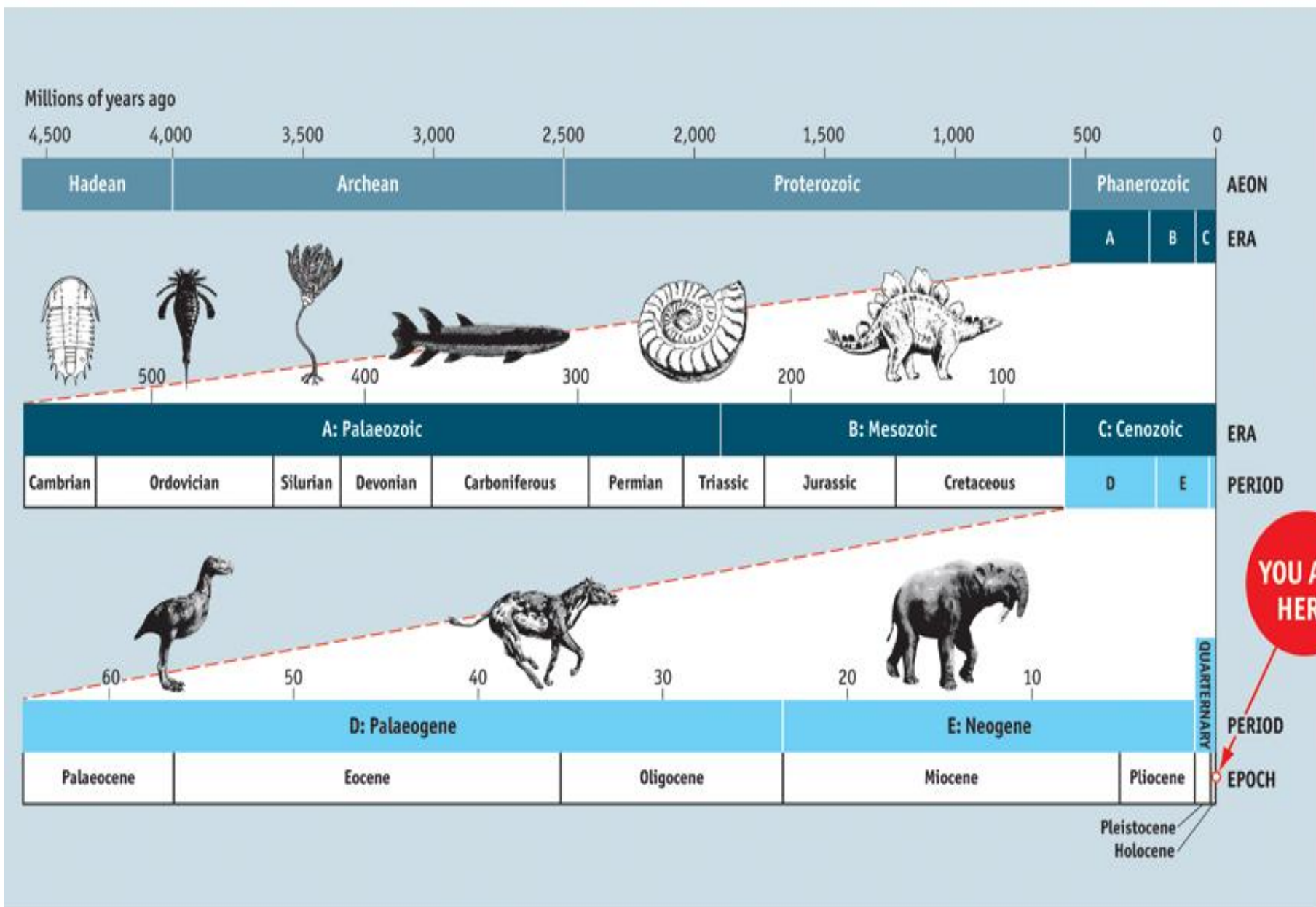


Le specie aliene e l'Antropocene

Gianfranco Bologna

**Pres. On. Comitato Scientifico WWF Italy, Seg. Gen.
Fondazione Aurelio Peccei , Full Member Club of Rome**



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QUARTERNARY

The Anthropocene:

A New Epoch of Geological Time?





20 March 2024

It is with the delegated authority of the IUGS President and Secretary General and on behalf of the International Commission on Stratigraphy (ICS) that the vote by the ICS Subcommittee on Quaternary Stratigraphy (SQS) to reject the proposal for an Anthropocene Epoch as a formal unit of the Geologic Time Scale is approved. The voting members of SQS have extensive experience and wide expertise in Quaternary stratigraphy and chronology. Their vote was approved by the ICS executive, and that approval was overwhelmingly supported by the chairs of the ICS subcommissions. Despite its rejection as a formal unit of the Geologic Time Scale, Anthropocene will nevertheless continue to be used not only by Earth and environmental scientists, but also by social scientists, politicians and economists, as well as by the public at large. It will remain an invaluable descriptor of human impact on the Earth system.

