



Agriculture & Food systems



Climate, DRR & Environment



Water

Working at the Green Nexus

**Bridging Themes for Greater Impact:
Enhancing Collaboration in Times of Global Crises**

Housekeeping rules



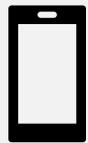
Please keep your microphone **muted** at all time.



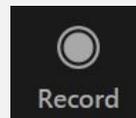
Please make sure to have your **full name** properly spelled out.



Use the **chat** to share reflections, resources and ask questions.



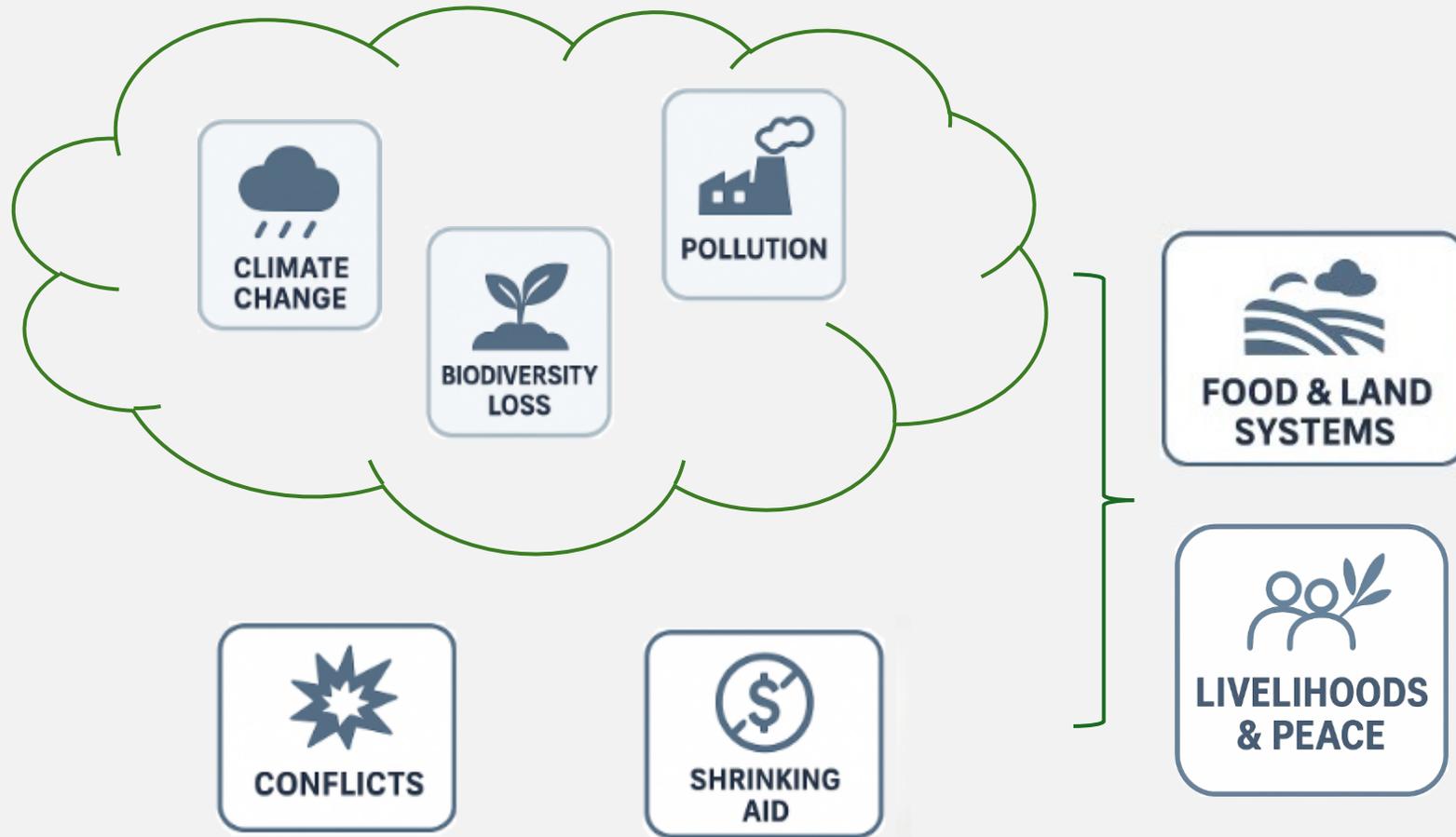
Keep your mobile phone at hand to join the interactive **Menti** sessions.



The keynote presentation will be **recorded**. The discussions will not be recorded.



Background – Why ?



A healthy biosphere, with a rich biodiversity and functioning ecosystems, is the foundation to achieve the societal and economic goals of the SDGs. — © Source: Stockholm Resilience Centre



What's being offered today?

- 1) Context : Global urgency & polycrises – where do we stand, major challenges
Clara Nicolai, Potsdam Institute for Climate Impact Research
- 2) Anchoring through current examples : Who is doing what, and how
Panel discussion with regional advisors and thematic experts
- 3) Open discussion
Q&A session from all participants
- 4) Wrapping up & next steps
SDC Green Nexus network focal points



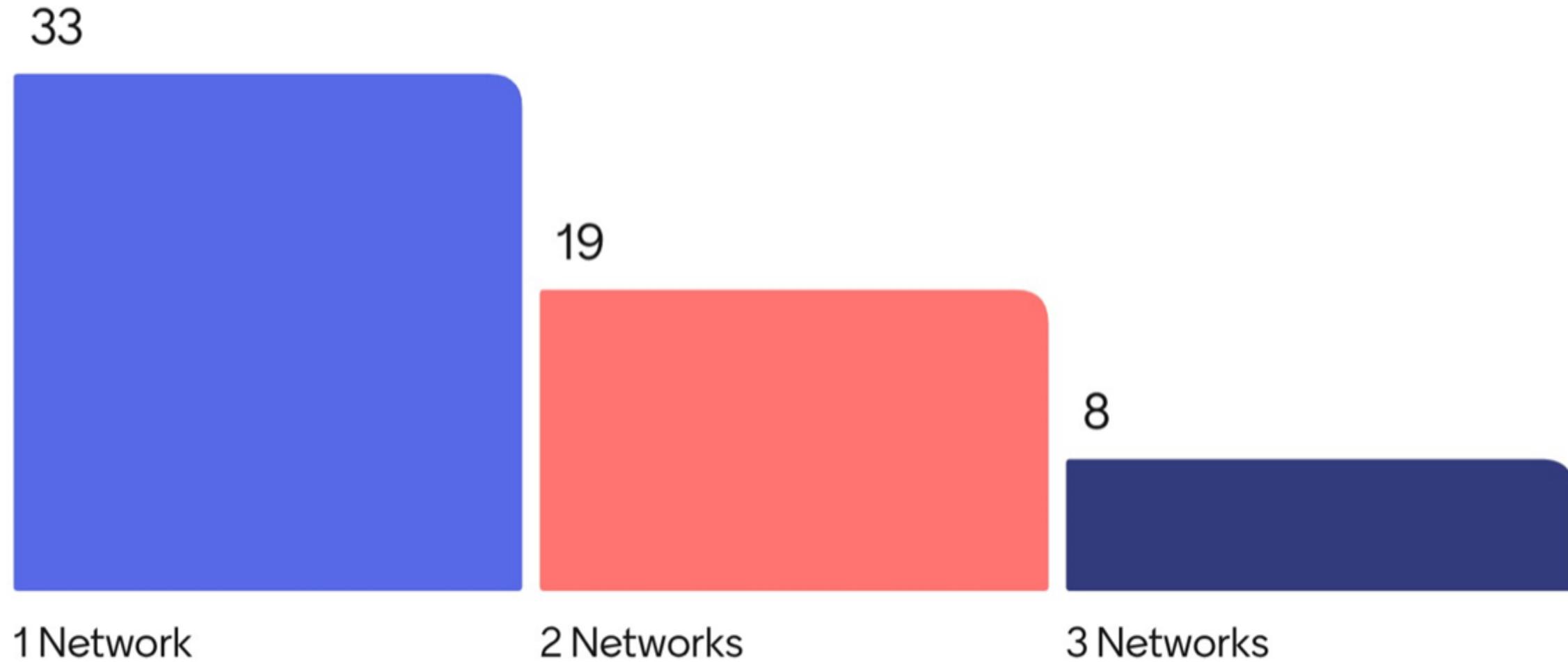
Menti survey

First, we'd like to get a shared idea of who we all are in this webinar today

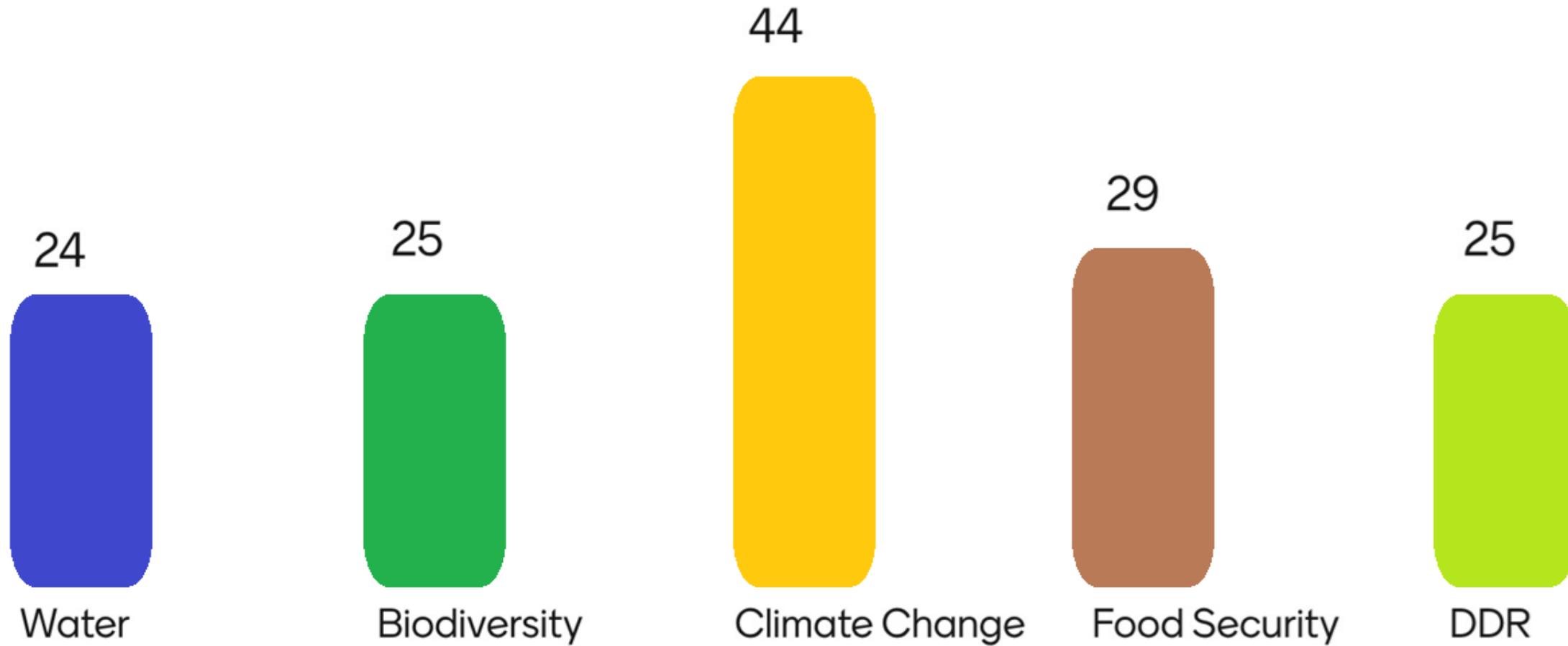
<https://www.menti.com/al16oghe9ow1>



Out of the three networks AFS, CDE and Water, how many are you part of ?



Which of the following themes do you cover in your daily work?



PART 1 :

Keynote speech – Global context & polycrises

Clara Nicolai, M.Sc.

Potsdam Institute for Climate Impact Research (PIK)



Sustainable Development in the Face of Global Urgency and Polycrises



Keynote | 10 November 2025

Clara Nicolai, Coordination Planetary Boundaries Science Lab
Potsdam Institute for Climate Impact Research

Planetary Boundaries
SCIENCE LAB



POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH

Agenda

- How can we assess the state of the planet using the **Planetary Boundaries**?
- What is the **Planetary Health Check Report** & why is it published annually?
- How do we **prioritize** in the face of polycrises?
- How can the Planetary Boundaries **guide** sustainable development?

How can we assess the state of the planet
using the **Planetary Boundaries**?

