# The COMMONS and Planetary Boundaries

## Sources and Resources for this Study

Private property - Wikipedia
Libertarianism.org
Globaïa (Check out this site!)
Hardin, Tragedy of the Commons.pdf
Commons - Wikipedia
Planetary boundaries - Wikipedia
About - Earth Overshoot Day
"The Tragedy of the Commons" - ppt download
The Tragedy of the Commons: How Elinor Ostrom Solved One of Life's Greatest Dilemmas - Evonomics
What Is the Tragedy of the Commons in Economics?
Tragedy of the Commons | HL IB ESS OLD COURSE - IGNORE Revision Notes 2024
Hardin's Tragedy of the Commons revisited, environmental science, global warming, groundwater, surface water, diffusion, Victor Miguel Ponce
https://www.nature.com/articles/461472a/figures/1
Planetary boundaries - Stockholm Resilience Centre
A safe operating space for humanity | Nature
Why are we not talking about Ecological Overshoot? | by Elisabeth Robson | Medium

## What part of our planet is truly "Private Property"?

## *The Commons: Open-access regimes*

*Wiki: The **commons** is the cultural and natural resources accessible to all members of a society, including natural materials such as air, water, and a habitable Earth. These resources are held in common even when owned privately or publicly. Commons can also be understood as natural resources that groups of people (communities, user groups) manage for individual and collective benefit.*

We may not have put words to this concept of the commons, even if it's intuitive. We do think of our rights and property - and someone dumping waste in our backyard isn't right. Even for Libertarians, recognition of limits to "private property" was fundamental:

> "For this Labour being the unquestionable Property of the Labourer, no Man but he can have a right to what that is once joined to, **at least where there is enough, and as good left in common for others.**" - John Loche (1689)

> "The only freedom which deserves the name, is that of pursuing our own good in our own way, **so long as we do not attempt to deprive others of theirs, or impede their efforts to obtain it**."
> – John Stuart Mill, *On Liberty* (1859)

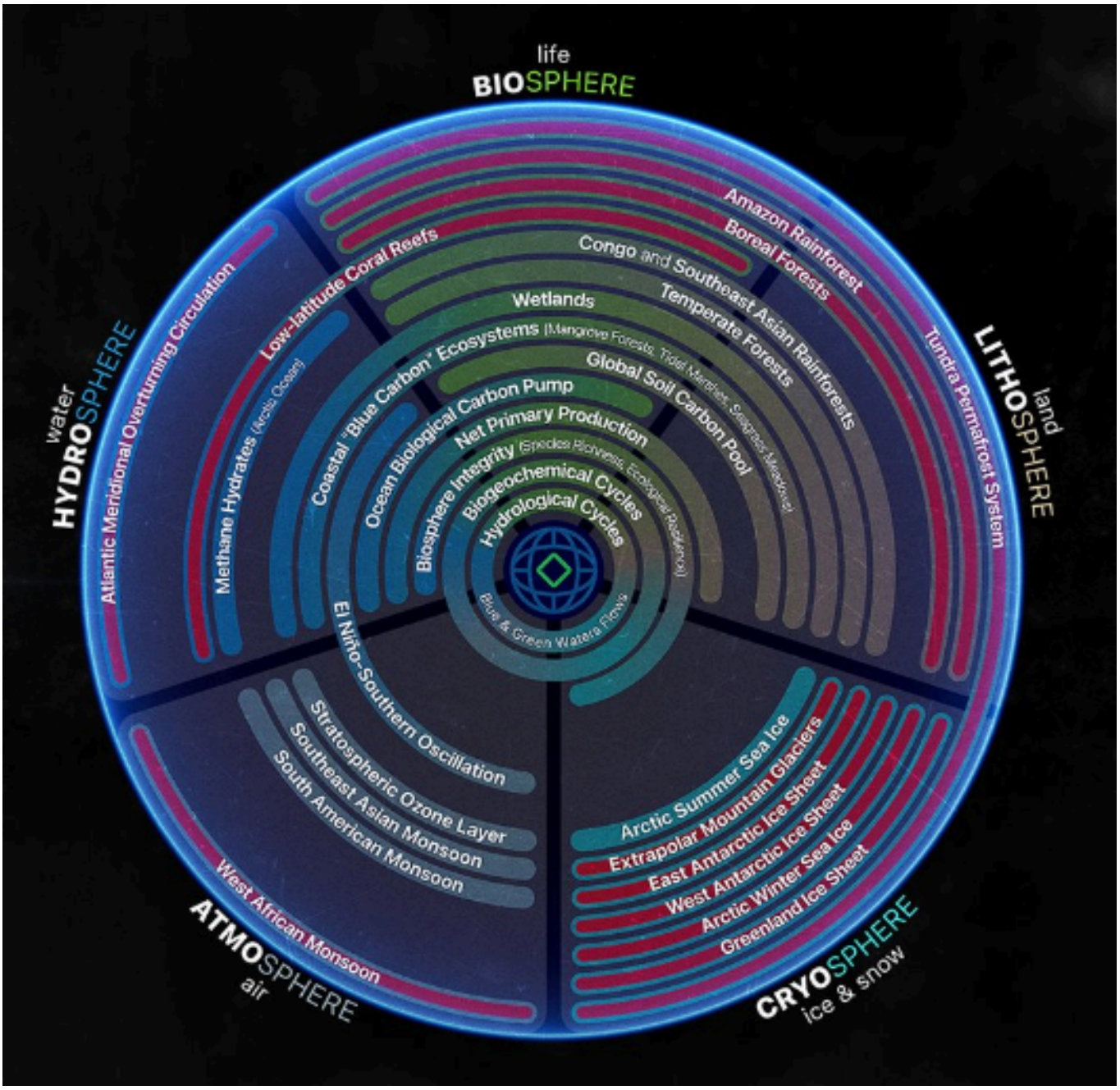
# *A new perspective: The Global Commons*