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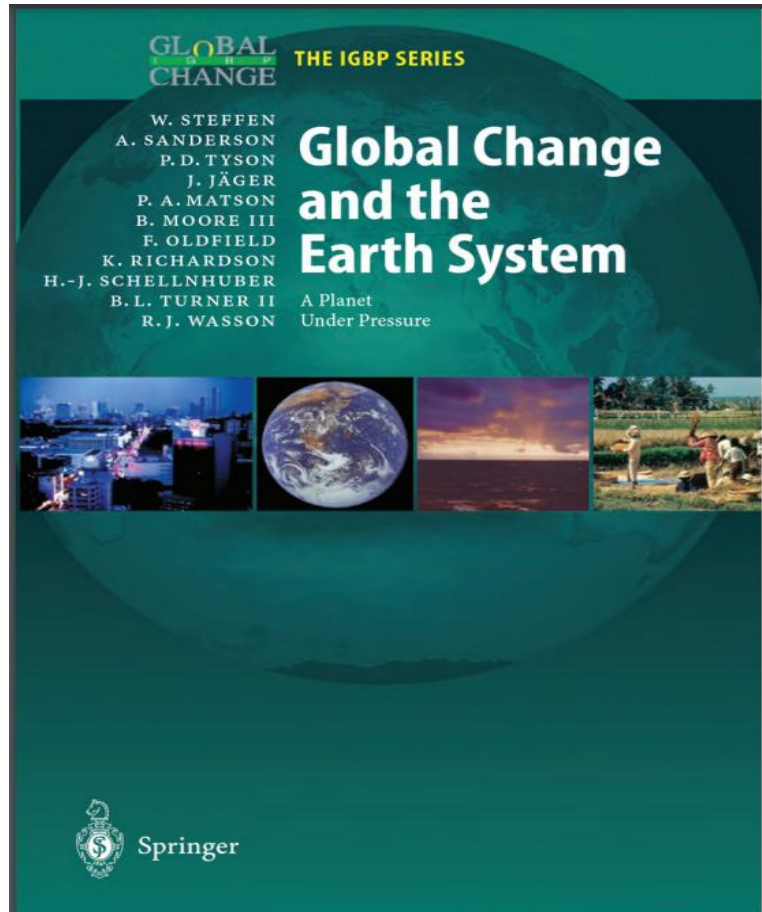
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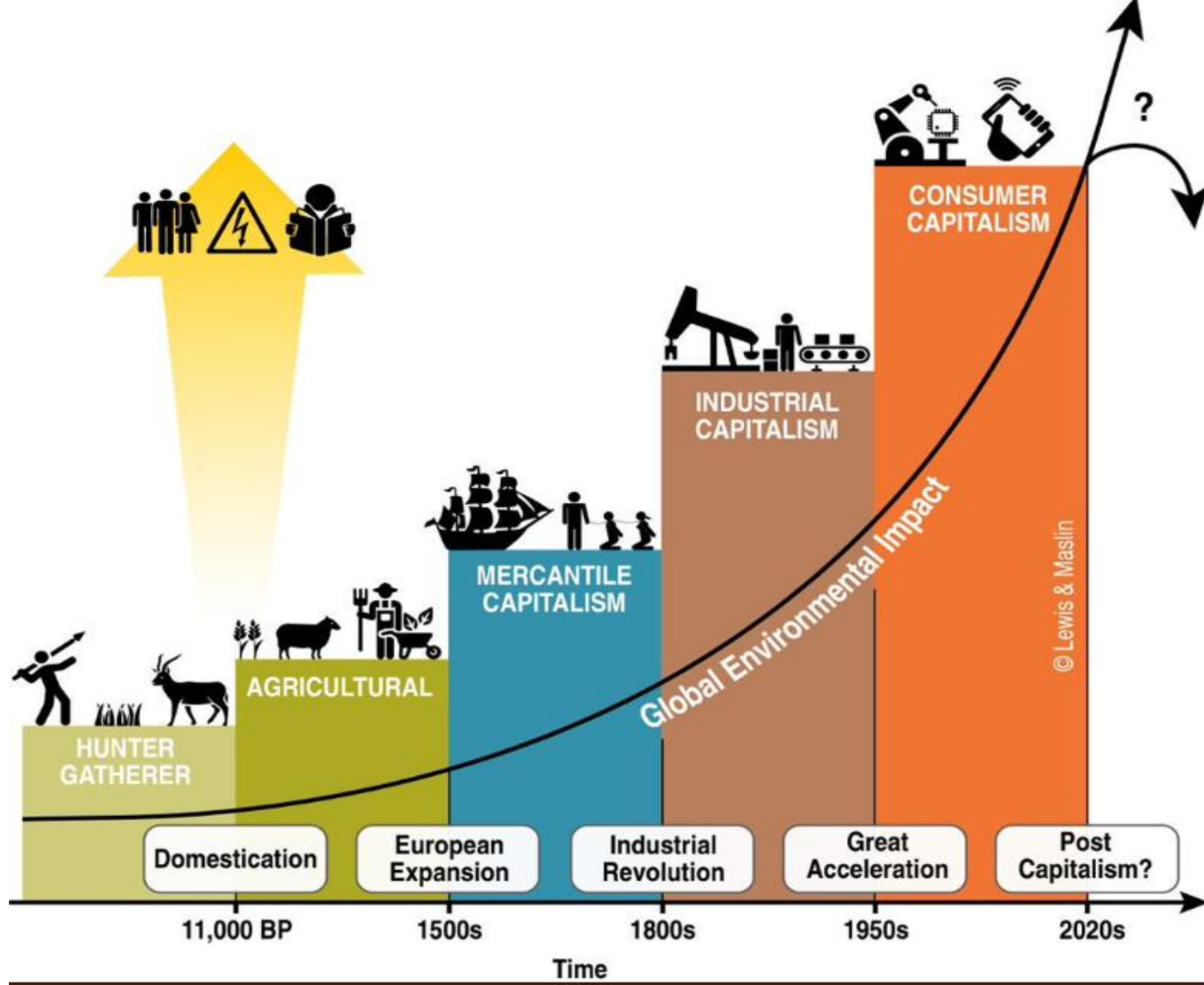
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Earth System Science