Beyond Climate: The Planetary Crisis Unfolding

Amazon rainforest could reach 'tipping point' by 2050, scientists warn

"We need to respond now," says author of study that says crucial forest has already passed safe boundary and needs restoration

Indonesia's tropical Eternity Glaciers could vanish within years, experts say

El Niño weather pattern could accelerate melting, leading to sea level rise



ing effect that helps stabilise the climate. Photograph: João

Earth 'well outside safe operating space for humanity', scientists find

First complete 'scientific health check' shows most global systems beyond stable range in which modern civilisation emerged



West Antarctica now rich shows

After how much carbon emissions danger



'Paying in lives': health of billions at risk from global heating, warns report

the climate crisis is 'costing lives and livelihoods' due to heat, food insecurity and infectious diseases, say

Jamaica's dengue fever outbreak shows the deadly danger of heat



Brutal heatwave cooks US south-west, an early sign of sizzling summer ahead

Millions of Americans are sweltering as experts warn early heat could herald next record-smashing summer



Climate crisis costing \$16m an hour in extreme weather damage, study estimates

Study shows at least \$2.8tn in damage from 2000 to 2019 through worsened storms, floods and heatwaves



Canada risks more 'catastrophic' wildfires with hot weather forecast

Worst-ever fire season in 2023 saw 15m hectare burned, eight firefighters killed and 230,000 people evacuated



Drought turns Amazonian capital into climate dystopia

Forest fires leave Manaus with second worst air quality in the world, while low river levels cut off communities



February on course to break unprecedented number of heat records

Rapid ocean warming and unusually hot winter days recorded as human-made global heating combines with El Niño



Temperatures put Earth in 'territory', say scientists

Study indicates climate crisis is taking place



New Zealand records hottest September on record

Some parts of the country exceeded normal daily maximum temperatures for the peak of summer



Europe unprepared for rapidly growing climate risks, report finds

Dangers of wildfires, extreme weather and other factors outgrowing preparedness, European Environment Agency says



Water level at Amazon port in Brazil hits lowest point in 121 years amid drought

Port in Manaus records lowest water level since 1902, leaving boats stranded and unable to deliver food and water to remote villages



Venezuela loses its last glacier, shrinks down to an ice field

Scientists reclassify Humboldt glacier after it melted faster than expected



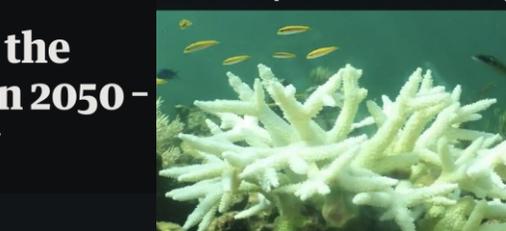
Human-caused heating behind extreme droughts in Syria, Iraq and Iran, study finds

Millions of people's lives wrecked by droughts that used to happen once every 250 years but now expected once a decade



'Unprecedented mass coral bleaching' expected in 2024, says expert

2023 is first year of potential pair of El Niño years and since 1997, instance of these pairs has led to mass coral mortality



Global heating is accelerating, warns scientist who sounded climate alarm in the 80s

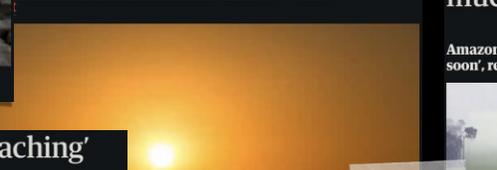
Study delivers dire warning although rate of increase is debated by some scientists amid a record-breaking year of heat



The research suggests that a 'dangerous' burst of heating will be unleashed, pushing temperatures 2C hotter by 2050. Photograph: Dmitry Rukhlenko/Travel Photos/Alamy

Temperatures see WA have top 15 hottest places in world as heatwave expected to peak on Tuesday

Australia news live blog for latest updates on morning and afternoon news emails, free app or daily



Record-breaking increase in CO2 levels in world's atmosphere

Experts issue warning after finding global average concentration in March was 4.7ppm higher than same period last year



Climate crisis increasing frequency of deadly ocean upwells, study finds

Intense patches of cold water rising from the depths are killing sharks, rays and other creatures, researchers say



Ecological tipping points could occur much sooner than expected, study finds

Amazon rainforest and other ecosystems could collapse 'very soon', researchers warn



Climate-heating gases reach record highs, UN reports

World Meteorological Organization sees 'no end in sight to the rising trend', largely driven by fossil fuel burning



Global heating will pass 1.5C threshold this year, top ex-Nasa scientist says

James Hansen says limit will be passed 'for all practical purposes' by May though other experts predict that will happen in 2030s



biodiversity catastrophe: how the world could look in 2050 - unless we act now

The climate crisis, invasive species, over-exploitation of resources and pollution





**Humanity's
Safe Operating Space**
(Holocene-like conditions)



Resilience

Ability to absorb global change, including human pressures.



Habitability

Conditions that sustain life and support human societies.



Stability

Predictable planetary patterns, cycles & phenomena.



