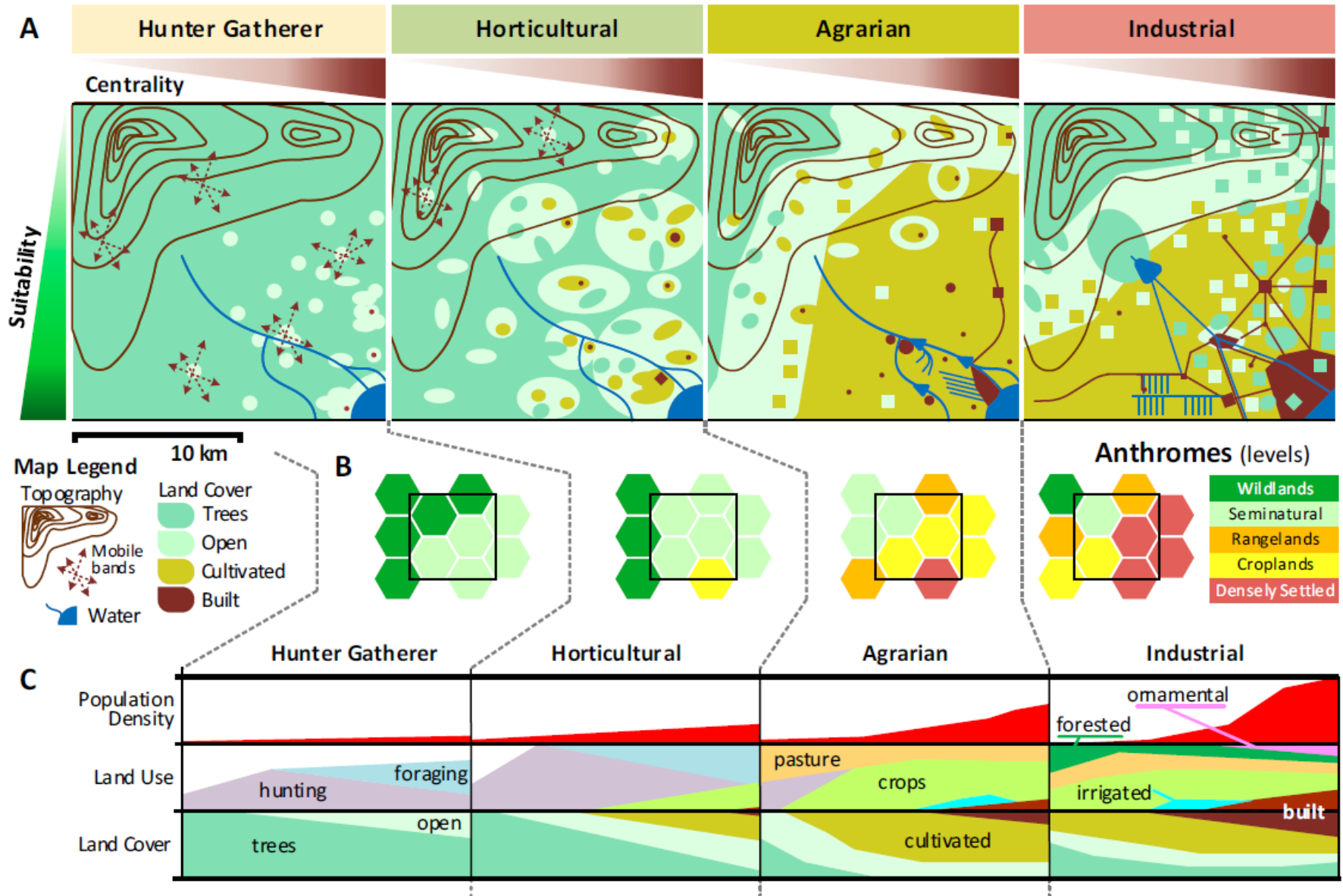


Food Processing



Domestication

Social Change > Ecological Change





Archaeological assessment reveals Earth's early transformation through land use

Stephens et al. 2019
Science 365:897-902

Science
AAAS

ArchaeoGLOBE Project*†

Foraging/Hunting/Gathering 10000 years ago

Animation by Nicolas Gauthier