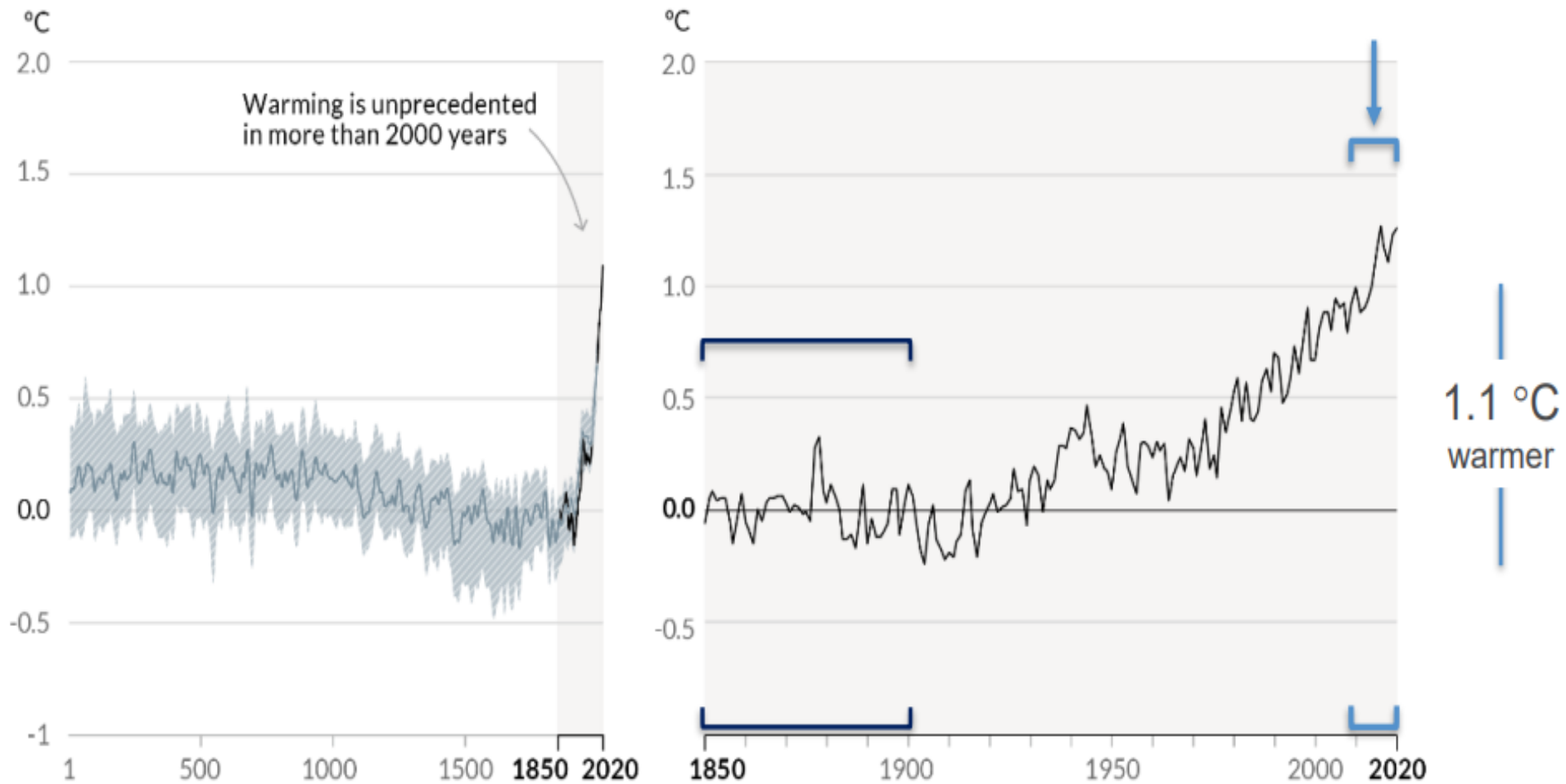


- *«...to obtain scientific understanding of the entire Earth system on a global scale by describing how its component parts and their interactions have evolved, how they function, and how they may expect to continue to evolve on all timescales.»*
- *Anthropocene*
- *Tipping Point*
- *Planetary Boundaries*

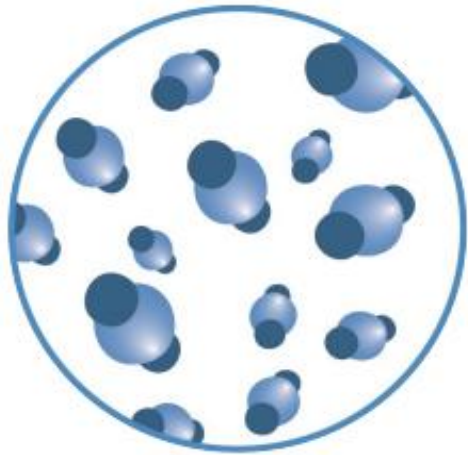


Human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years

Changes in global surface temperature relative to 1850-1900



CO₂
concentration



Highest

in at least

2 million years

Sea level
rise



Fastest rates

in at least

3000 years

Arctic sea ice
area



Lowest level

in at least

1000 years

Glaciers
retreat



Unprecedented

in at least

2000 years



Temperature

Global air temperature [🔗](#)

+1.3°C above pre-industrial level

European temperature (over land)



+2.4°C above pre-industrial level

Arctic temperature (over land) [🔗](#)

+3.3°C Above pre-industrial level

(Latest five-year averages)

Ice and glaciers



Global glaciers [🔗](#)

-9200 km³ ice loss since 1976

European glaciers [🔗](#)

-915 km³ Ice loss since 1976

Greenland Ice Sheet [🔗](#)

-6776 km³ ice loss since 1976

Arctic sea ice extent [🔗](#)

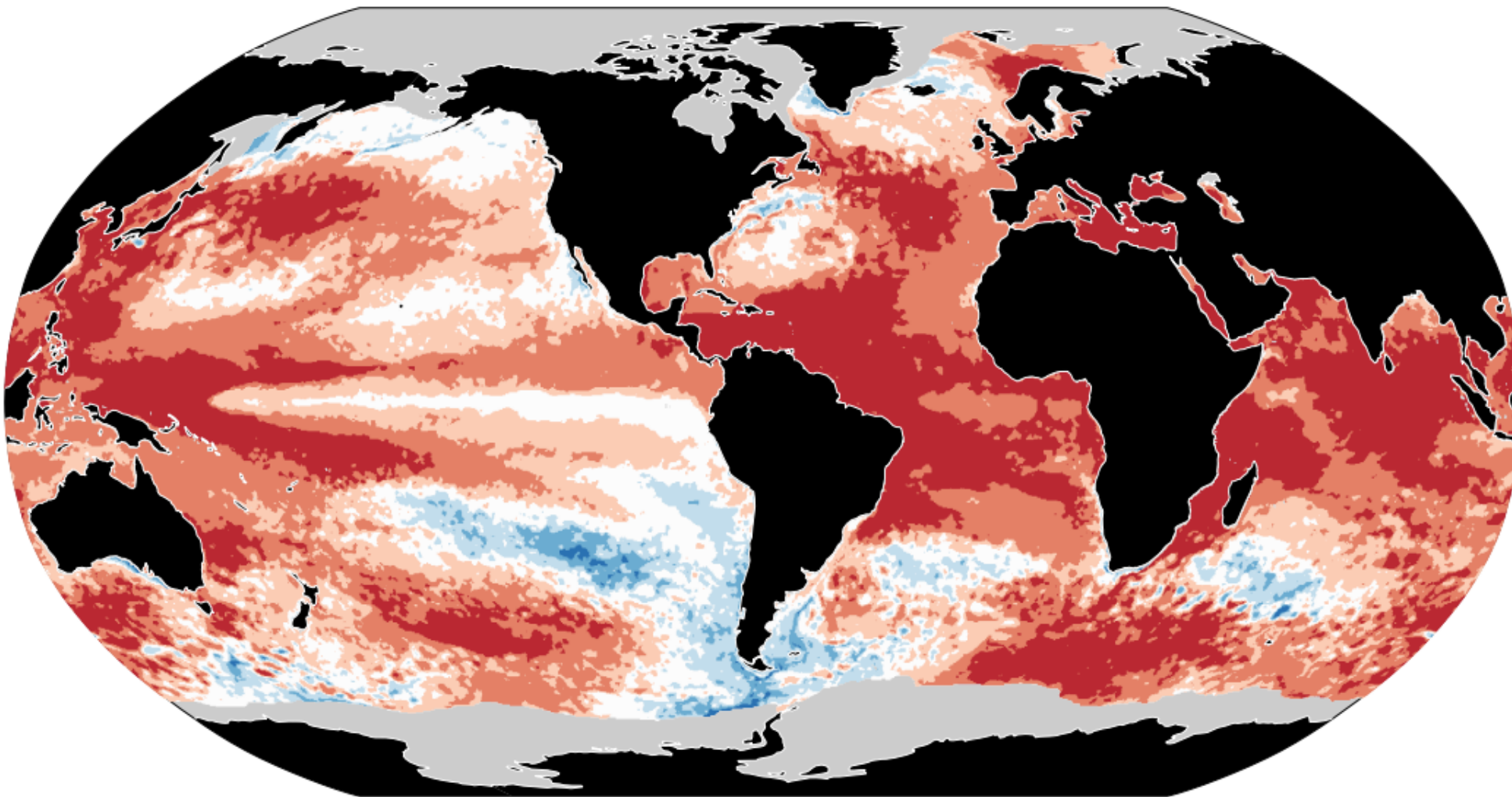
-2.7 Mkm² (-36%) September
loss since the 1980s

