



POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH

Planetary Boundaries and Food Systems

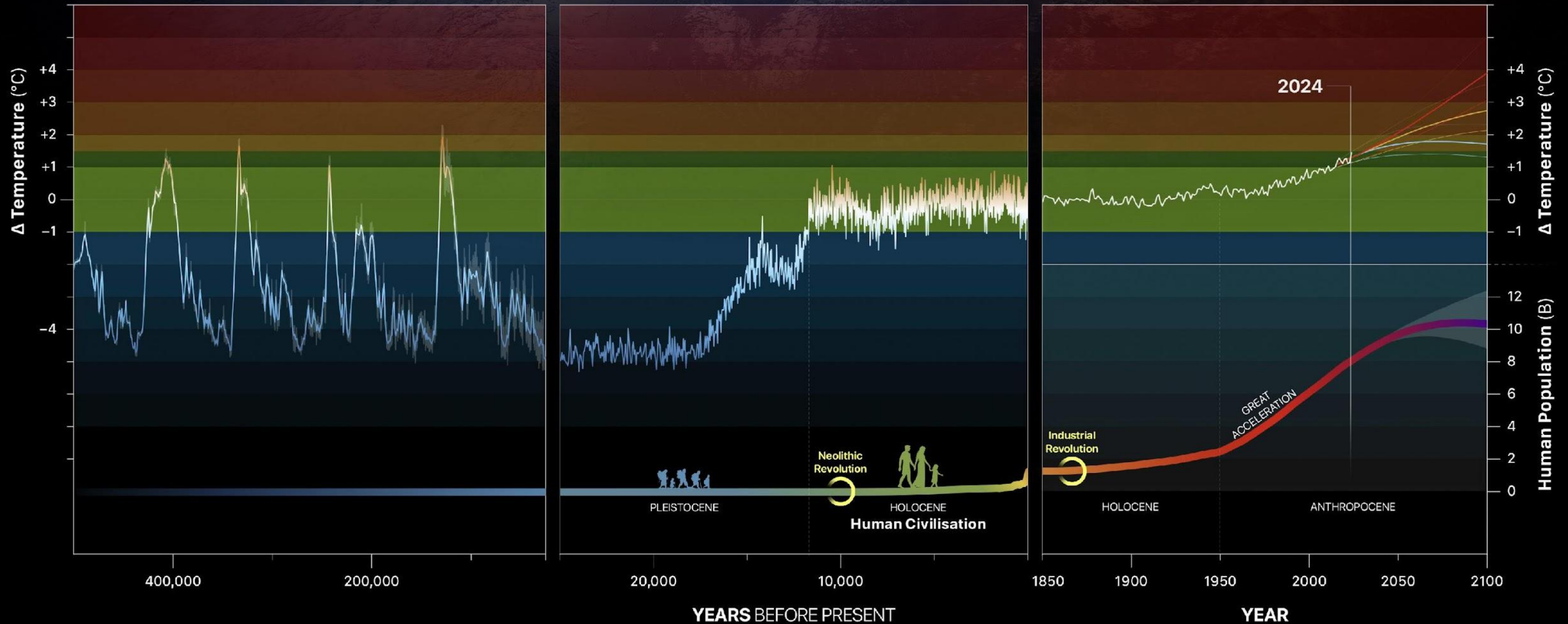
Niklas Kitzmann

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The Potsdam Institute for Climate Impact Research (PIK)