Freshwater Use



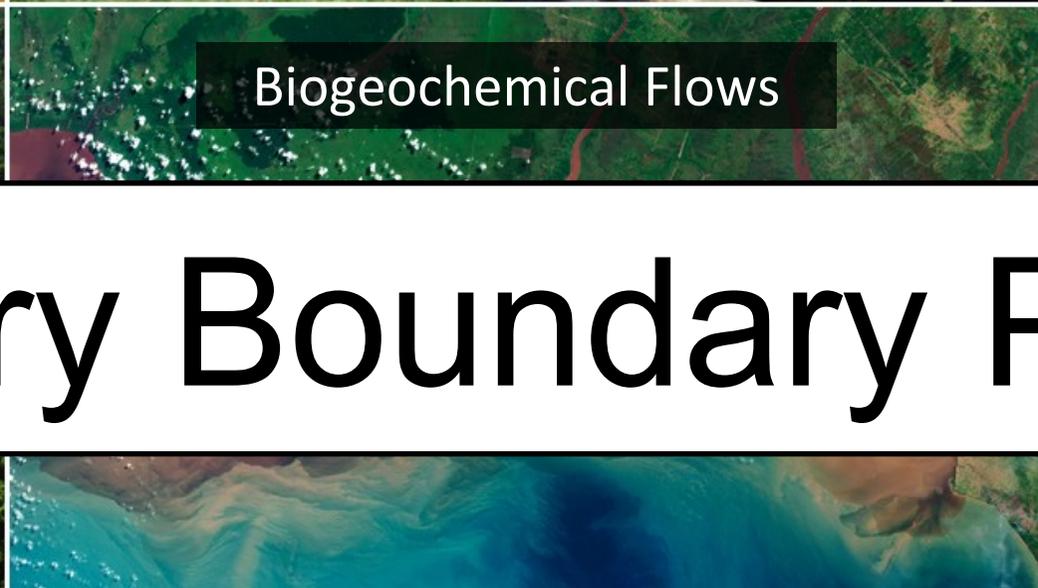
Biosphere Integrity



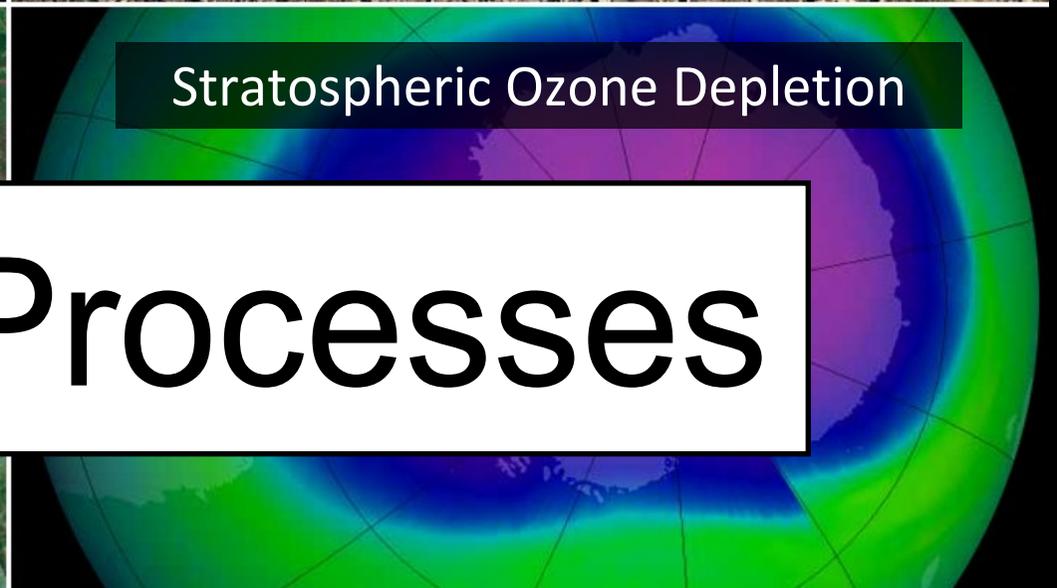
Climate Change



Land-System Change



Biogeochemical Flows

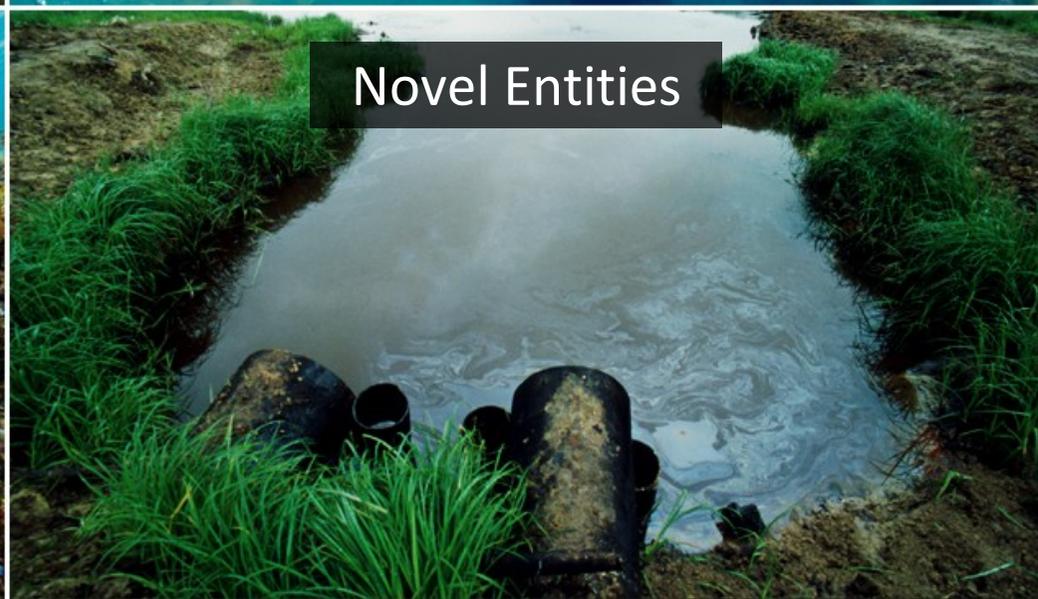


Stratospheric Ozone Depletion

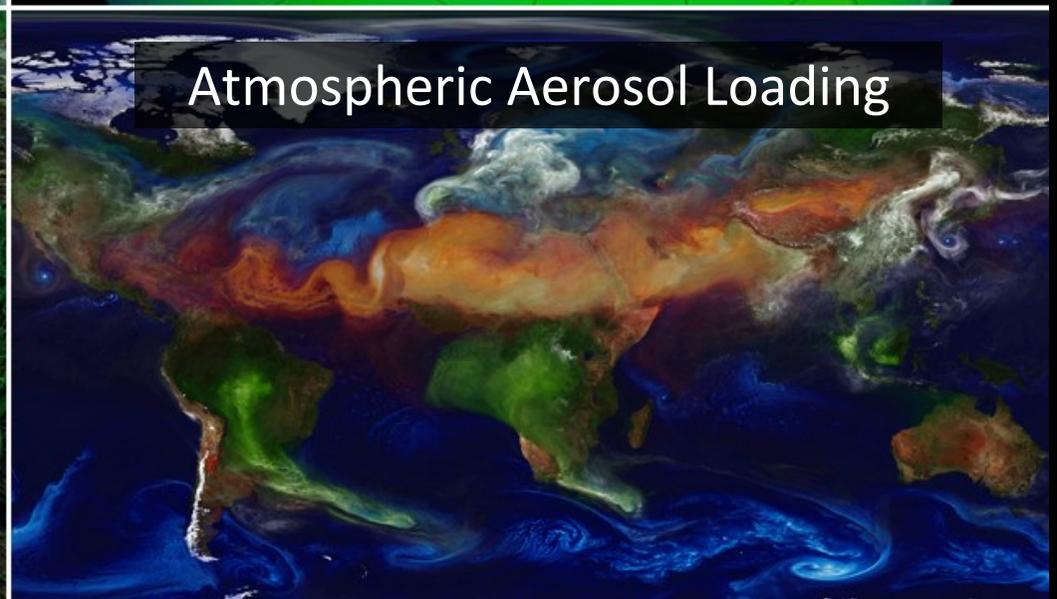
9 Planetary Boundary Processes



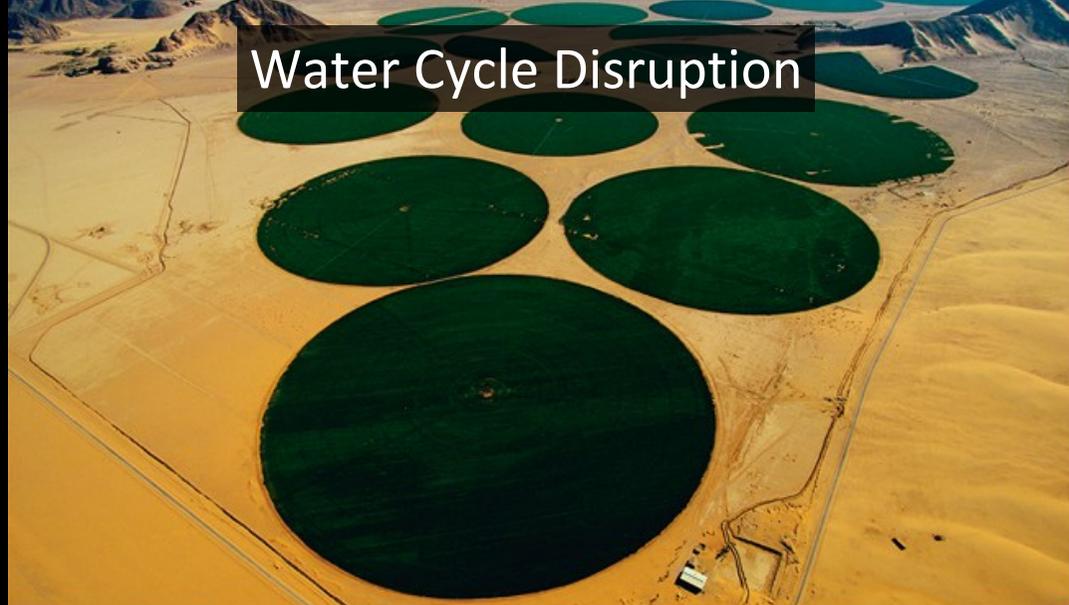
Ocean Acidification



Novel Entities



Atmospheric Aerosol Loading



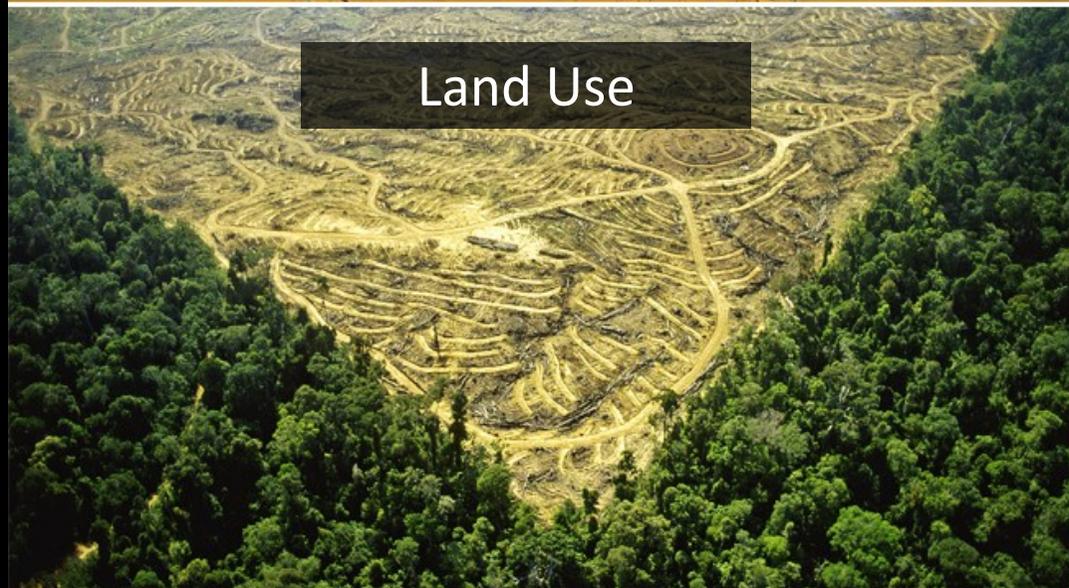
Water Cycle Disruption



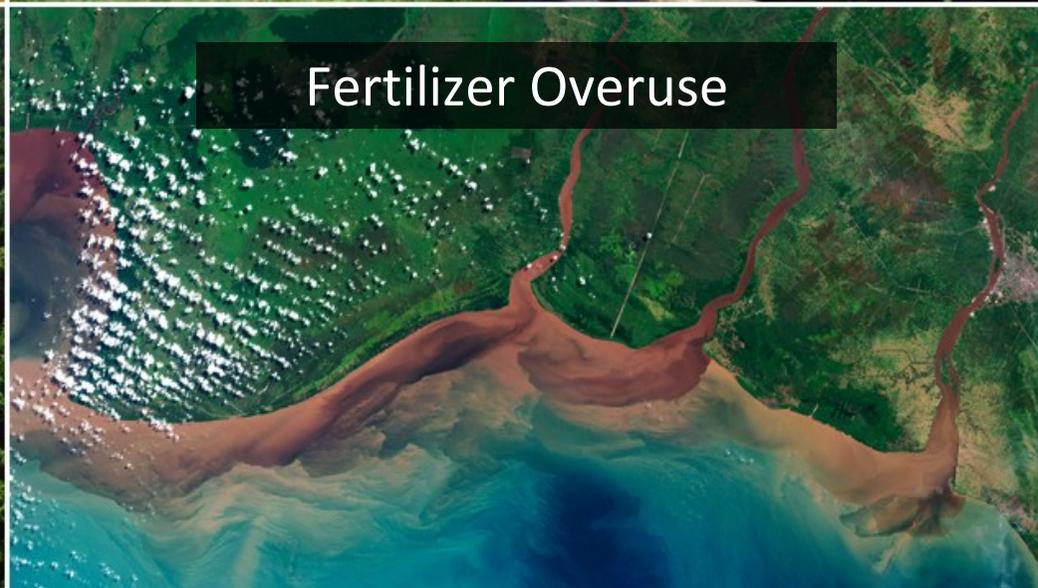
Damage to Nature



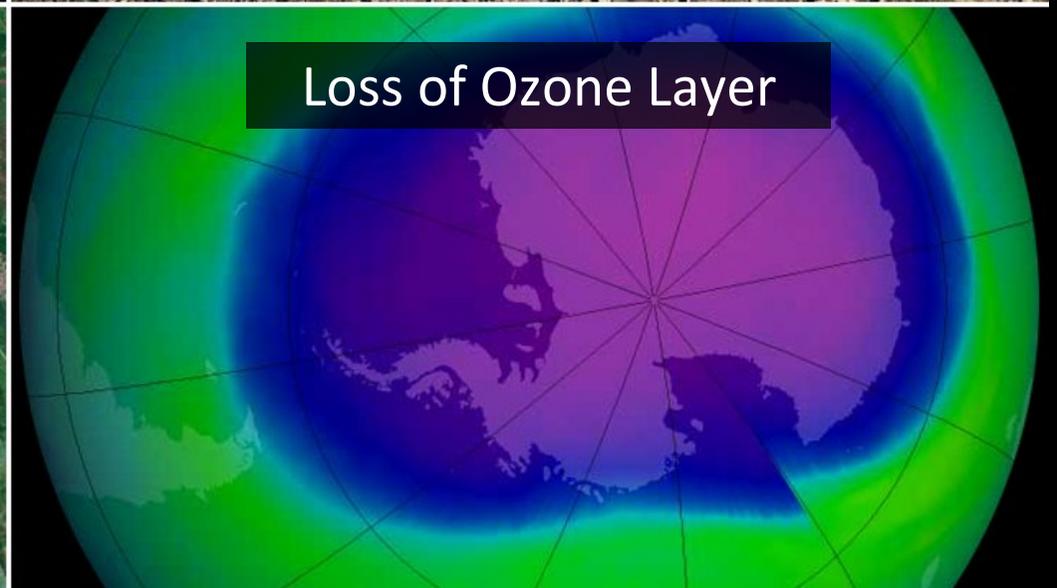
Climate Change



Land Use



Fertilizer Overuse



Loss of Ozone Layer



Rising Ocean Acidity



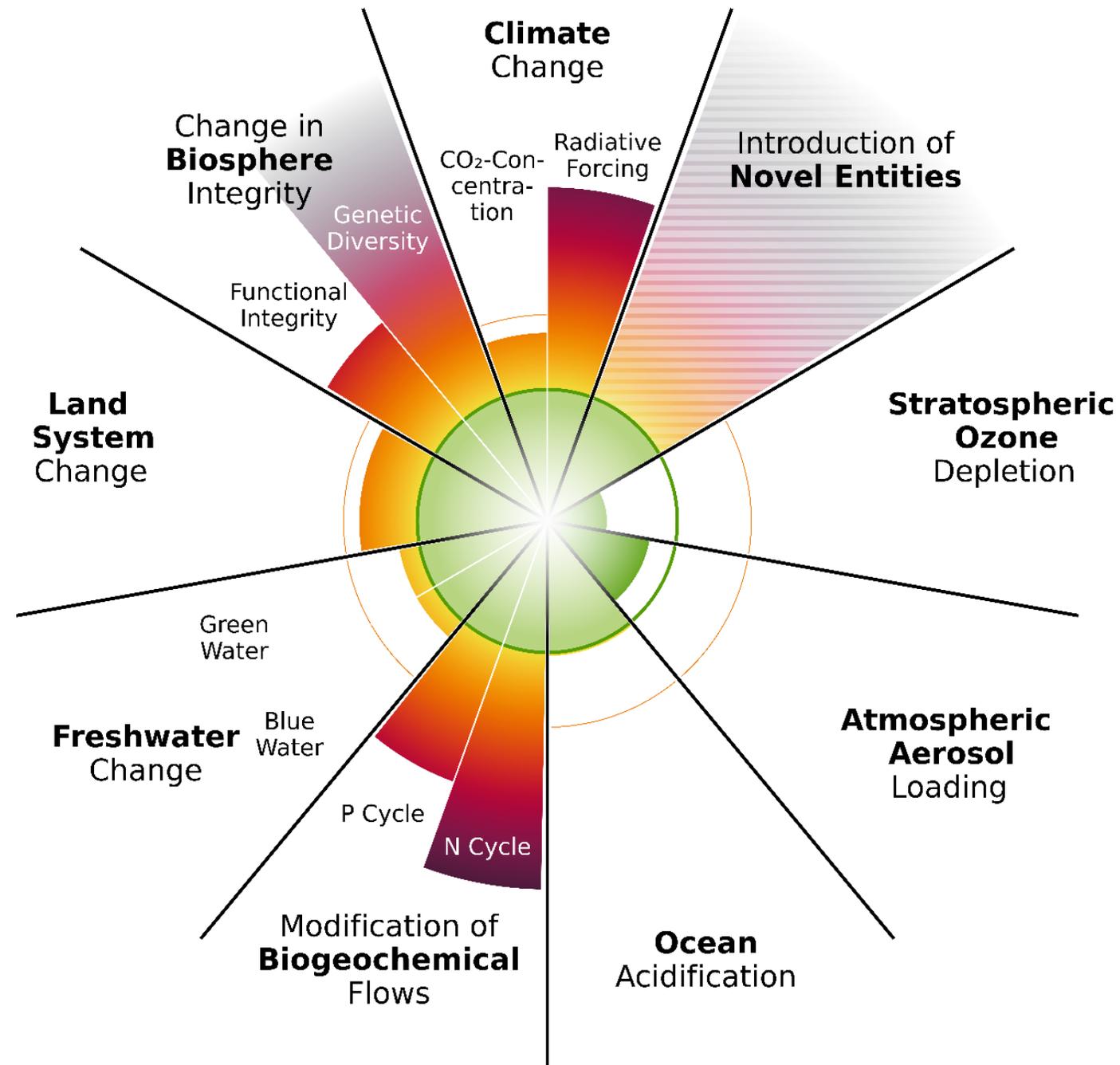
Pollution



Air Pollution

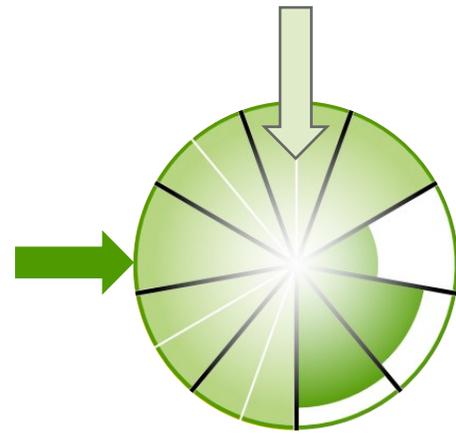
What the Planetary Boundaries Framework is (not!)