(Latest five-year averages)

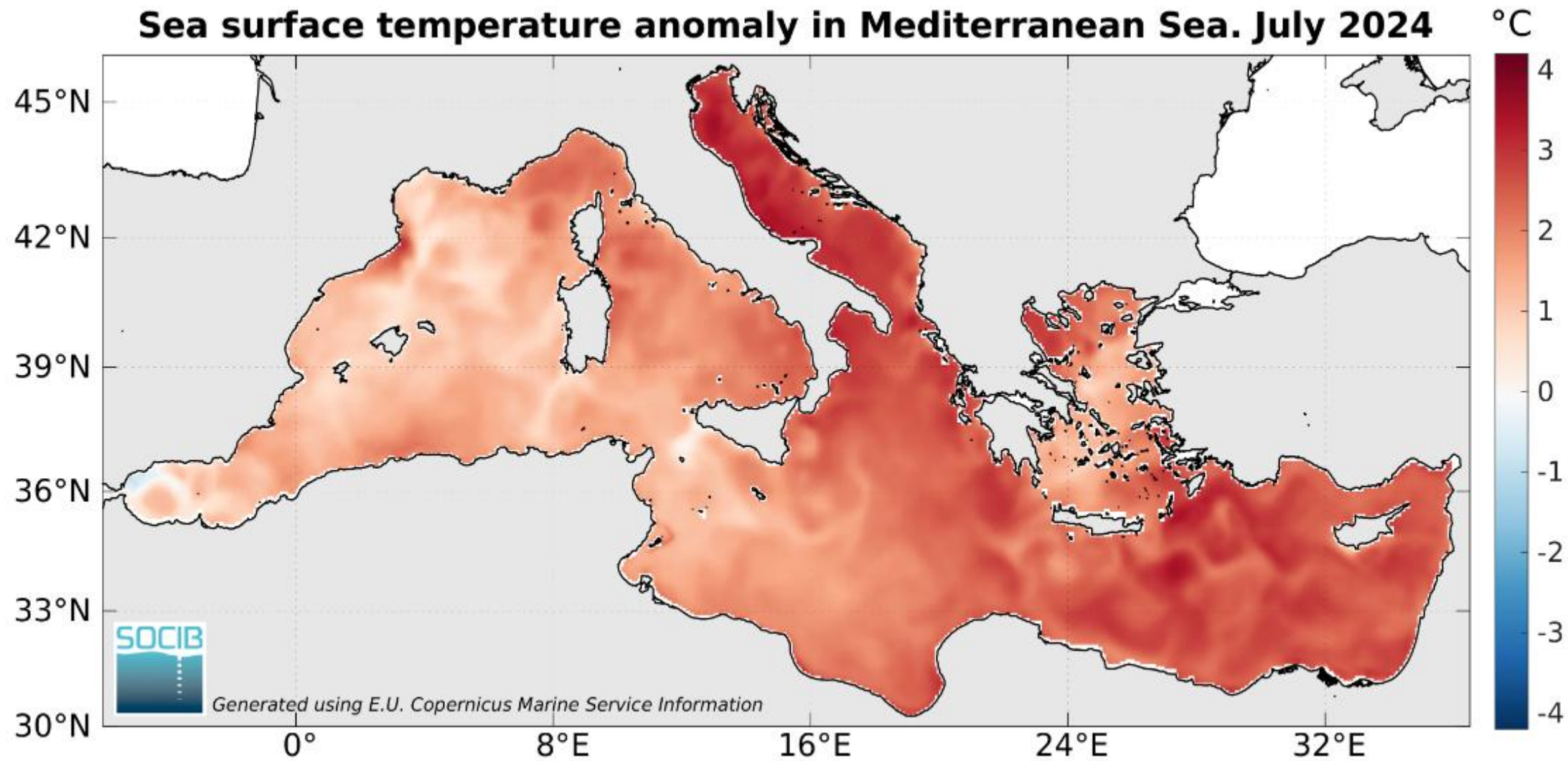


Anomalies and extremes in sea surface temperature in 2024

Data: ERA5 (1979–2024) • Reference period: 1991–2020 • Credit: C3S/ECMWF



Sea surface temperature anomaly in Mediterranean Sea. July 2024



The biosphere upon which humanity depends, has been deeply reconfigured by human activities

75%

of the land area has been significantly altered, negatively impacting the well-being of 3.2 billion people

66%

of the ocean area is experiencing increasing cumulative impacts only 3% of the oceans is unaffected by human activities

>85%

of wetland area has been lost



90%

of land is projected to be significantly altered, by 2050

1 million

species (500,000 plants and animals and 500,000 insects) are at risk of extinction assuming a total of 8.1 million species (2.6 million plants and animal and 5 million insects)





Piano di gestione nazionale dell'ibis sacro

Threskiornis aethiopicus
(Latham, 1790)