In this Study, we take a look at:

1. The Planetary Commons, with all of the physical systems in play
2. "Doughnut Economics" reminding us of the societal and ecological dimensions of "the Commons"
3. The "Tragedy of the Commons"
4. How to overcome the "Tragedy"
5. Earth System Boundaries and Overshoot

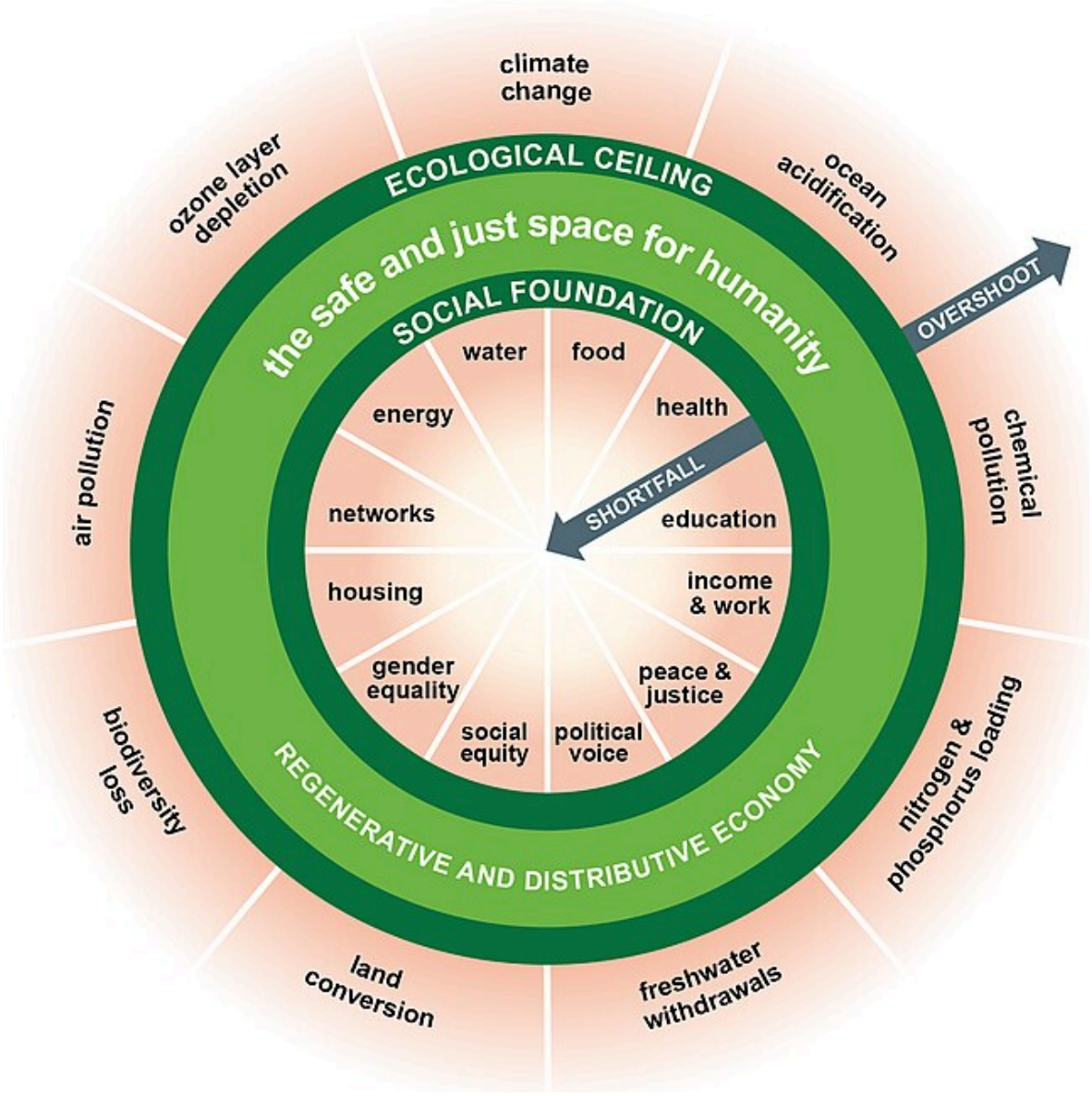
# 1. The Planetary Commons, with all of the physical systems in play

This depicts systems which can be disrupted by not respecting the Commons.