- Based on natural sciences – not socioeconomic factors
- Complementary – not in competition – to the SDGs
- Ever-evolving – open to be expanded or corrected where scientifically required

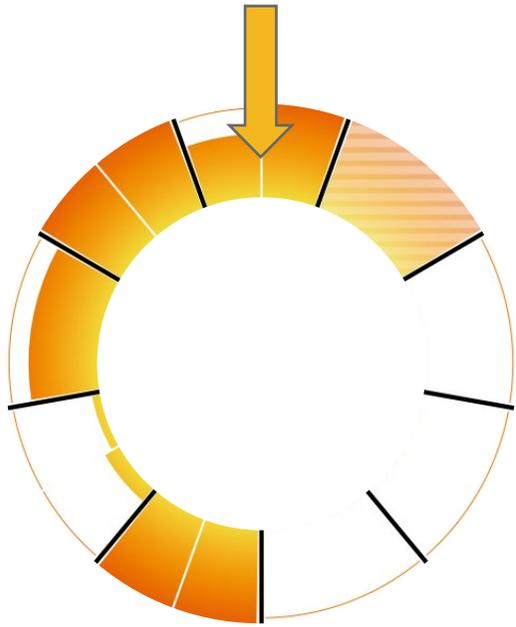


Planetary Boundary

Safe Operating Space

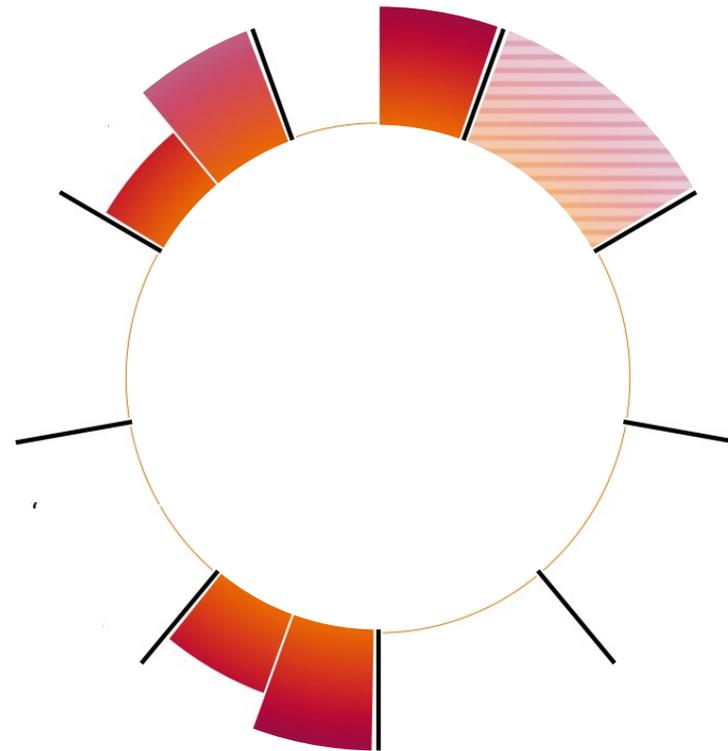


Zone of Increasing Risk

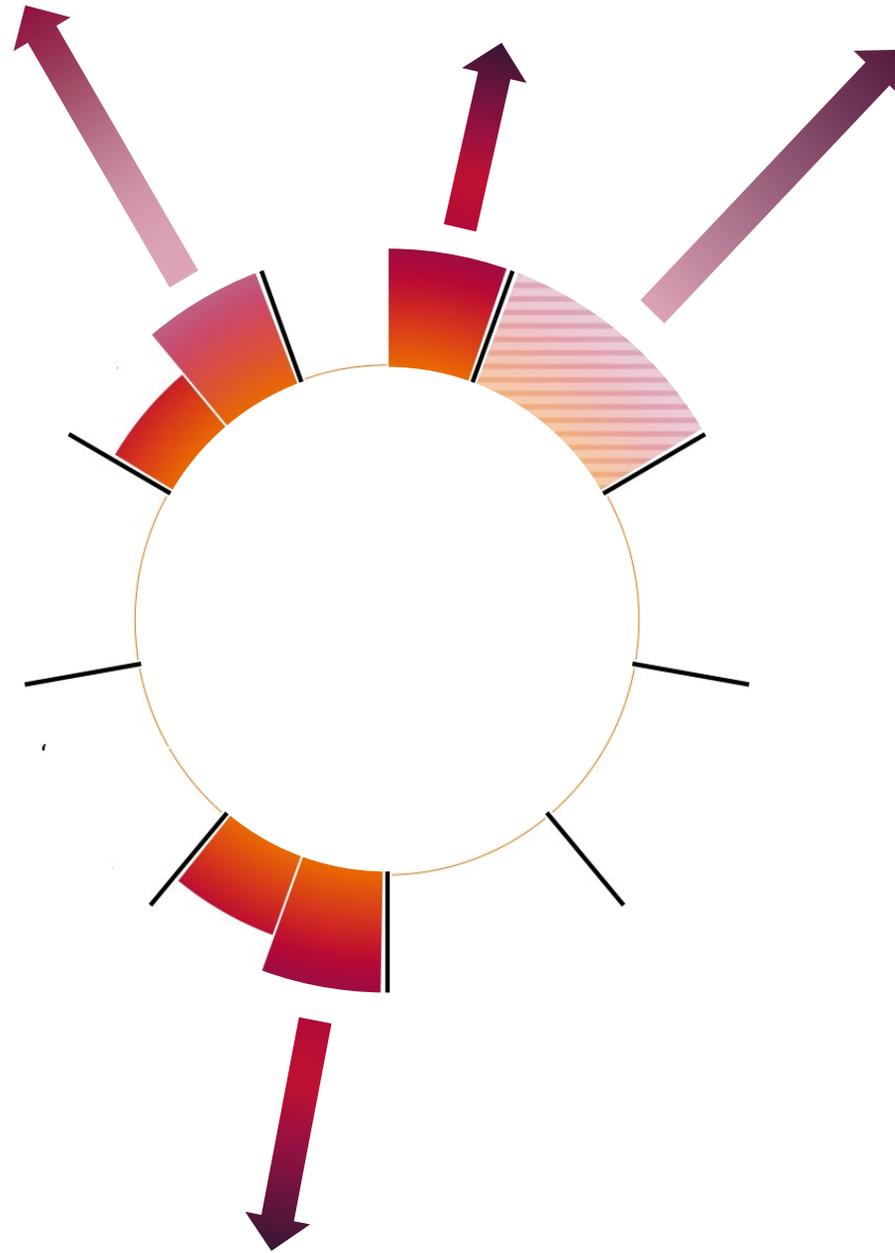


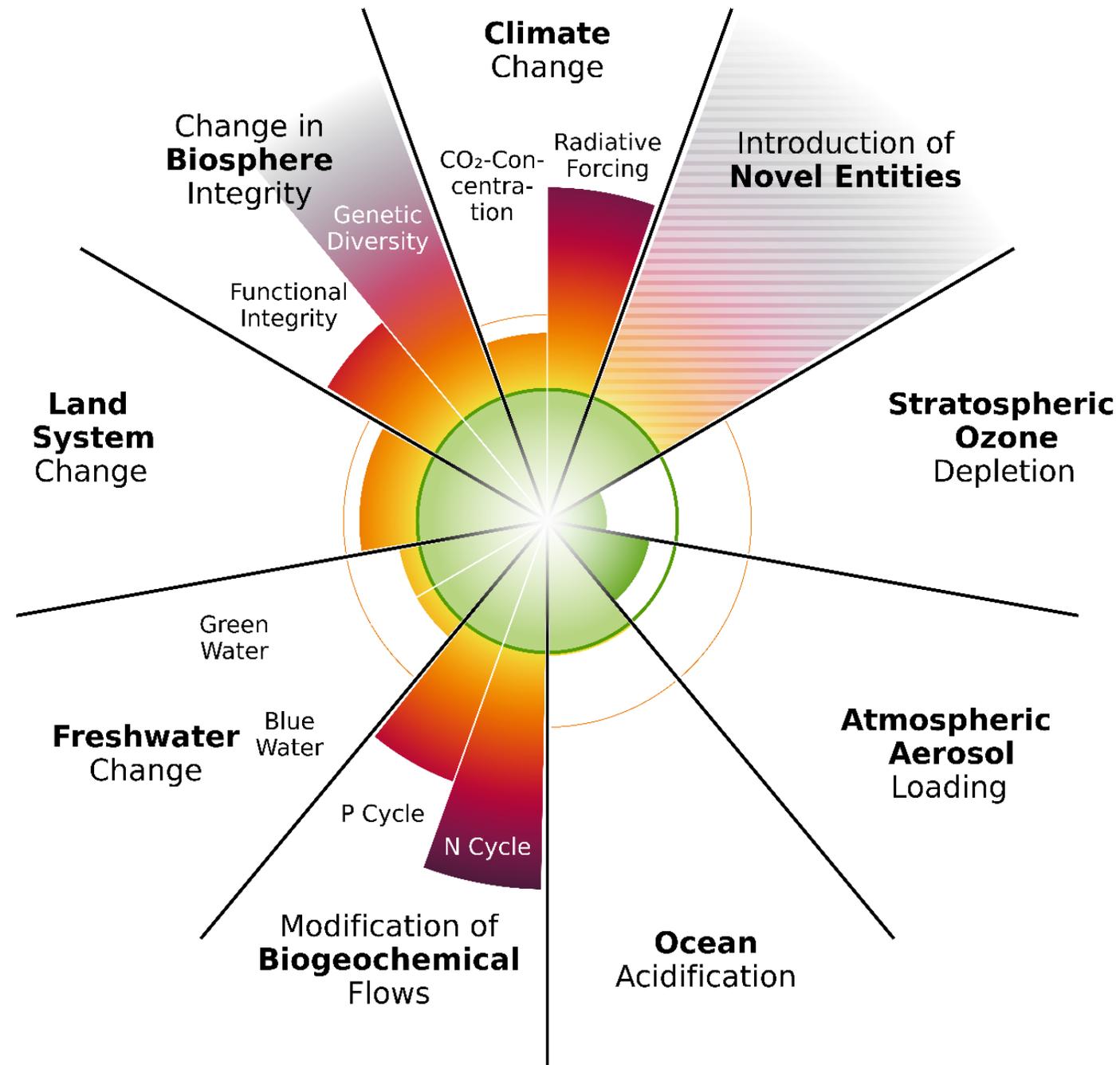
Planetary Boundaries are **already transgressed !**