Febbraio 2023

PIANO DI CONTROLLO NUMERICO DELLA POPOLAZIONE DI IBIS SACRO (*THRESKIORNIS AETHIOPICUS*) IN LOMBARDIA

Giugno 2024





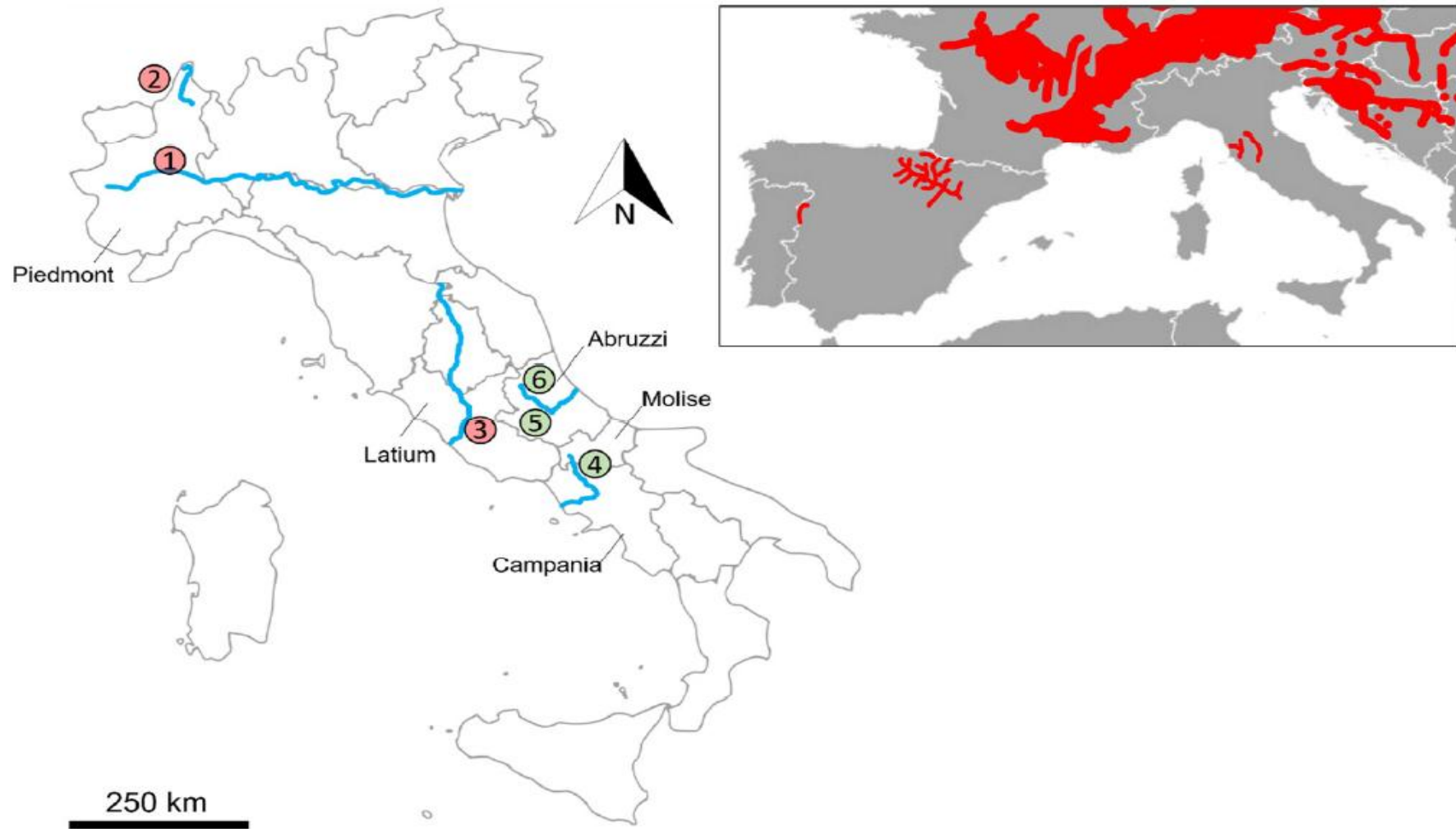


Figure 1. New surveyed areas for beavers: (1) Province of Vercelli, Po River, Piedmont; (2) Migliandone, Toce River, Piedmont; (3) Rome, Tevere River, Latium; (4) Volturno River, Molise-Campania; (5,6) Aterno River, Abruzzi. Red circles refer to unconfirmed records, green ones to confirmed beaver presence. The known distribution of the Eurasian beaver in Italy and neighbouring countries is shown in the inset [1,5,8,9].

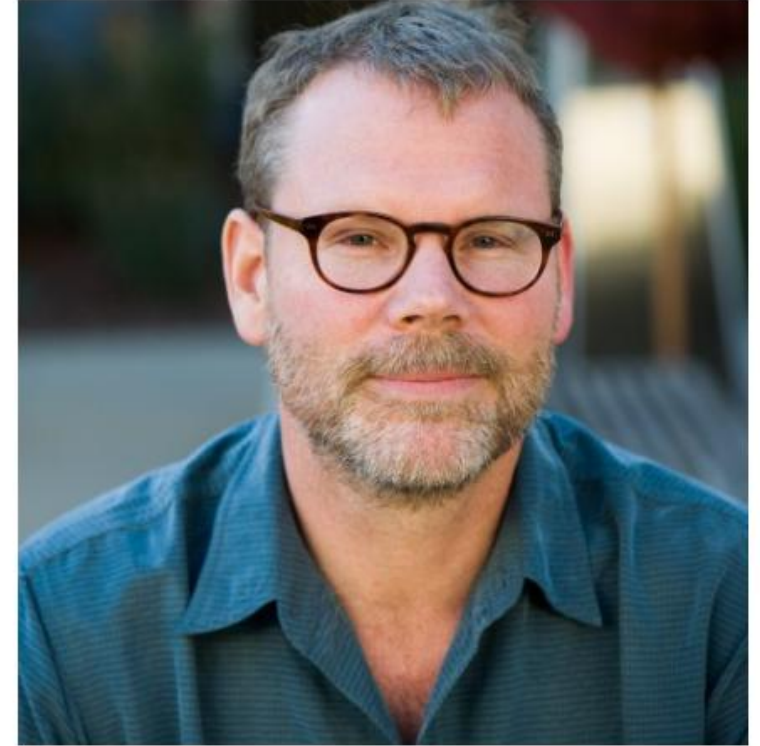
ESA CENTENNIAL PAPER

Ecological Monographs, 85(3), 2015, pp. 287–331
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Ecology in an anthropogenic biosphere

ERLE C. ELLIS¹

Department of Geography and Environmental Systems, University of Maryland, Baltimore County, 1000 Hiltop Circle, Baltimore, Maryland 21250 USA



Anthroecology Lab

[ABOUT](#)