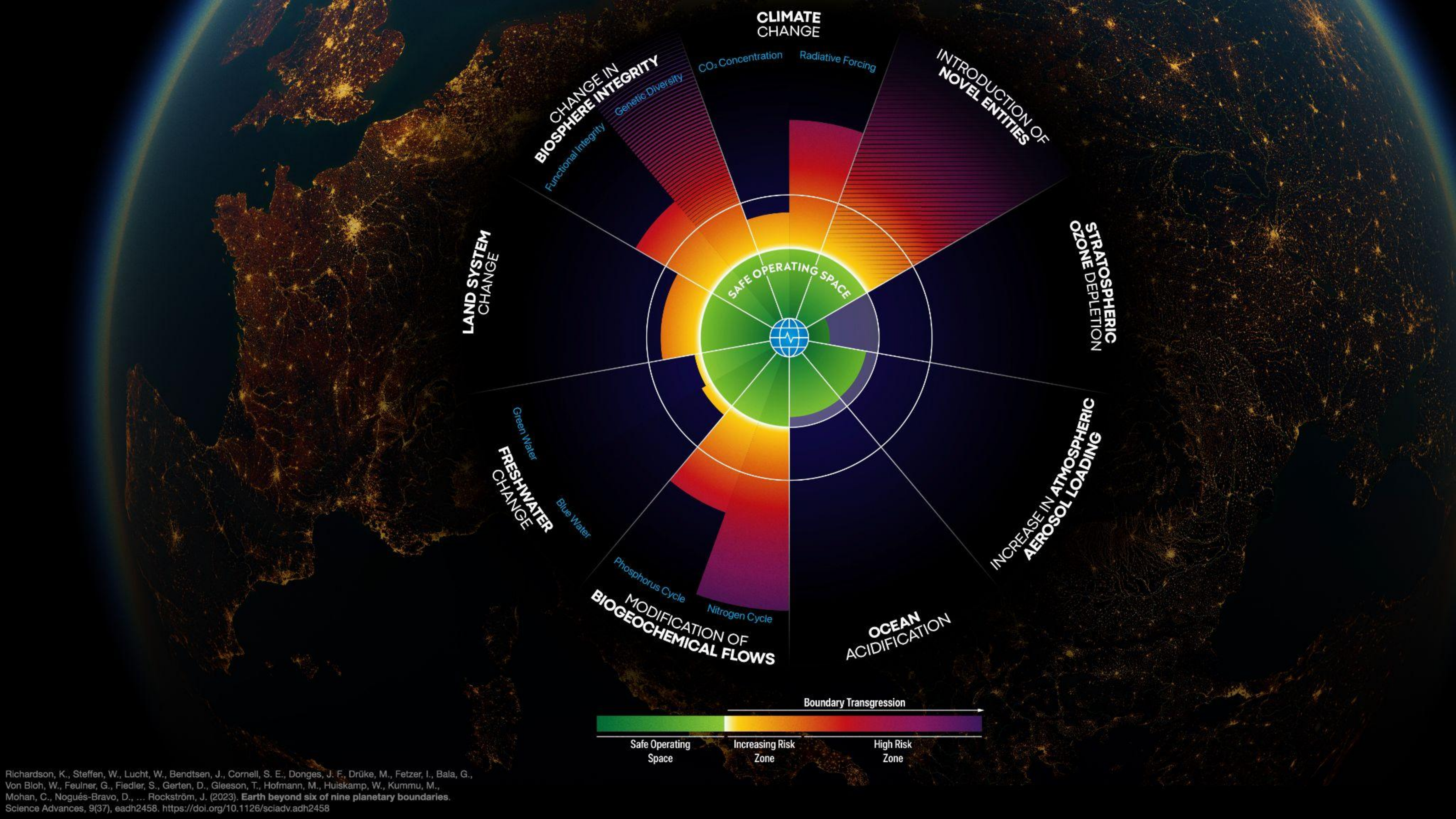


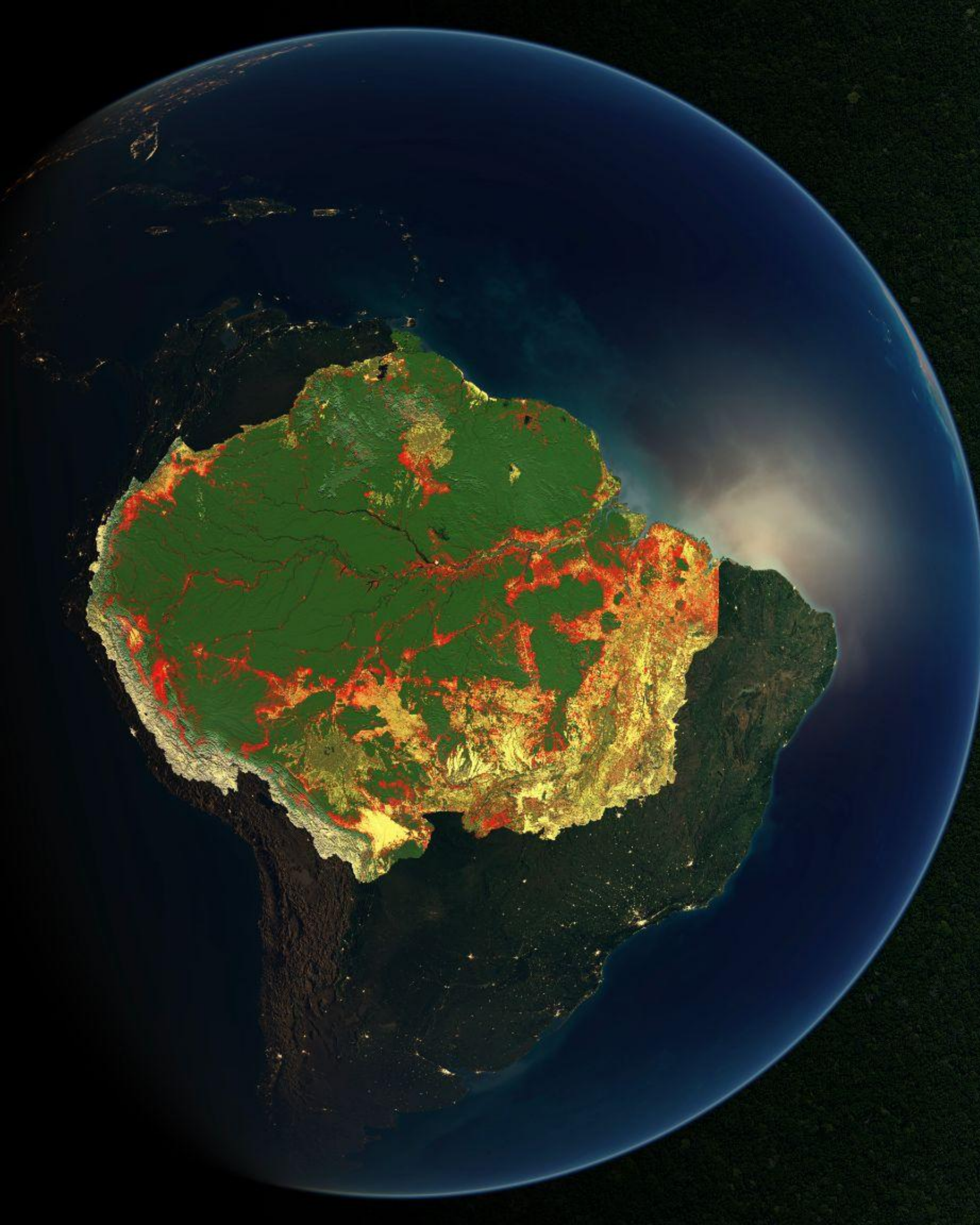
Humanity's Journey on Earth



Credit: PIK / Globaia. For details, see Planetary Health Check 2024

Data from: Jouzel et al. 2007, Masson-Delmotte et al. 2010, Morice et al. 2021, Osborn and Jones 2014, CRU 2024, IPCC Summary for Policymakers 2021, Fyfe et al. 2024, Ritchie et al. 2024, Sjödin et al. 2012, UN World Population





Risk of Amazon Tipping Point

Closer than we thought?