High-Risk Zone

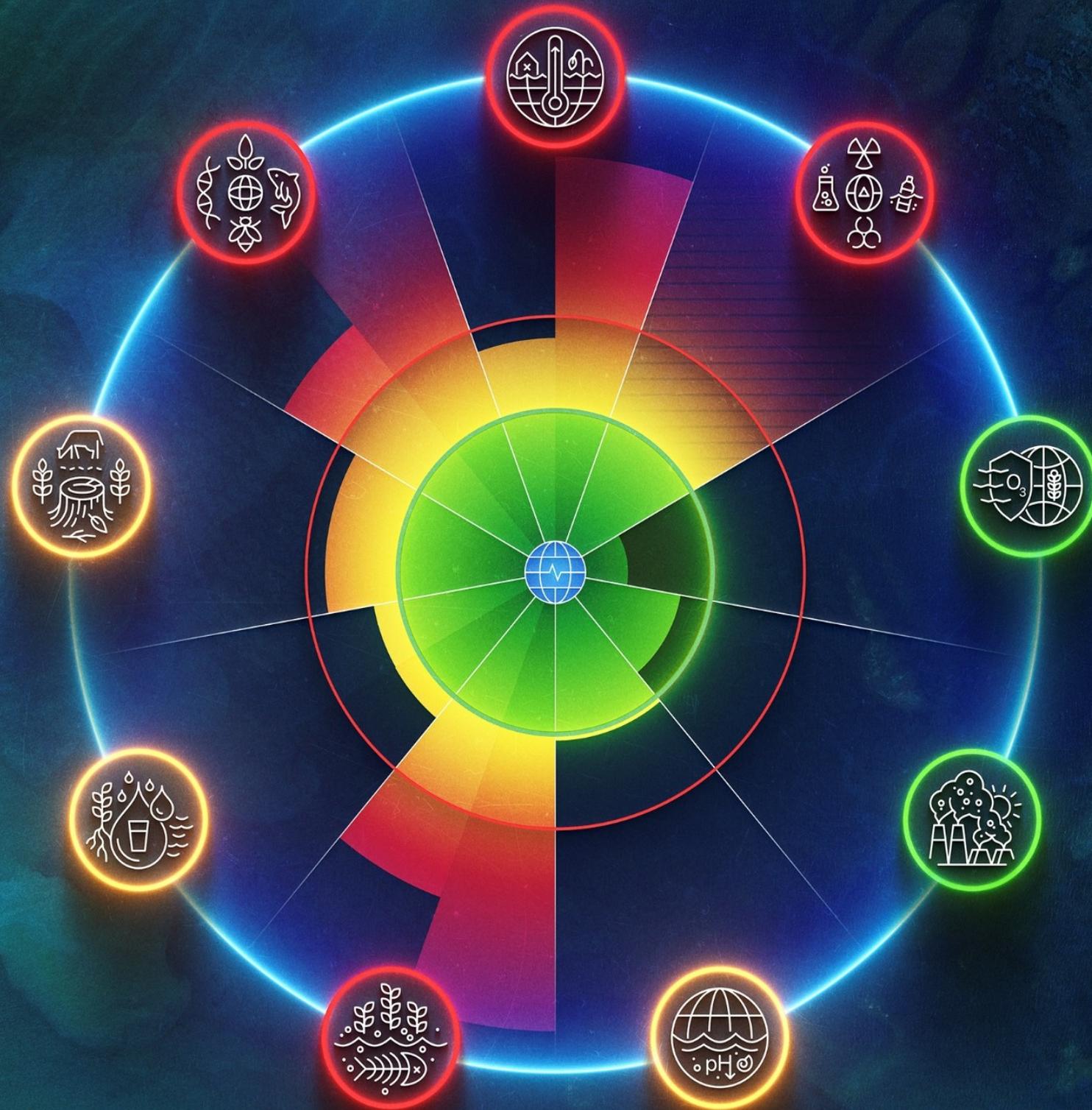


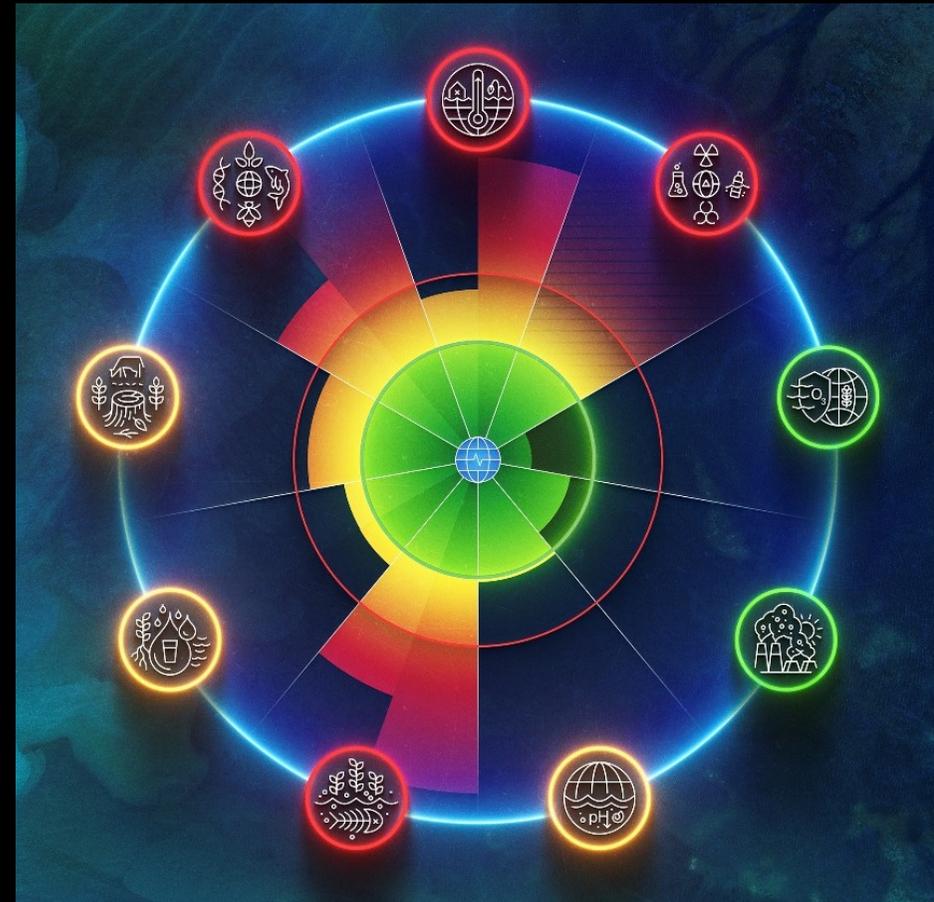
High-Risk Zone





What is the **Planetary Health Check Report** & why is it published annually?