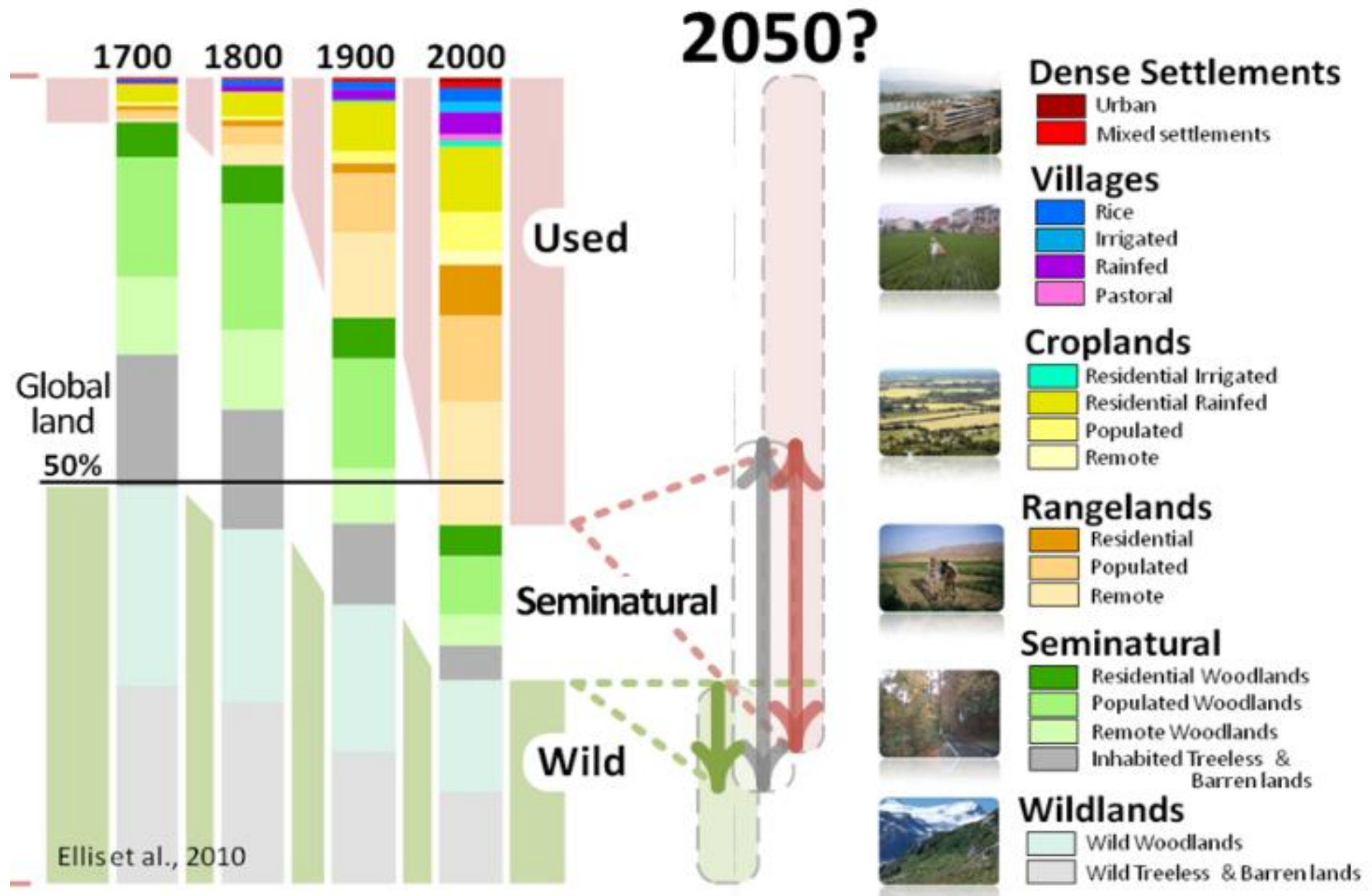
[ANTHROMES](#)

[PROJECTS](#)

[PEOPLE](#)

[PRODUCTS](#)

[BLOG](#)



People have shaped most of terrestrial nature for at least 12,000 years

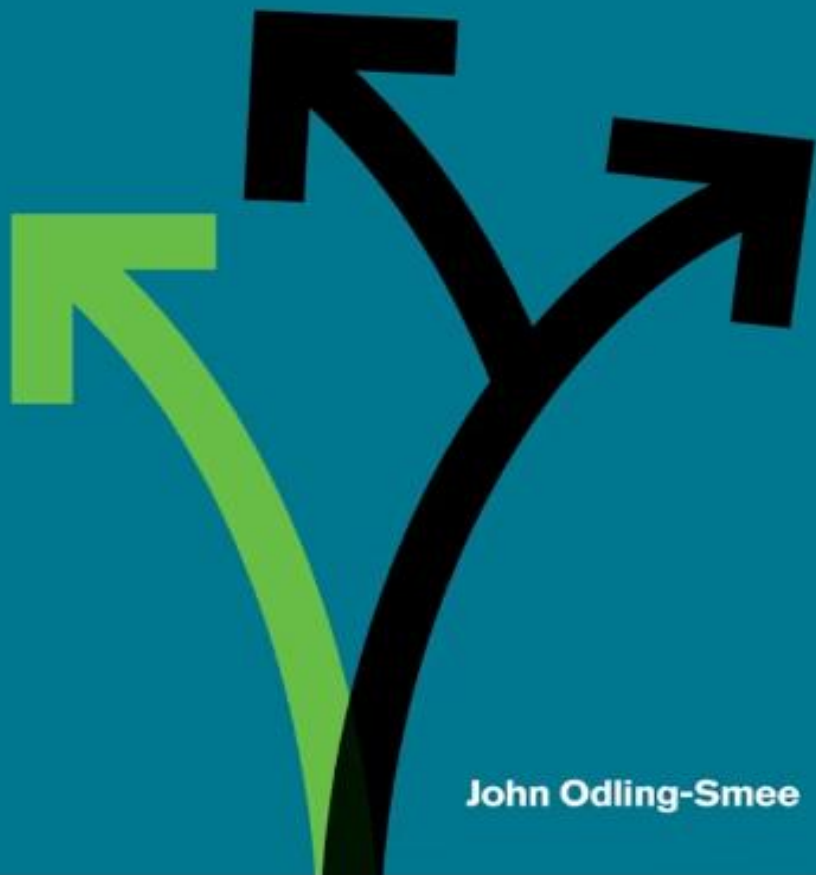
Erle C. Ellis (艾尔青)^{a,1} , Nicolas Gauthier^{b,c} , Kees Klein Goldewijk^{d,e} , Rebecca Bliege Bird^f , Nicole Boivin^{g,h}, Sandra Díazⁱ, Dorian Q. Fuller (傅稻镰)^{j,k} , Jacquelyn L. Gill^l , Jed O. Kaplan^m , Naomi Kingstonⁿ , Harvey Locke^o , Crystal N. H. McMichael^p , Darren Ranco^q , Torben C. Rick^r , M. Rebecca Shaw^s, Lucas Stephens^t, Jens-Christian Svenning^u , and James E. M. Watson^{v,w}