CLIMATE RISK

3-5°C

CLIMATE & ECOLOGICAL RISKS

1.5-2°C

+ **20-25%**
deforestation

TODAY

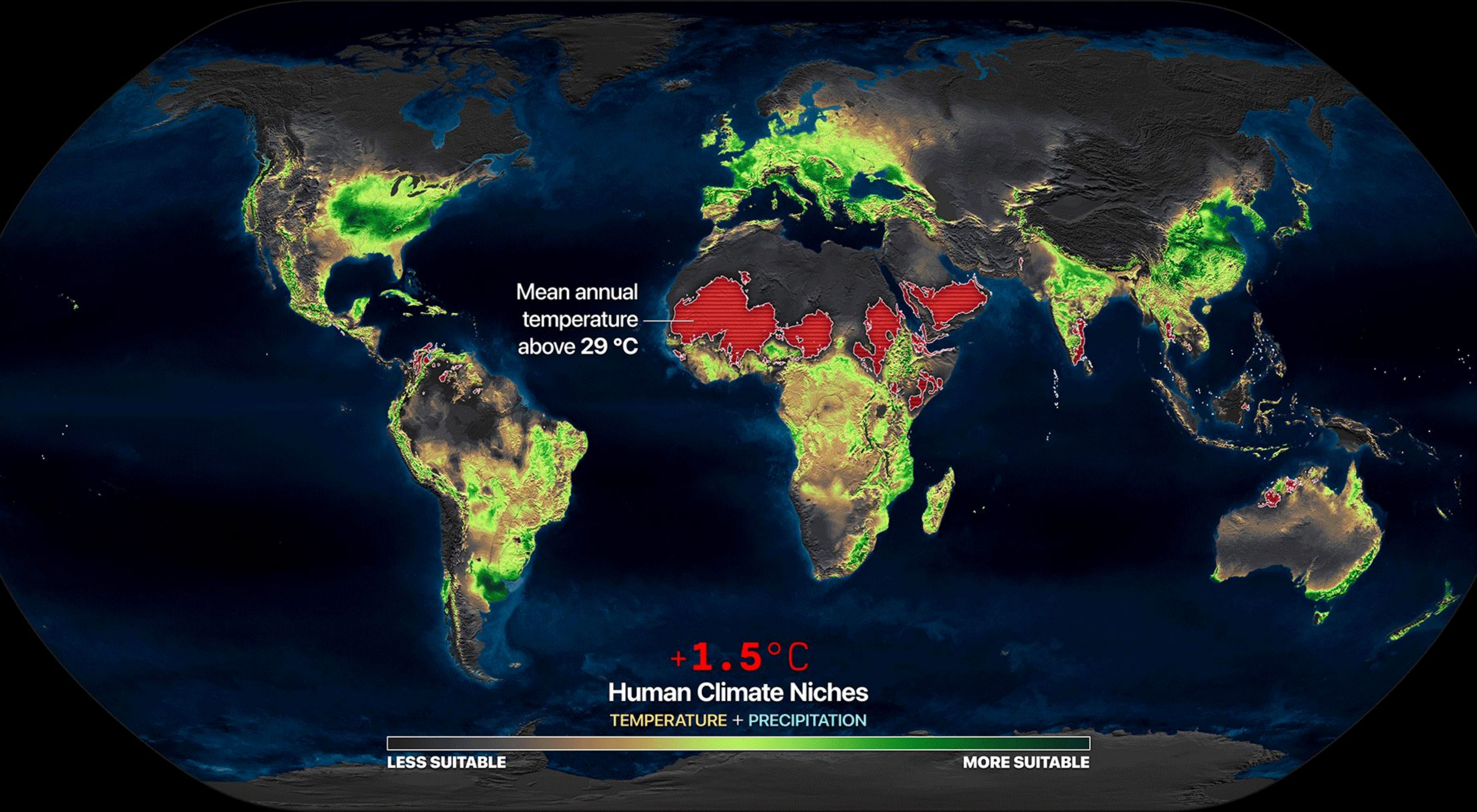
1.2°C + **17%**

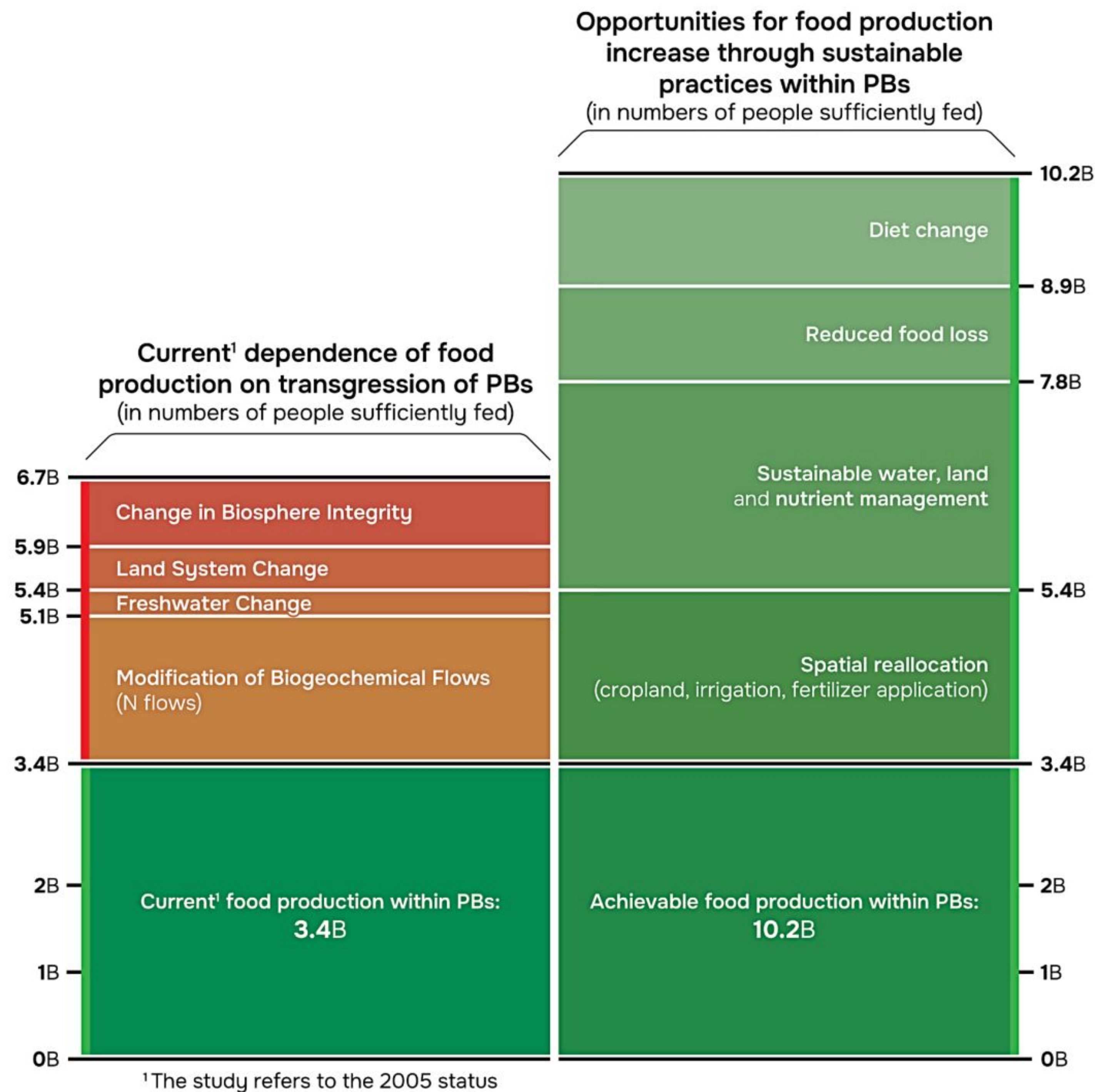