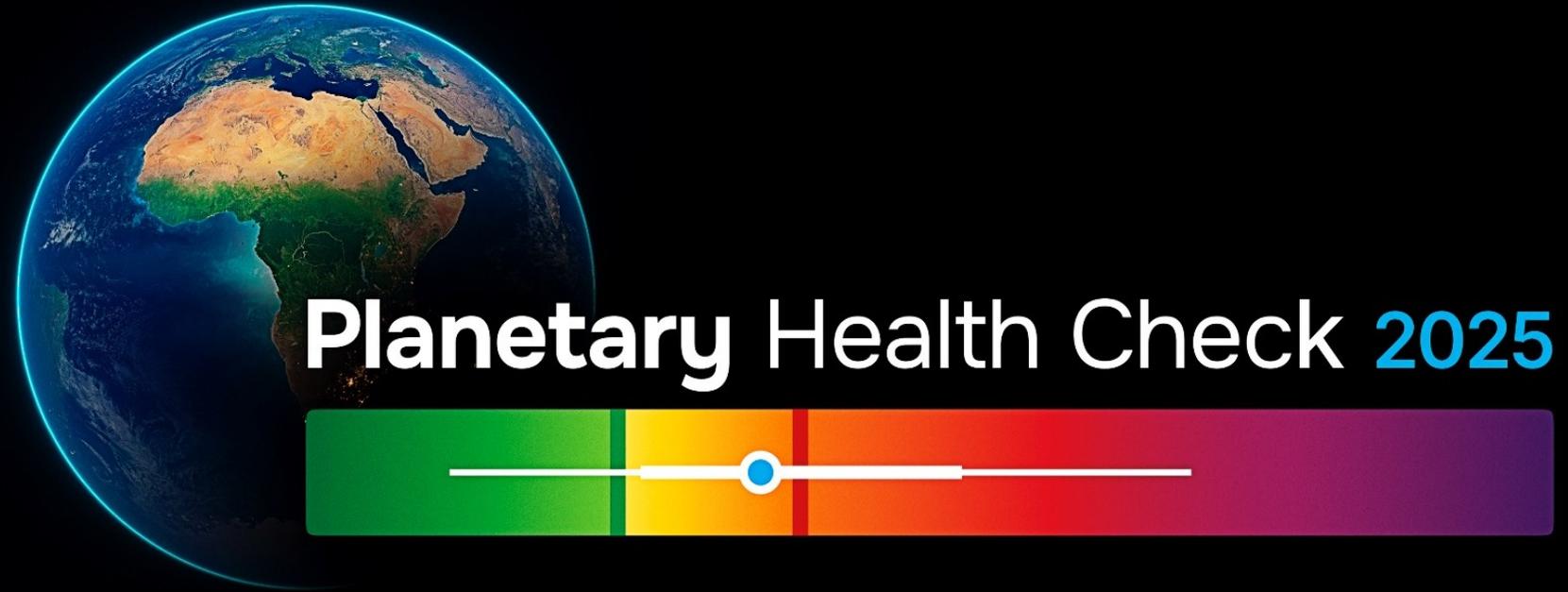


Planetary Health Check 2025

A Scientific Assessment of the State of the Planet

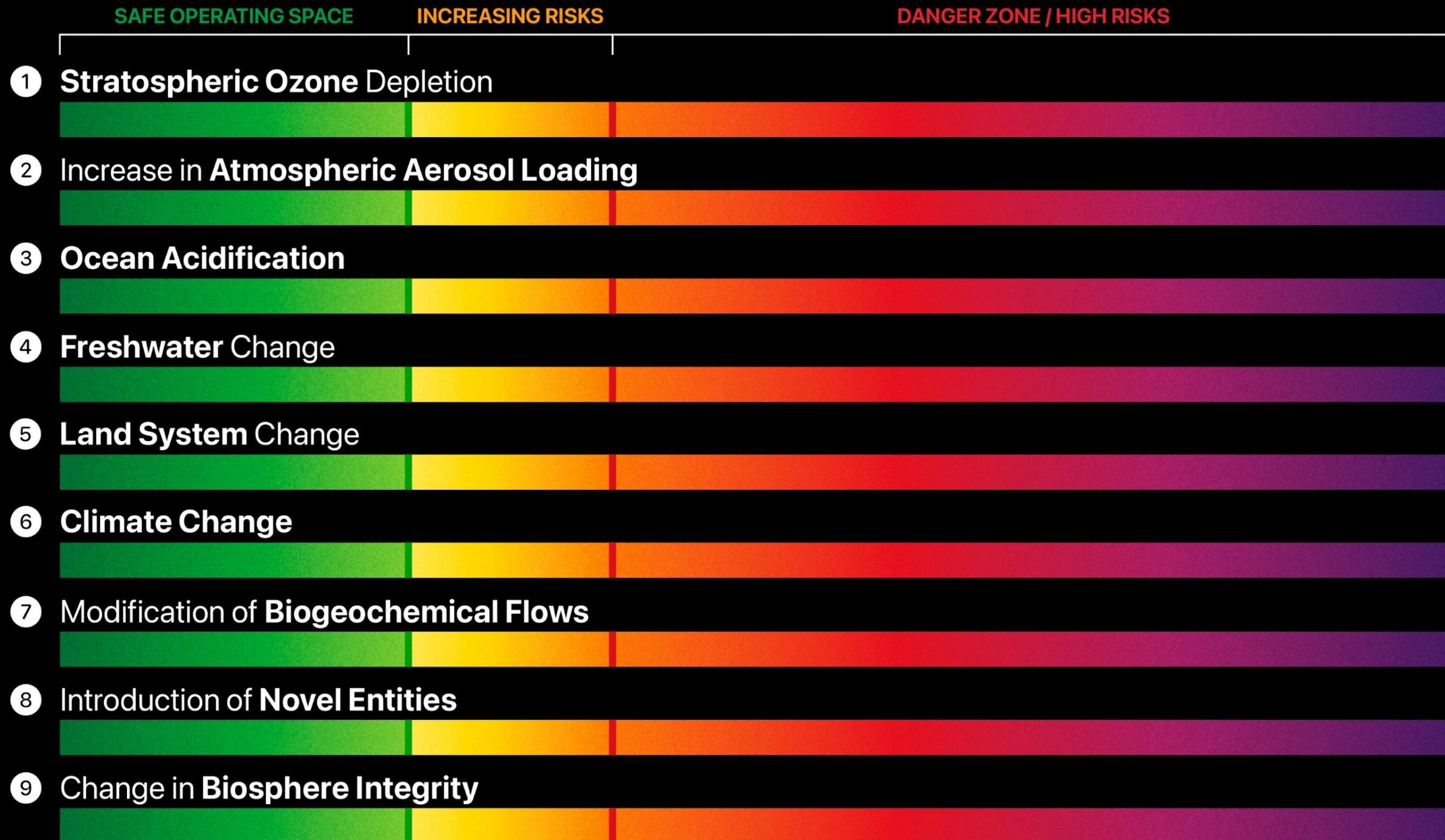


Representing planetary health in one metric



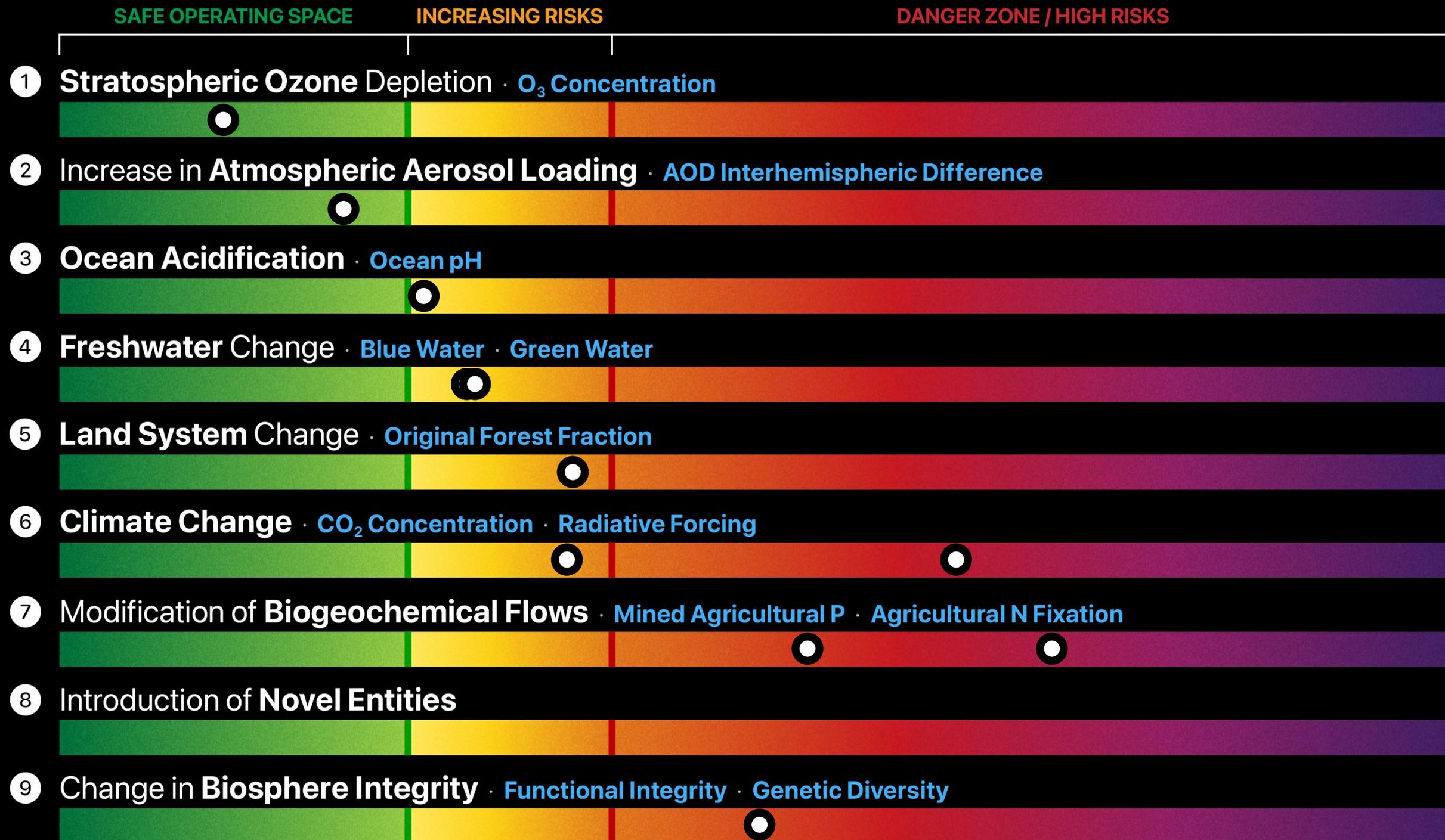
THE PLANETARY BOUNDARIES

Nine pillars of Earth's stability, resilience, and habitability



THE PLANETARY BOUNDARIES

Nine pillars of Earth's stability, resilience, and habitability



How do we **prioritize**
in the face of polycrises?

Three tough truths about climate

What I want everyone at COP30 to know.



By **Bill Gates** published 7 days ago

[Home](#)

TRUTH #1

**Climate change is a serious
problem, but it will not be
the end of civilization.**

TRUTH #2

**Temperature is not the
best way to measure our
progress on climate.**

TRUTH #3

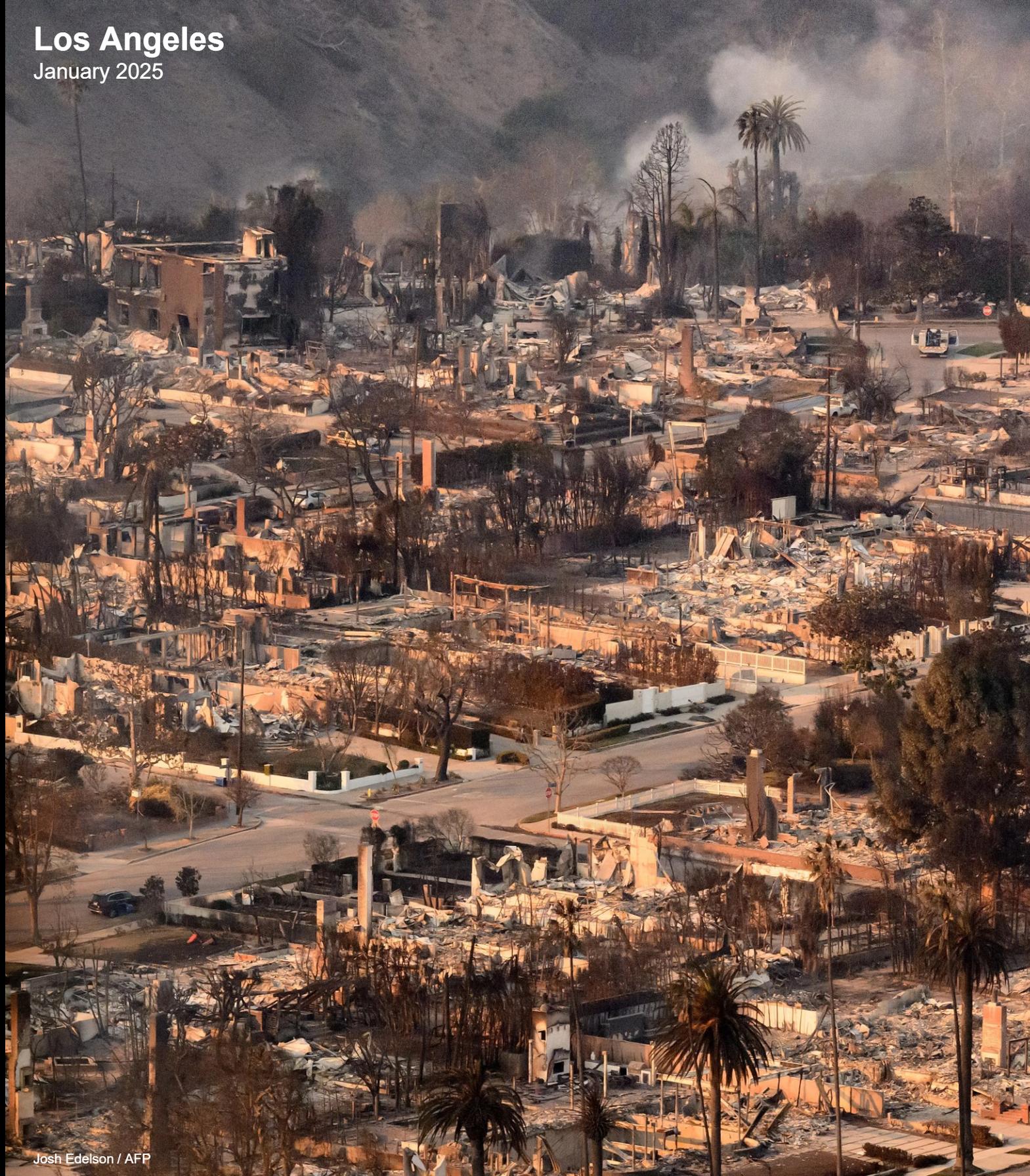
**Health and prosperity
are the best defense
against climate change.**

Three tough truths about the Planetary Boundaries

TRUTH #1:

We can modify our physical environment
– but cannot argue with physics.

Los Angeles
January 2025



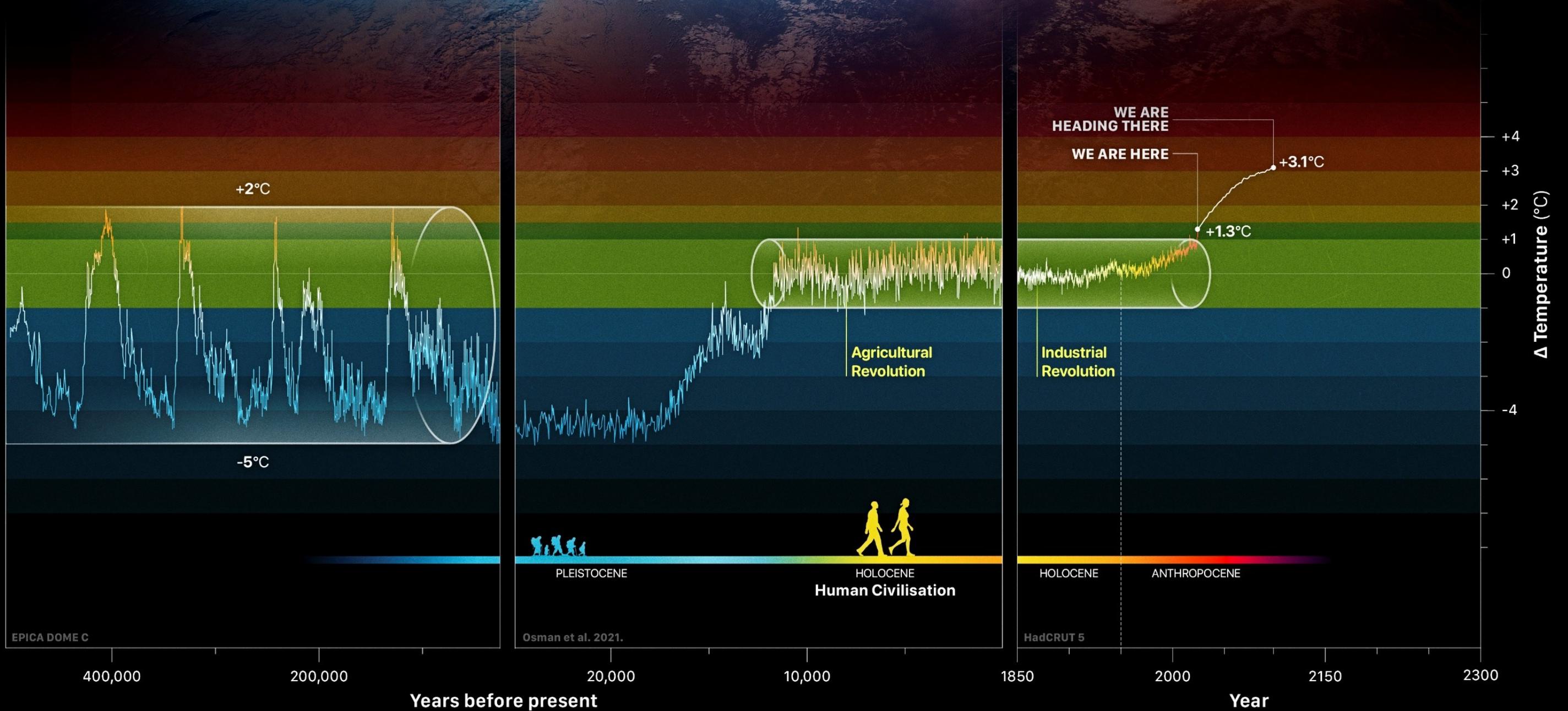
Valencia
October 2024



TRUTH #2:

We do not have all the answers –
so the precautionary principle matters.