## 2. "Doughnut Economics" reminds us of the societal and ecological dimensions of "the Commons"

I found it interesting that respect for others, so central to Western thinking, has both a social foundation and an ecological ceiling, further defining the Commons…



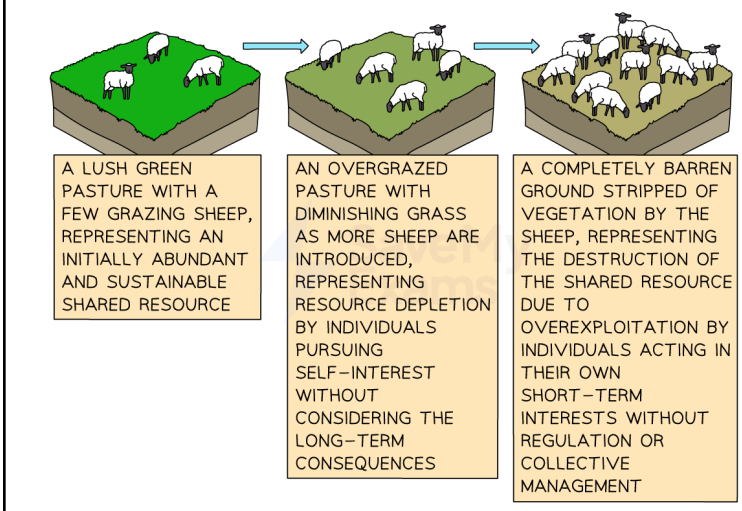

Based on a growing understanding of planetary limits, Doughnut Economics recognises that a number of parts of the world fall below the 'social foundation' of basic needs while, in richer parts of the world, people live in a way that breaches the 'ecological ceiling'. Kate Raworth's model describes the challenge: to rethink economics so we can bring everyone into the 'safe and just space for humanity'. Image redrawn from Doughnut Economics, Creative Commons

# 3. The "Tragedy of the Commons"

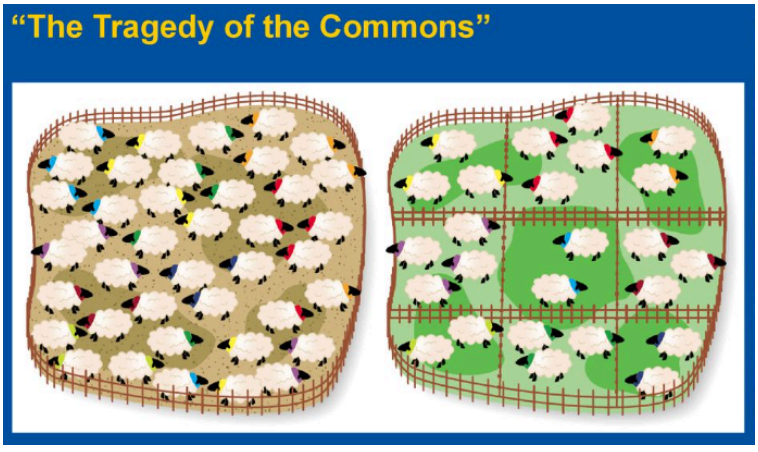
In 1968, Garrett Hardin published in *Science* a groundbreaking article clarifying the situation that the propensities of individuals, as well as overpopulation, have caused damage to resources shared by all → **The COMMONS**.

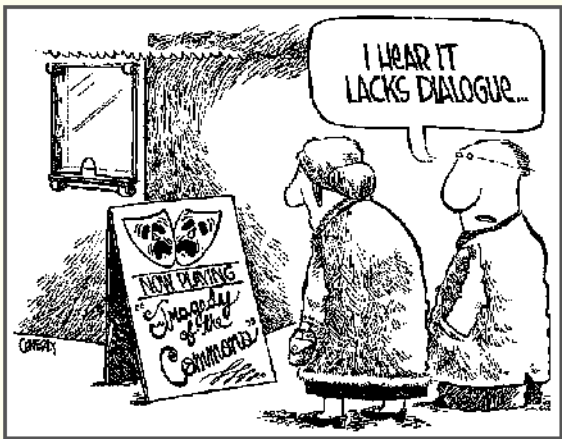
**"The Tragedy of the Commons"**

- In his essay, ecologist Garrett Hardin argued that the main difficulty in solving environmental problems is the conflict between the short-term interests of the individual and the long-term welfare of society.
- The example he used was the commons, or the areas of land that belonged to the whole village.







# 4. How to overcome the "Tragedy"

## - *Coercion (mutually agreed)*

In general, Hardin dismissed that individual conscience would be effective in solving this or related problems and saw "coercion" as necessary. But he made sure to clarify: ***"The only kind of coercion I recommend is mutual coercion, mutually agreed upon by the majority of the people affected."***

*"Every new enclosure of the commons involves the infringement of somebody's personal liberty. Infringements made in the distant past are accepted because no contemporary complains of a loss.*

*"It is the newly proposed infringements that we vigorously oppose; cries of **"rights" and "freedom"** fill the air. But what does "freedom" mean? When men mutually agreed to pass laws against robbing, mankind became more free, not less so. Individuals locked into the logic of the commons are free only to bring on universal ruin; once they see the necessity of mutual coercion, they become free to pursue other goals. I believe it was Hegel who said, **"Freedom is the recognition of necessity."**"*

## - *Design Principles*

In more recent thought, Elinor Ostrom challenged the received wisdom in her field of political science. The message of her work was that ***groups are capable of avoiding the tragedy of the commons without requiring top-down regulation*, at least if certain conditions are met** (Ostrom 1990, 2010)