Significance

The current biodiversity crisis is often depicted as a struggle to preserve untouched habitats. Here, we combine global maps of human populations and land use over the past 12,000 y with current biodiversity data to show that nearly three quarters of terrestrial nature has long been shaped by diverse histories of human habitation and use by Indigenous and traditional peoples. With rare exceptions, current biodiversity losses are caused not by human conversion or degradation of untouched ecosystems, but rather by the appropriation, colonization, and intensification of use in lands inhabited and used by prior societies. Global land use history confirms that empowering the environmental stewardship of Indigenous peoples and local communities will be critical to conserving biodiversity across the planet.

Niche Construction

How Life Contributes
to its Own Evolution



John Odling-Smee

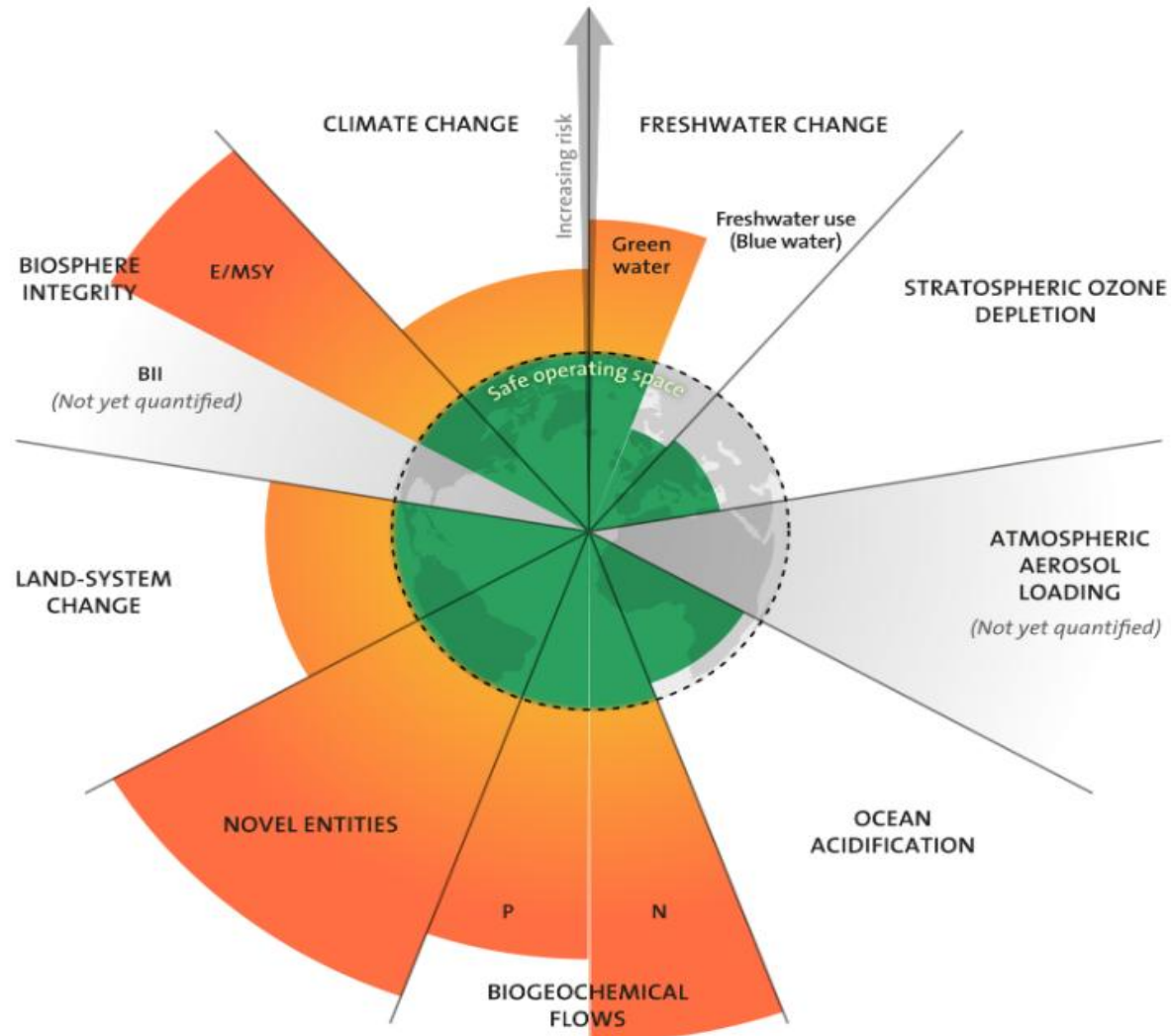
Niche Construction

THE NEGLECTED PROCESS IN EVOLUTION

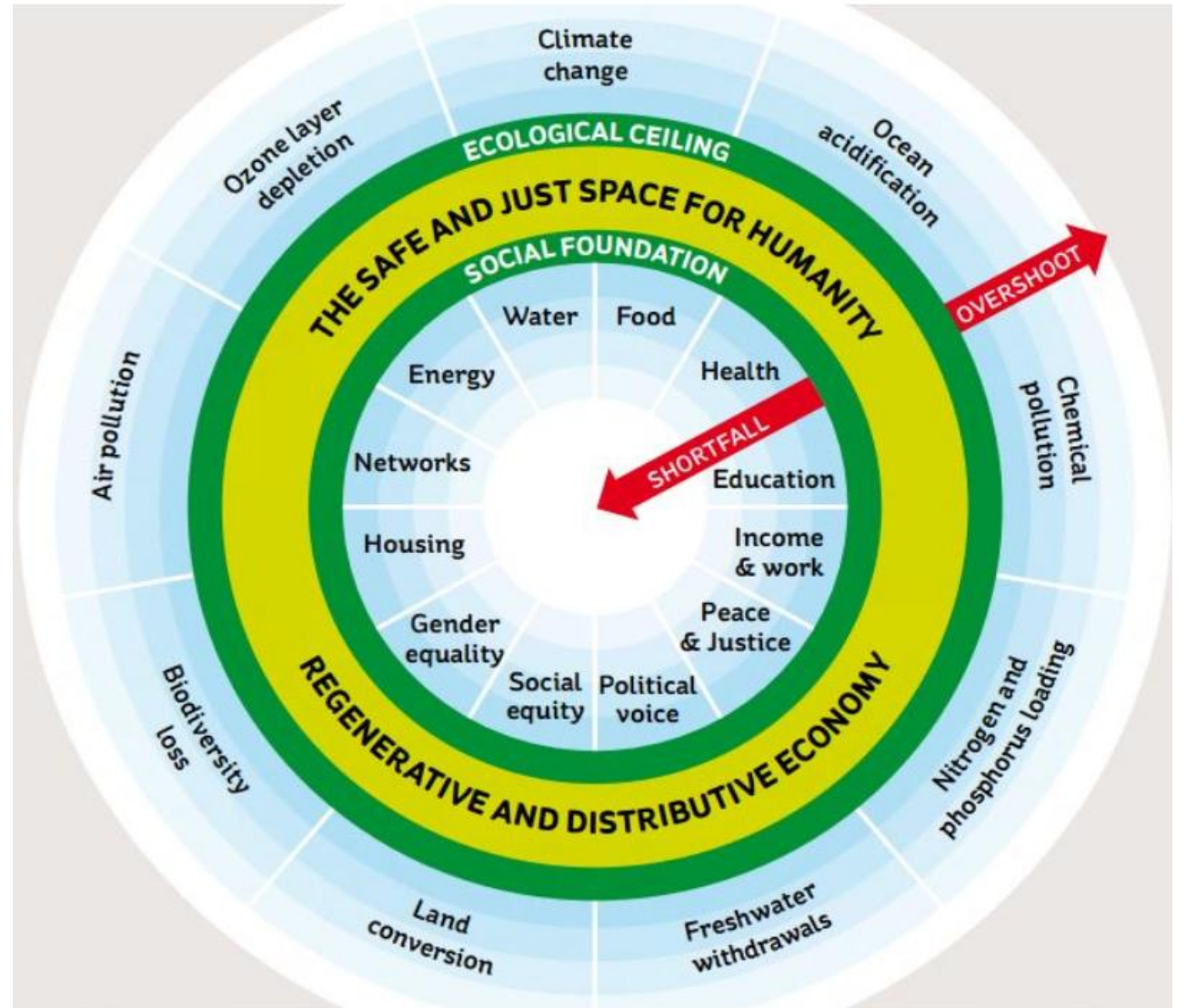
F. John Odling-Smee, Kevin N. Laland,
and Marcus W. Feldman

MONOGRAPHS IN POPULATION BIOLOGY • 37

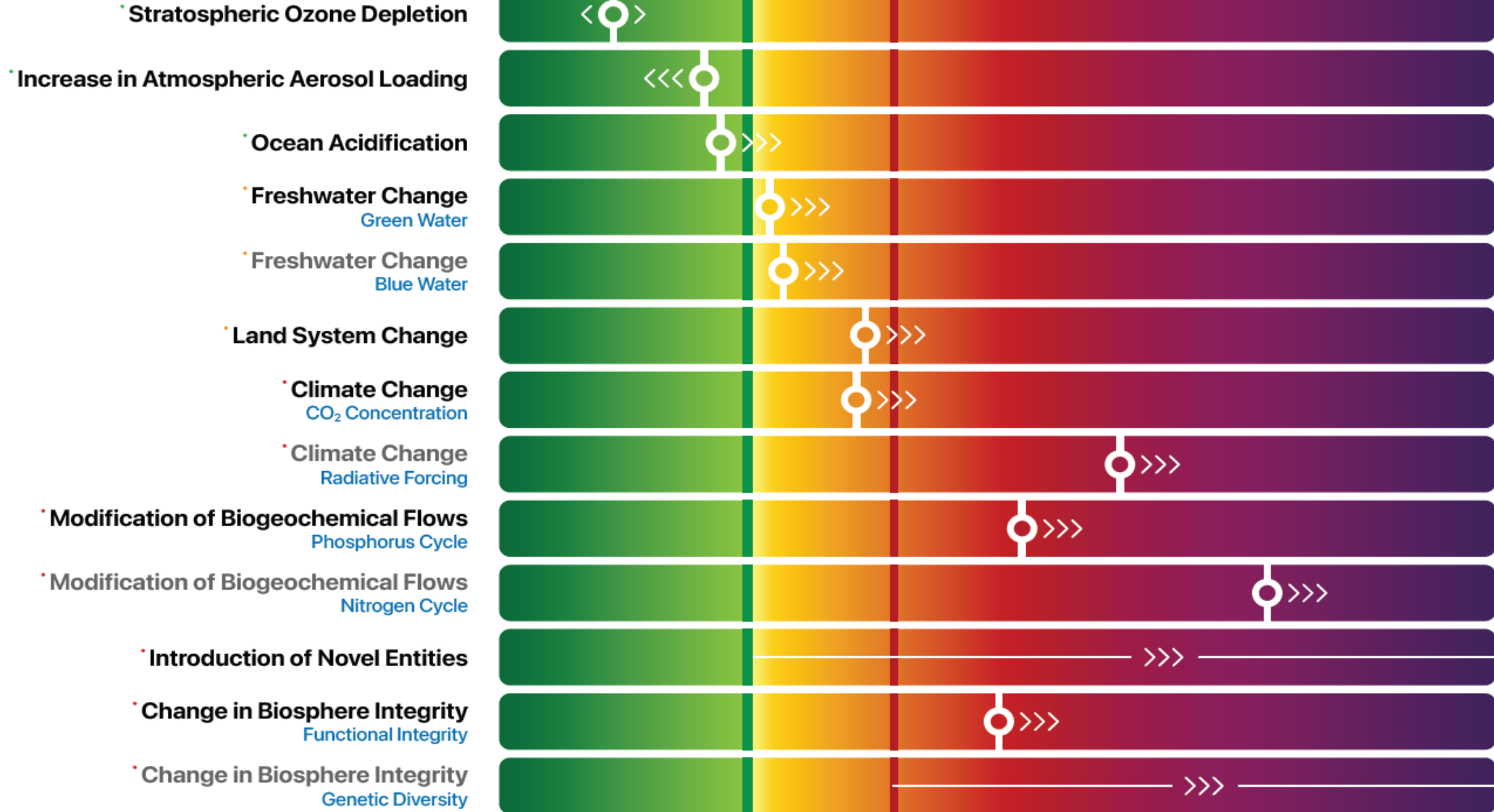
Safe Operating Space (S.O.S.)



S.O.S : Safe Operating Space



PLANETARY BOUNDARY PROCESSES



The Choice is Ours