CLIMATE TIPPING ELEMENTS



GLOBAL WARMING THRESHOLDS

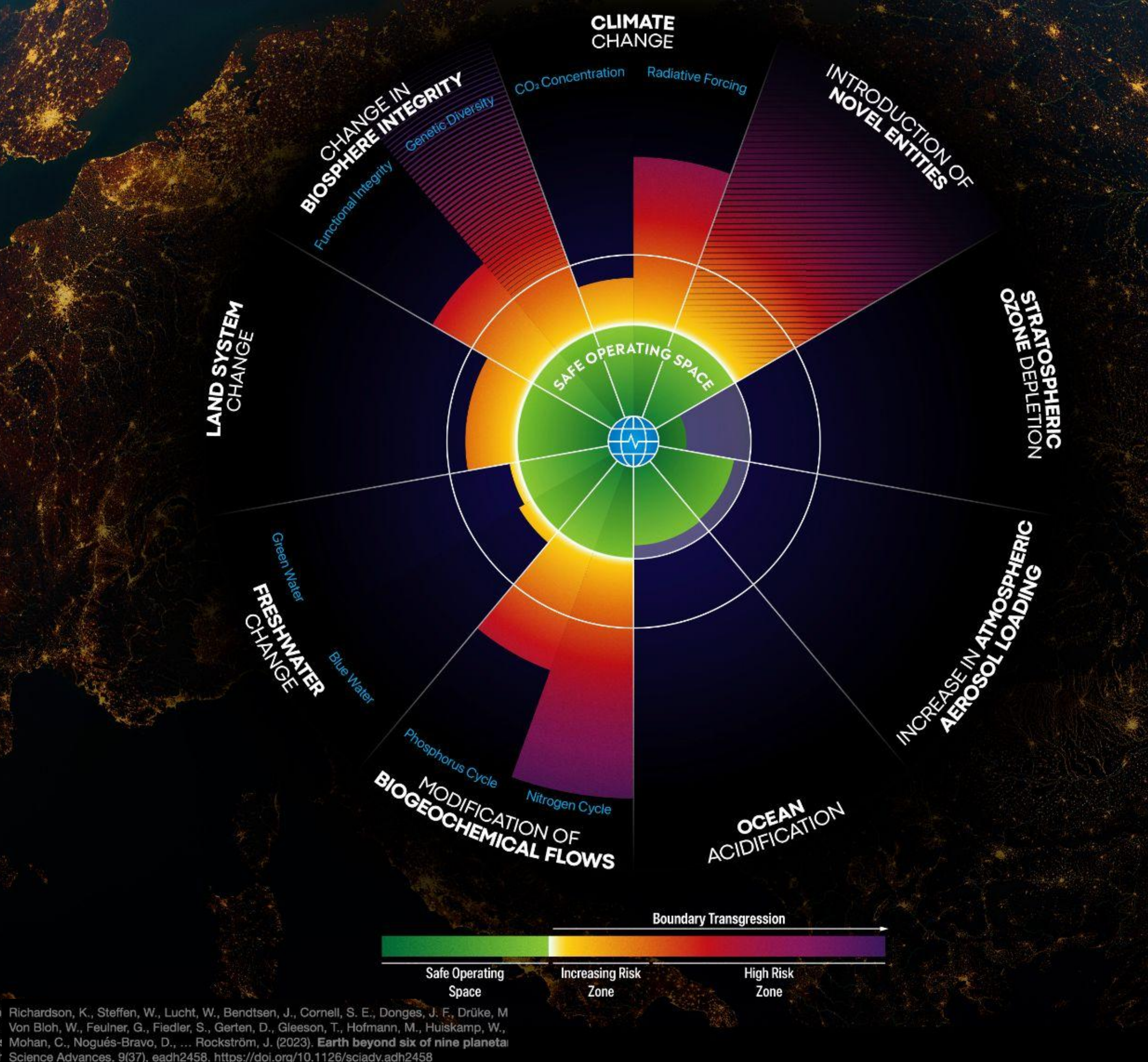






Transforming the global food system to feed everyone within Planetary Boundaries is possible.

Gerten, D. et al. Feeding ten billion people is possible within four terrestrial planetary boundaries. Nat. Sustain. 3, 200–208 (2020)



Thank you.

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