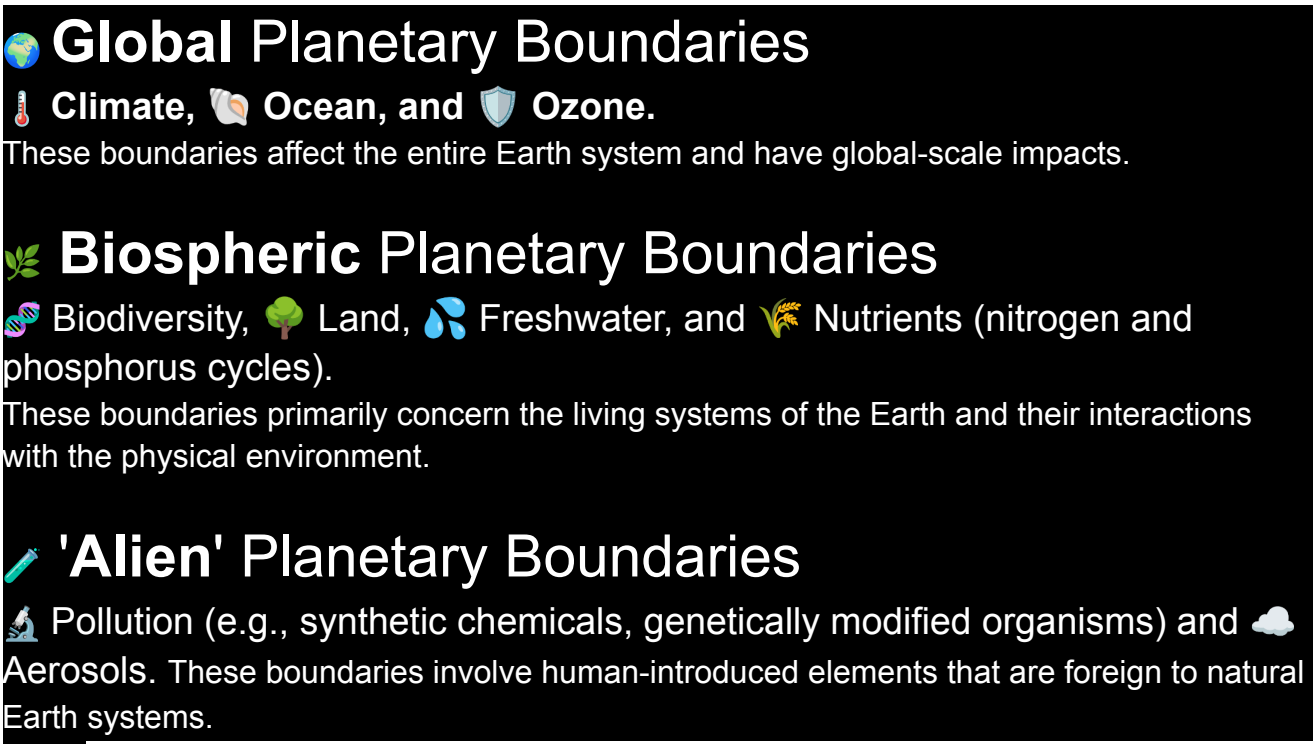
Ostrom proposed a series of design principles (DP) to ensure success - this work was so groundbreaking that Ostrom was awarded the Nobel Prize in economics in 2009.

- Clearly defined boundaries (DP1) meant that members knew they were part of a group and what the group was about (e.g., fisherman with access to a bay or farmers managing an irrigation system).
- Proportional equivalence of costs and benefits (DP2) meant that members had to earn their benefits and couldn't just appropriate them.
- Collective choice arrangements (DP3) meant that group members had to agree upon decisions so nobody could be bossed around.

- Monitoring (DP4) and graduated sanctions (DP5) meant that disruptive self-serving behaviors could be detected and punished.
- Fast and fair conflict resolution (DP6) meant that the group would not be torn apart by internal conflicts of interest.
- Local autonomy (DP7) meant that the group had the elbow room to manage its own affairs.
- Appropriate relations with other tiers of rule-making authority (DP8) meant that everything regulating the conduct of individuals within a given group also was needed to regulate conduct among groups in a multi group population.