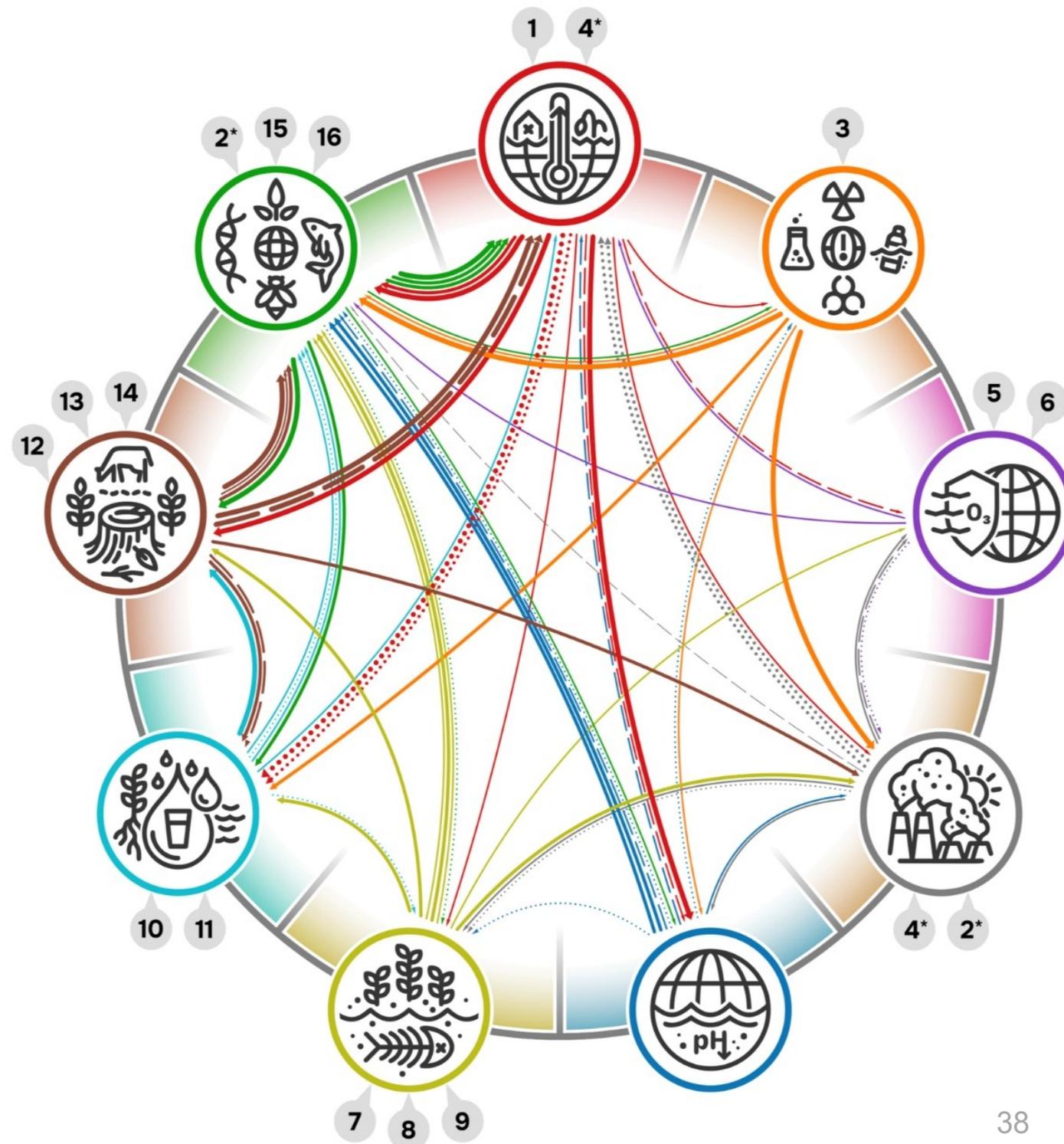
Humanity's Journey on Earth



TRUTH #3:

Complex problems (usually)
require complex answers.

The causal network of Planetary Boundary processes



PB INTERCONNECTIONS

COLOR

 Planetary
 Boundaries

WIDTH

 Interconnection
 Relevance

SOLID LINE

 Connection increasing
 transgression

DASHED LINE

 Connection decreasing
 transgression

DOTTED LINE

 Connection with both
 effects possible

PB DRIVERS

* same driver shown twice for different PBs

- 1 Emission of non-CO₂ greenhouse gases (other pathways than fossil fuel burning)
- 2 Biomass burning
- 3 Release of untested synthetic chemicals
- 4 Fossil fuel burning
- 5 Emissions of synthetic chlorofluorocarbon molecules
- 6 N₂O release to the atmosphere (in multiple contexts, mainly agriculture)
- 7 Application of industrially-fixed N to fields as fertilizers

- 8 Cultivation of N-fixing crops
- 9 Application of mined mineral P to fields as fertilizers
- 10 Industrial and household water use
- 11 Irrigation and agriculture
- 12 Expansion of livestock grazing
- 13 Expansion of cropland
- 14 Expansion of settlements and infrastructure
- 15 Introduction of invasive species
- 16 Harvesting biomass

How can the Planetary Boundaries
guide sustainable development?

Frameworks founded on the Planetary Boundaries



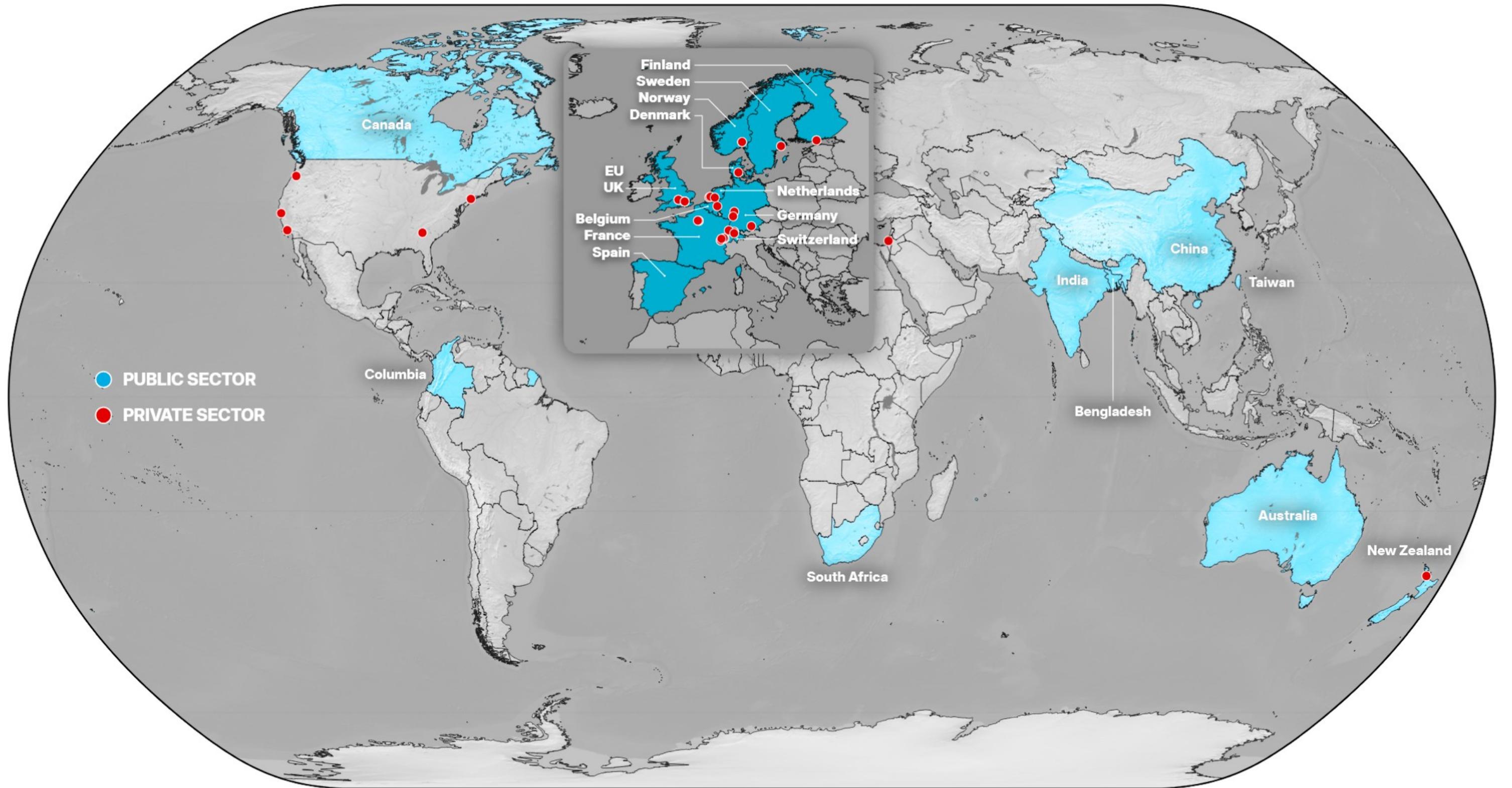


FIGURE 14 - Planetary Boundaries applied around the world. Attempts to operationalize the Planetary Boundaries framework in different national, regional and business contexts (not comprehensive).

Planetary Boundaries (PBs) from global to local

Global

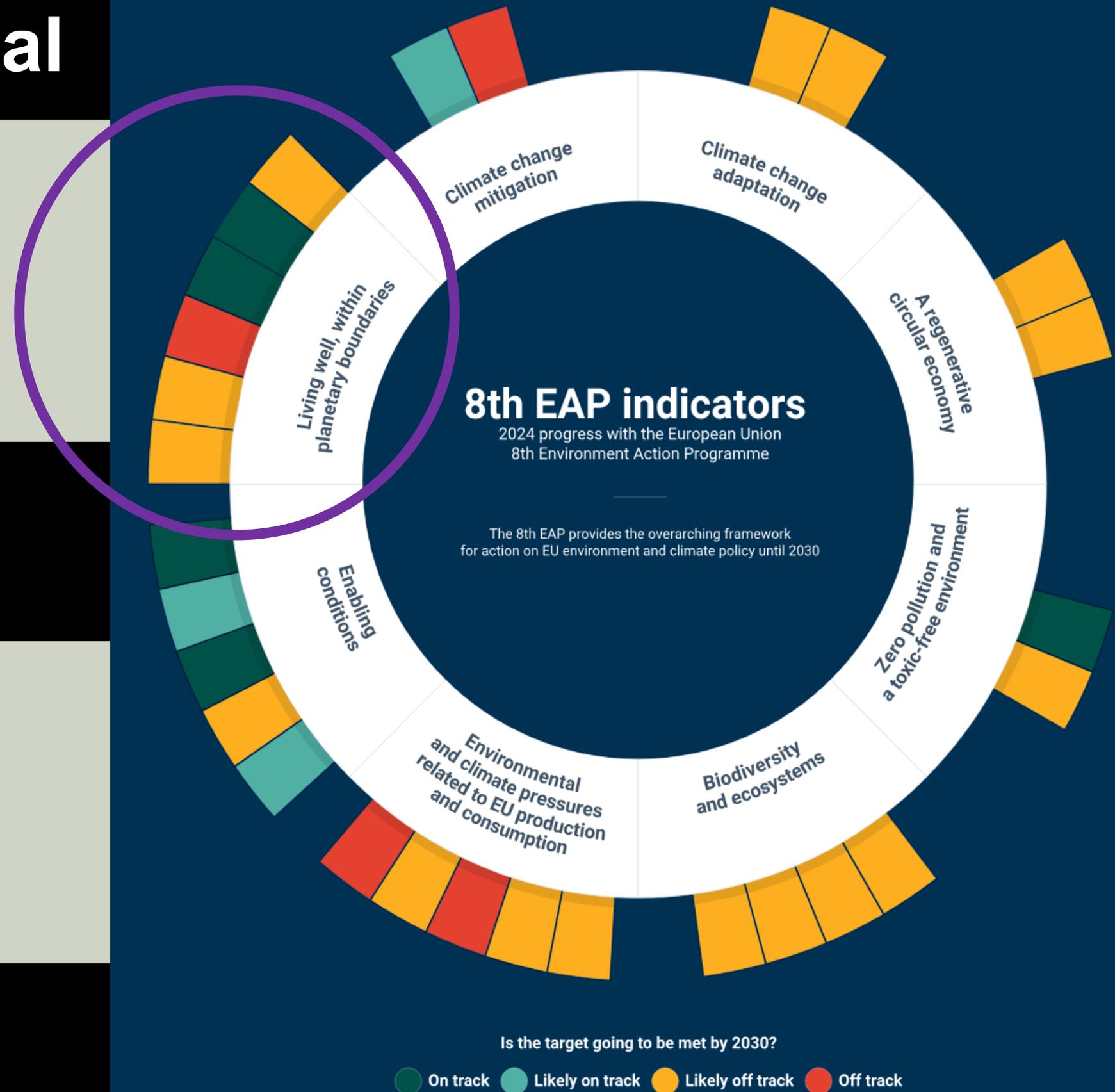
- › PBs shaped UN **SDGs** & **Paris Agreement** (e.g. climate targets align with PB for 1.5–2°C).



PBs from global to local

Transnational

- > **EU's 8th Environment Action Programme** aims for 'well-being within planetary boundaries'.



PBs from global to local

National

- > **Germany** uses PBs as policy 'guardrails';
- > **New Zealand** national PB report as a **guide into a sustainable future**;
- > **Switzerland** held a referendum on **economic reform in line with PBs** this year.