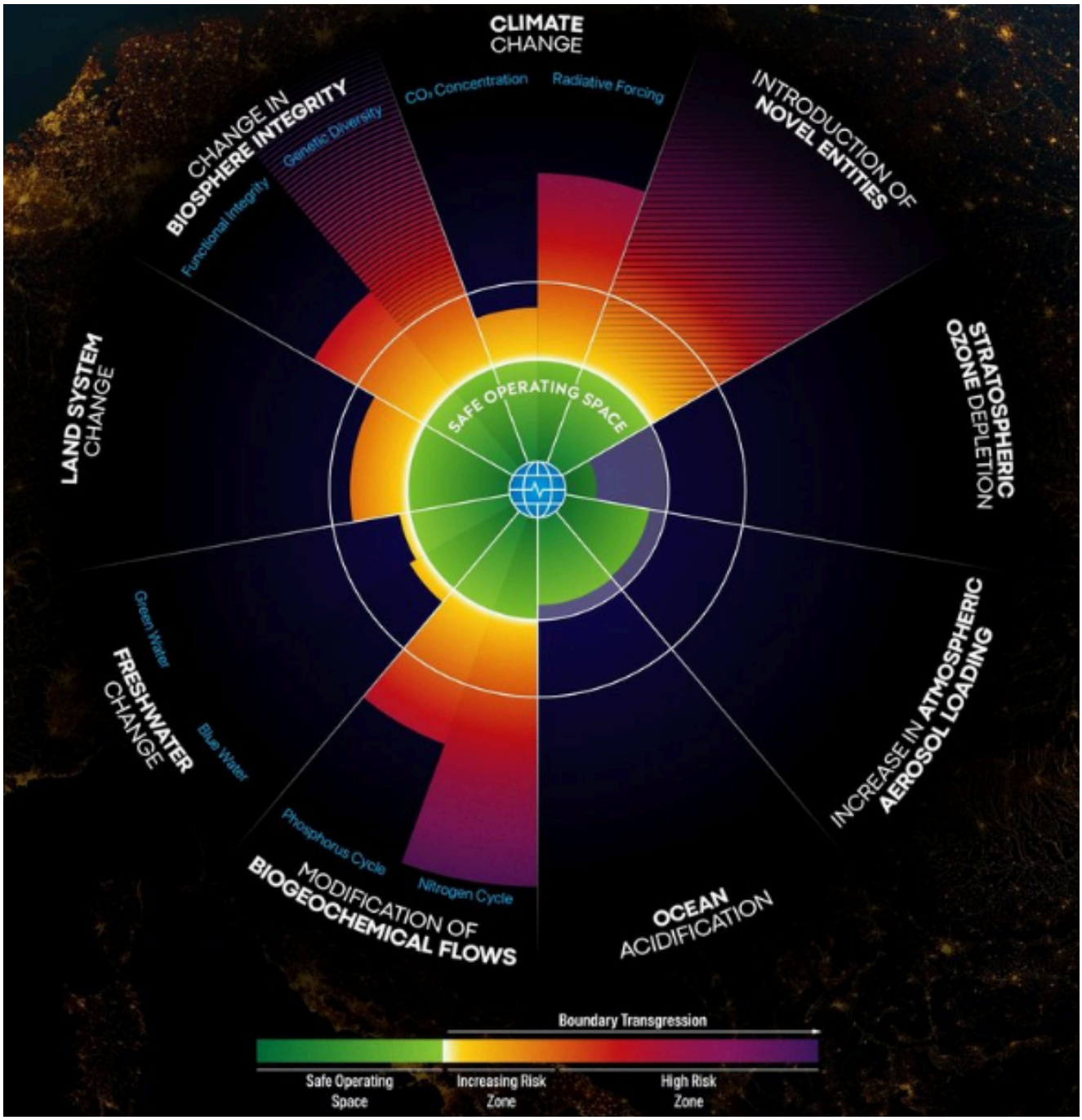
## 5. Earth System Boundaries and Overshoot

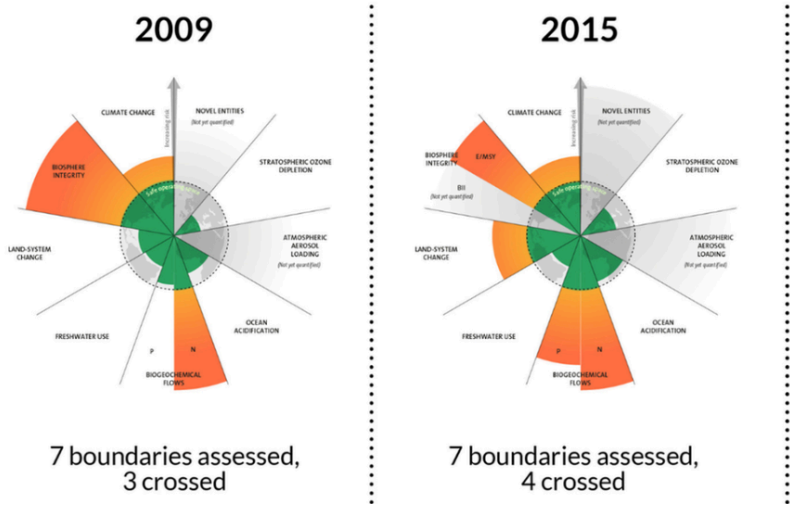
We may categorize planetary boundaries into three broad groups:



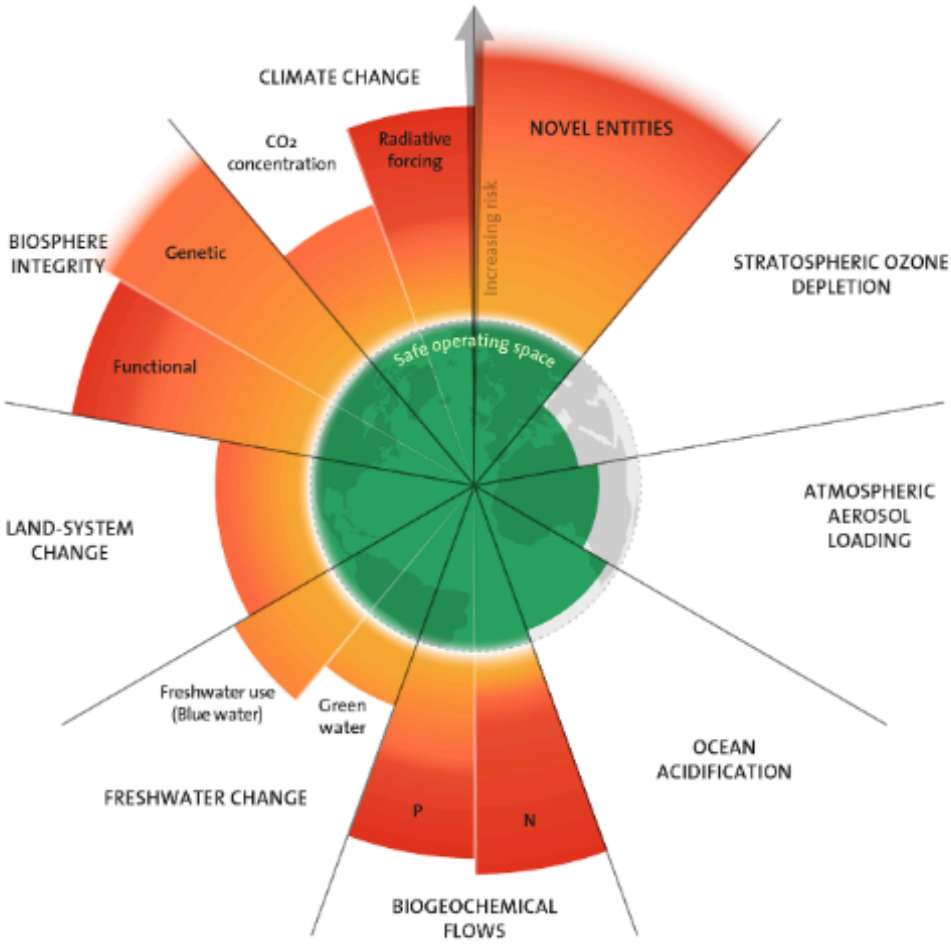

Once the concept of the Commons is internalized, a natural question is “how well are we taking care of it?”. The planetary boundaries concept presents a set of nine planetary boundaries within which humanity can continue to develop and thrive for generations to come.

In September 2023, a team of scientists quantified, for the first time, all nine processes that regulate the stability and resilience of the Earth system. These nine Planetary Boundaries were first proposed by former center director Johan Rockström and a group of 28 internationally renowned scientists in 2009. **The Planetary Boundaries are the safe limits for human pressure on the nine critical processes which together maintain a stable and resilient Earth.** The 2023 update not only quantified all boundaries, it also concluded that six of the nine boundaries have been transgressed.



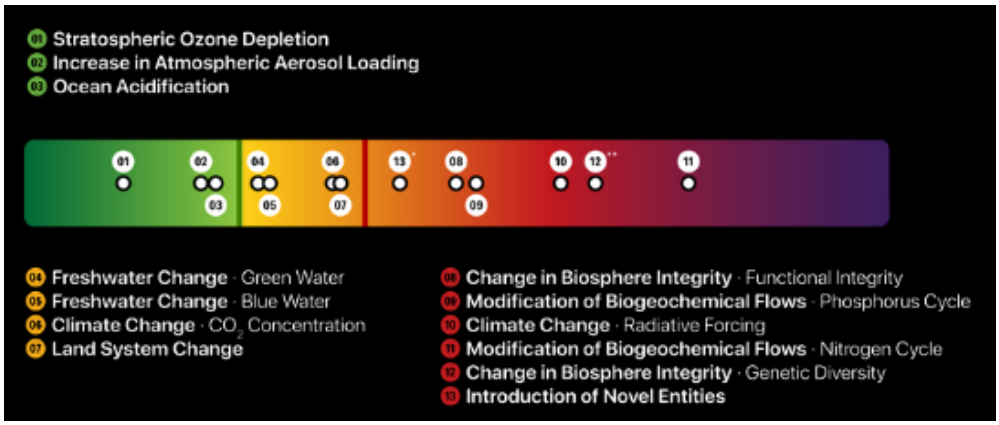


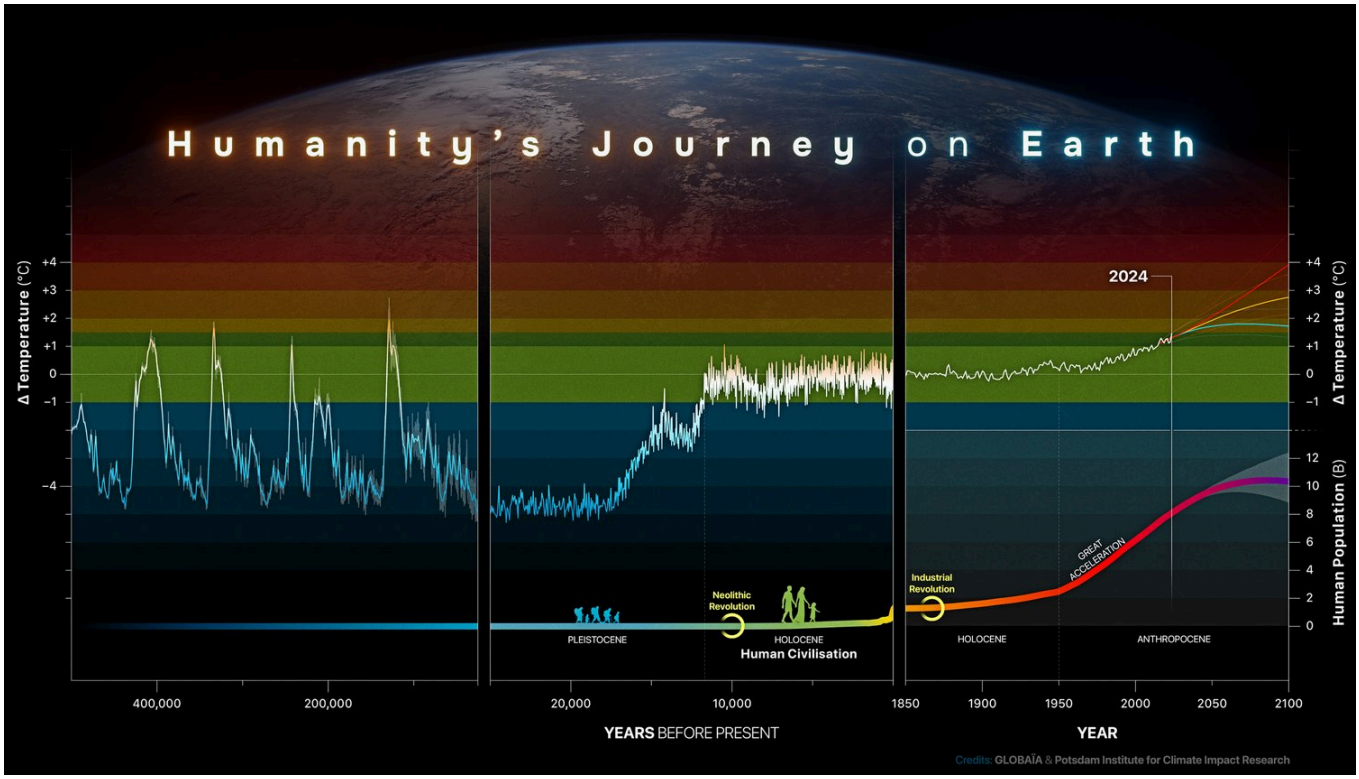

## 2023




9 boundaries assessed,
6 crossed

Another view of these assessments can be found at [Planetary Health Check — Globaïa]



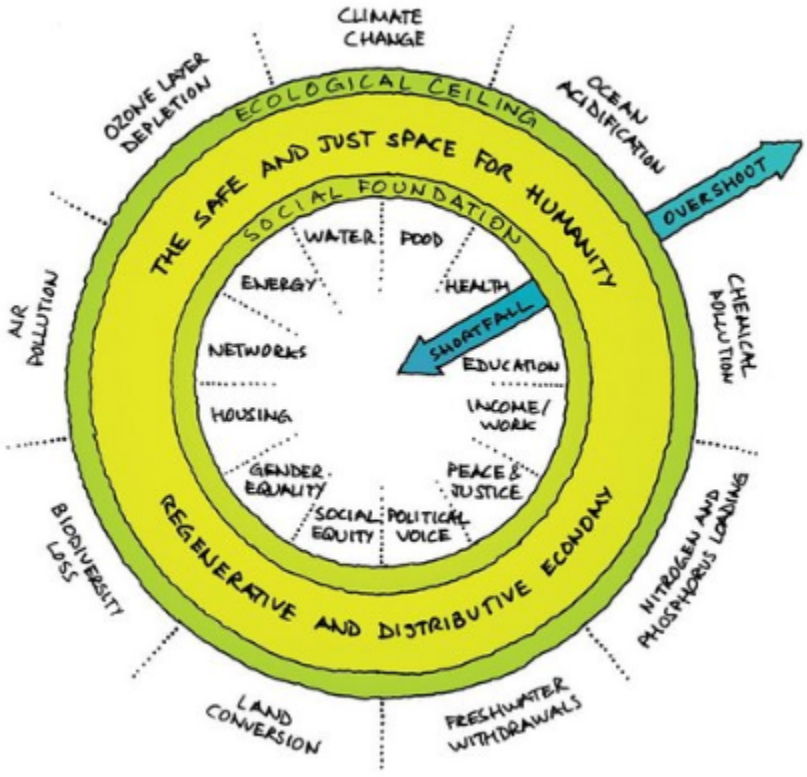



# Overshoot

This is hard to get one's head around. Planetary overshoot, also known as ecological overshoot or global overshoot, occurs when human demand for resources and services exceeds the Earth's ability to regenerate them:

## A Sustainable World

- **Sustainability** is the condition in which human needs are met in such a way that a human population can survive indefinitely.
- Sustainability is a key goal of environmental science.




If Earth was a spaceship, how would you manage its life-support system?