Transformation
gemeinsam
gerecht gestalten

Deutsche Nachhaltigkeitsstrategie
Weiterentwicklung 2025

A safe operating space for
New Zealand/Aotearoa

Translating the planetary boundaries framework



PBs from global to local

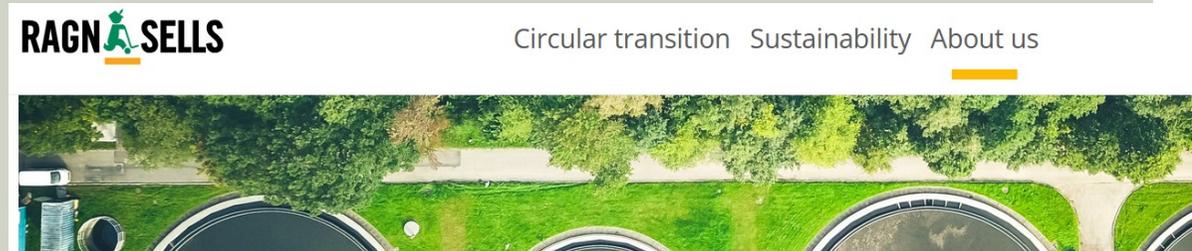
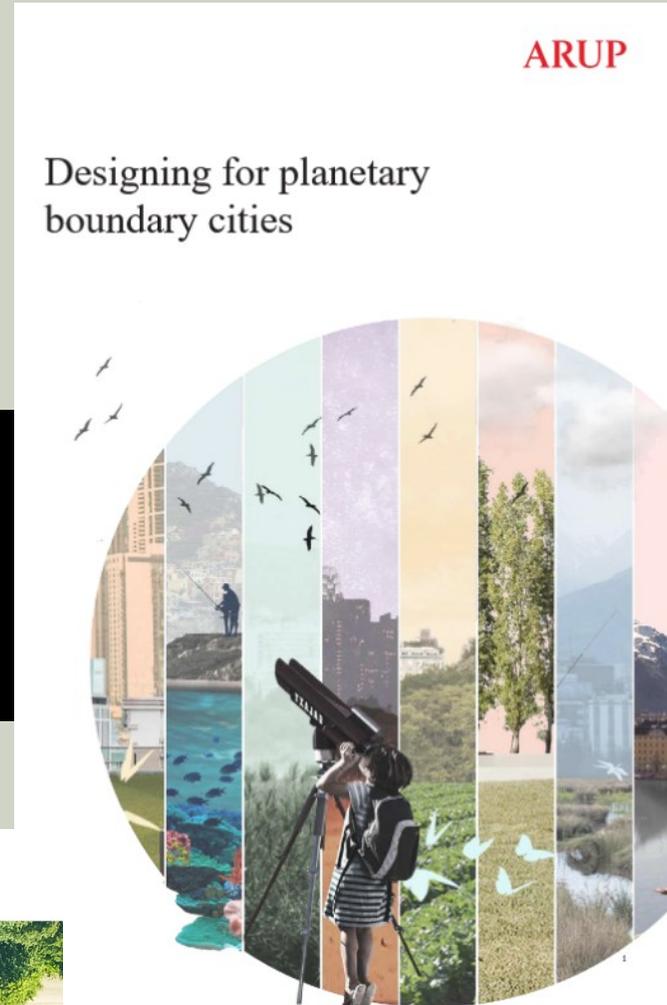
Local

- › **Amsterdam** applies 'Doughnut Economics' to align city planning with PBs

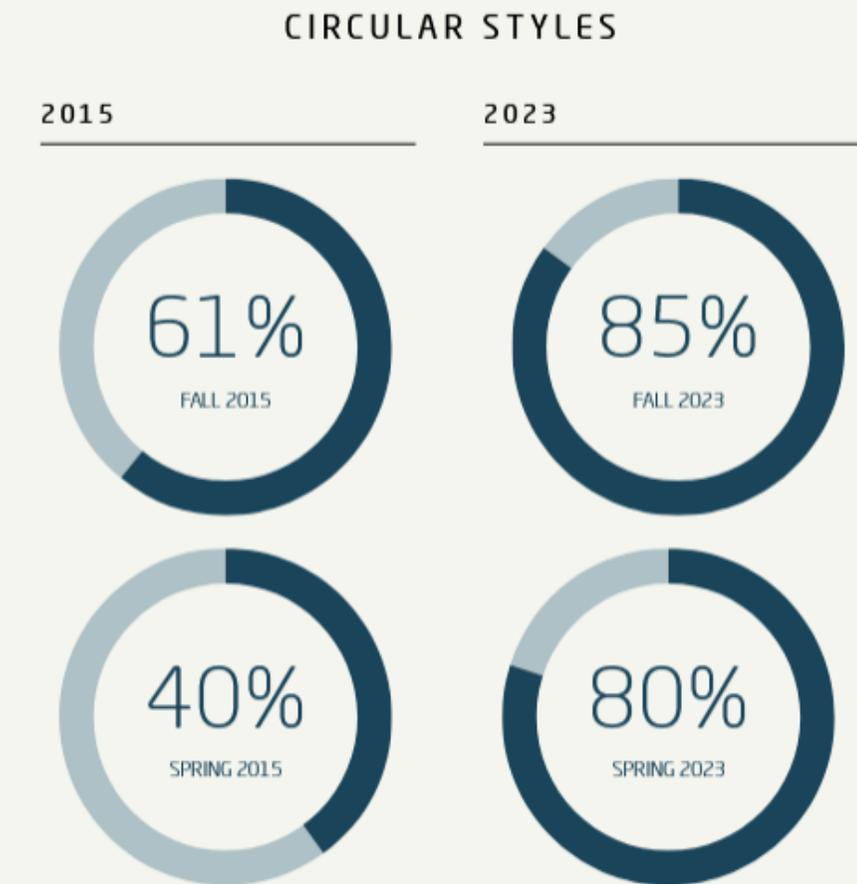


PBs for businesses

- > Arup
- > Houdini Sportswear
- > Ragn-Sells Group
- > ...



Conducting business within planetary boundaries



Houdini's advancement in share of circular styles from 2015 to 2023.

My personal recommendations

- Foster eye-level collaboration where possible.
- Prioritize knowledge transfer.
- Fight inequality not just between, but also within societies.
- Lead by example.



Thank you

planetaryhealthcheck.org

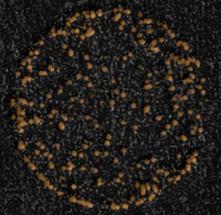


Planetary Boundaries
SCIENCE



P I K

POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH



Planetary[®]
Guardians

Menti survey

We'd like to get a sense of how everyone is feeling in the light of the information shared

<https://www.menti.com/al16oghe9ow1>

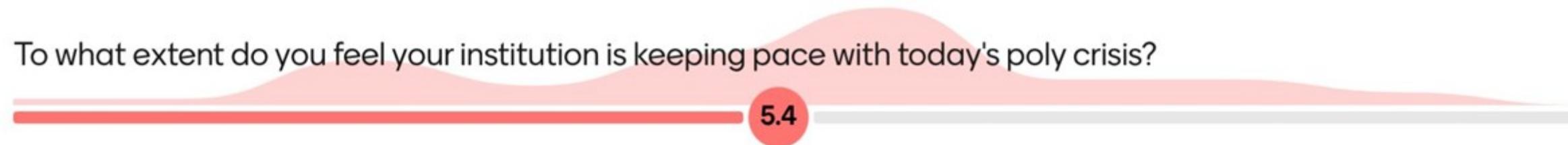


Please rate the following statements about addressing today's polycrisis.

How well do you feel you contribute personally to tackling today's poly crisis in your daily work?



To what extent do you feel your institution is keeping pace with today's poly crisis?



Strongly disagree

Strongly agree

PART 2 :

Panel discussion



Today's panellists



Carmen Thönnissen
Regional advisor
Water and Environment
SDC Skopje, Western Balkans



Lucien Blandenier
Regional advisor
Water, Sanitation, Climate, DRR
SDC Amman, Middle East



Nicole Stolz
Head of Department
Development Cooperation
Swissaid, Bern, Global



Meron Wubishet
Water Food Climate
Programme Director
Addis, Helvetas Ethiopia



Clusters of negotiating chapters

Following the introduction of the revised methodology for the accession negotiations in February 2020, negotiating chapters are now divided in six thematic clusters

- 1. Fundamentals
- 2. Internal market
- 3. Competitiveness & inclusive growth
- 4. Green agenda & sustainable connectivity
- 5. Resources, agriculture & cohesion
- 6. External relations



REVISED ACTION PLAN

FOR THE IMPLEMENTATION OF THE SOFIA DECLARATION
ON THE GREEN AGENDA FOR THE WESTERN BALKANS
2025-2030



TMC





LAND & RESOURCE MANAGEMENT

The 13 PRINCIPLES of AGRO-ECOLOGY

CONNECTIVITY

Q

Q

Q

PARTICIPATION

+ GENDER EQUALITY

Q

COMMON KNOWLEDGE GENERATION

Q

SOCIAL VALUES & NUTRITION

Q

ANIMAL HEALTH

Q

EQUITY

Q

BIODIVERSITY

Q

SYNERGIES

Q

RECYCLING

Q

REDUCTION OF THE USE OF INPUTS

Q

SOIL HEALTH

Q

ECONOMIC DIVERSIFICATION

Q

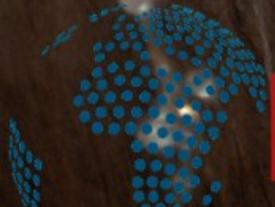








HELVETAS
ETHIOPIA



HELVETAS

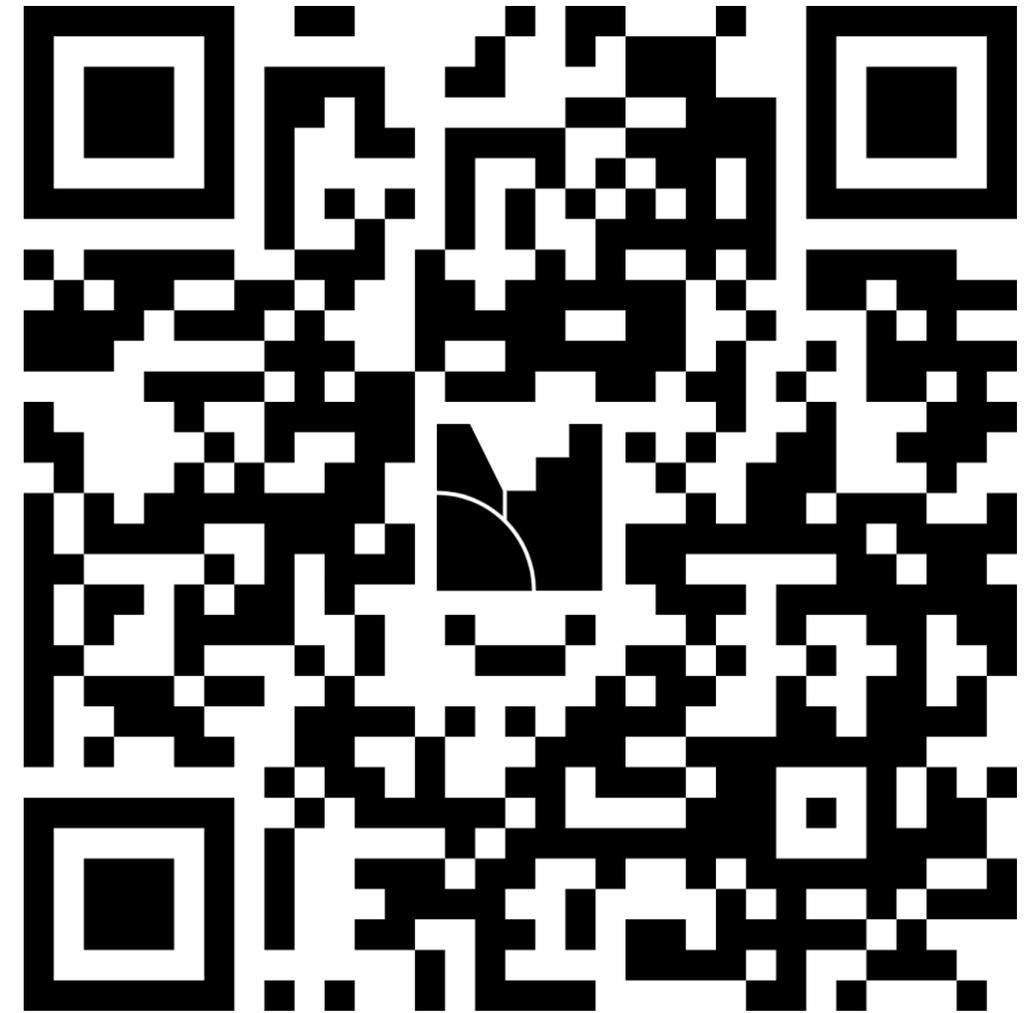


HELVETAS
ETHIOPIA

Menti survey

What word best describes your feeling at the end of this discussion?

<https://www.menti.com/al16oghe9ow1>



What word best describes your feeling at the end of this discussion?



Wrap-up



Next steps



Thank you !



Agriculture & Food systems



Climate, DRR & Environment



Water