EARTH OVERSHOOT DAY

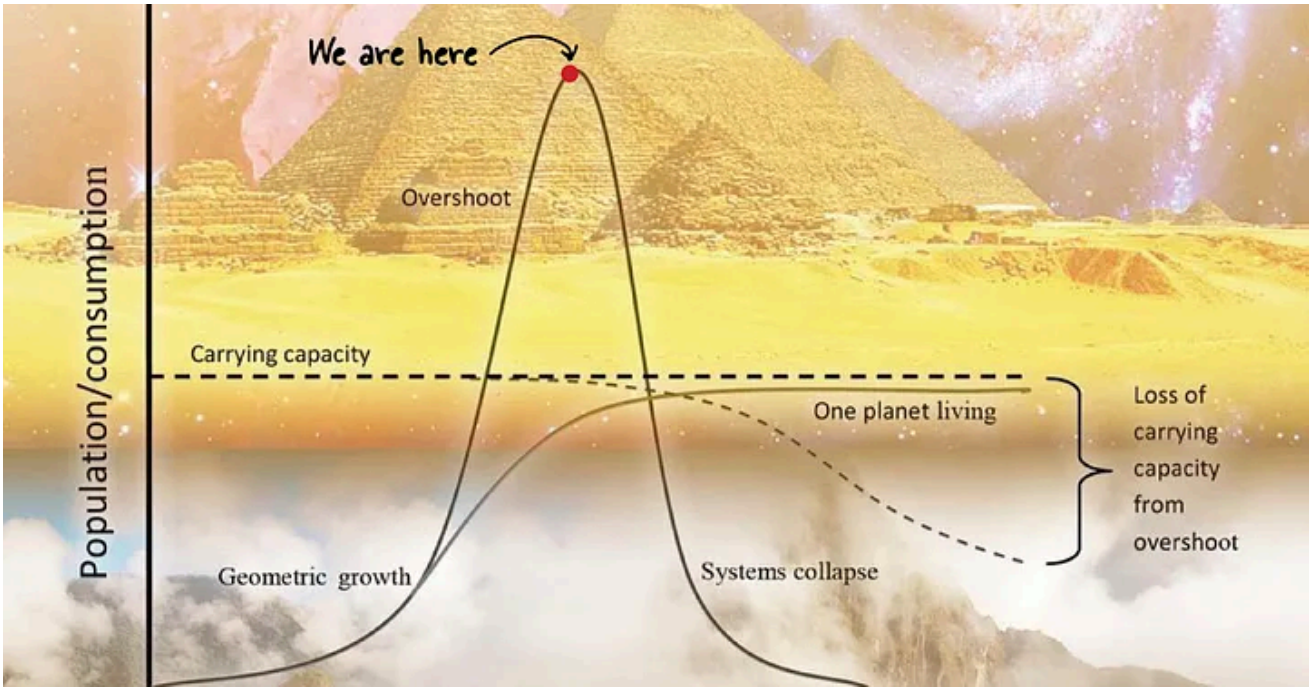
**Overshoot**

Refers to a situation where humanity's demand on nature exceeds the Earth's biocapacity to regenerate resources and absorb waste, including carbon emissions.

This concept implies that human consumption and waste production are occurring at a rate faster than the ecosystem can replenish and recover. Overshoot leads to the depletion of ecological reserves, such as forests, fisheries, and clean air, and results in long-term damage to the environment, including loss of biodiversity, deforestation, and climate change.

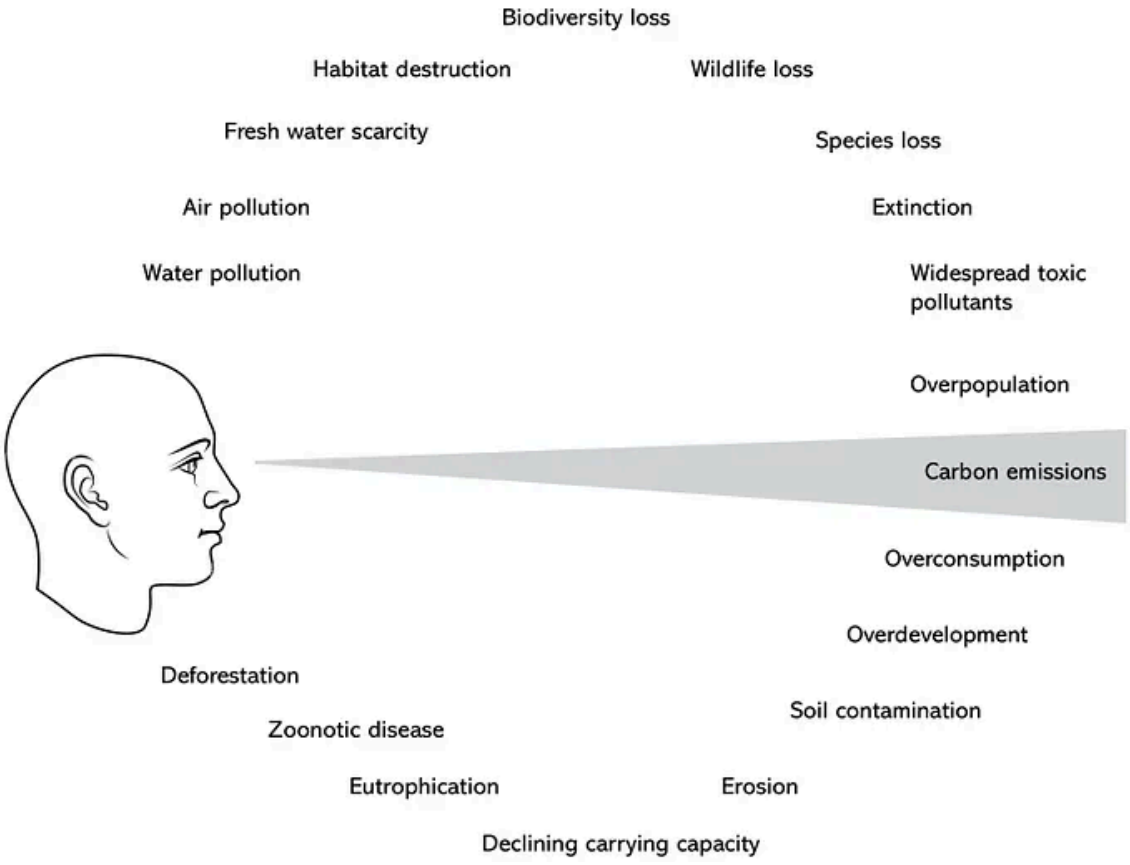
Currently, humanity's demand for goods and services exceeds the Earth's capacity to provide them by 75%, meaning we are consuming resources as if we had 1.75 Earths, *despite only having one*.

Ref: Global Footprint Network / Earth Overshoot Day



# Punchline

## *Don't miss the Big Picture With Carbon Tunnel Vision!*



# *We are part of the Earth System*

**Approximate "Cheat Sheet":**

**1 meter** → 3 feet **1 degree Celsius ($^0$C)** → 2 degree Fahrenheit ($^0$F)

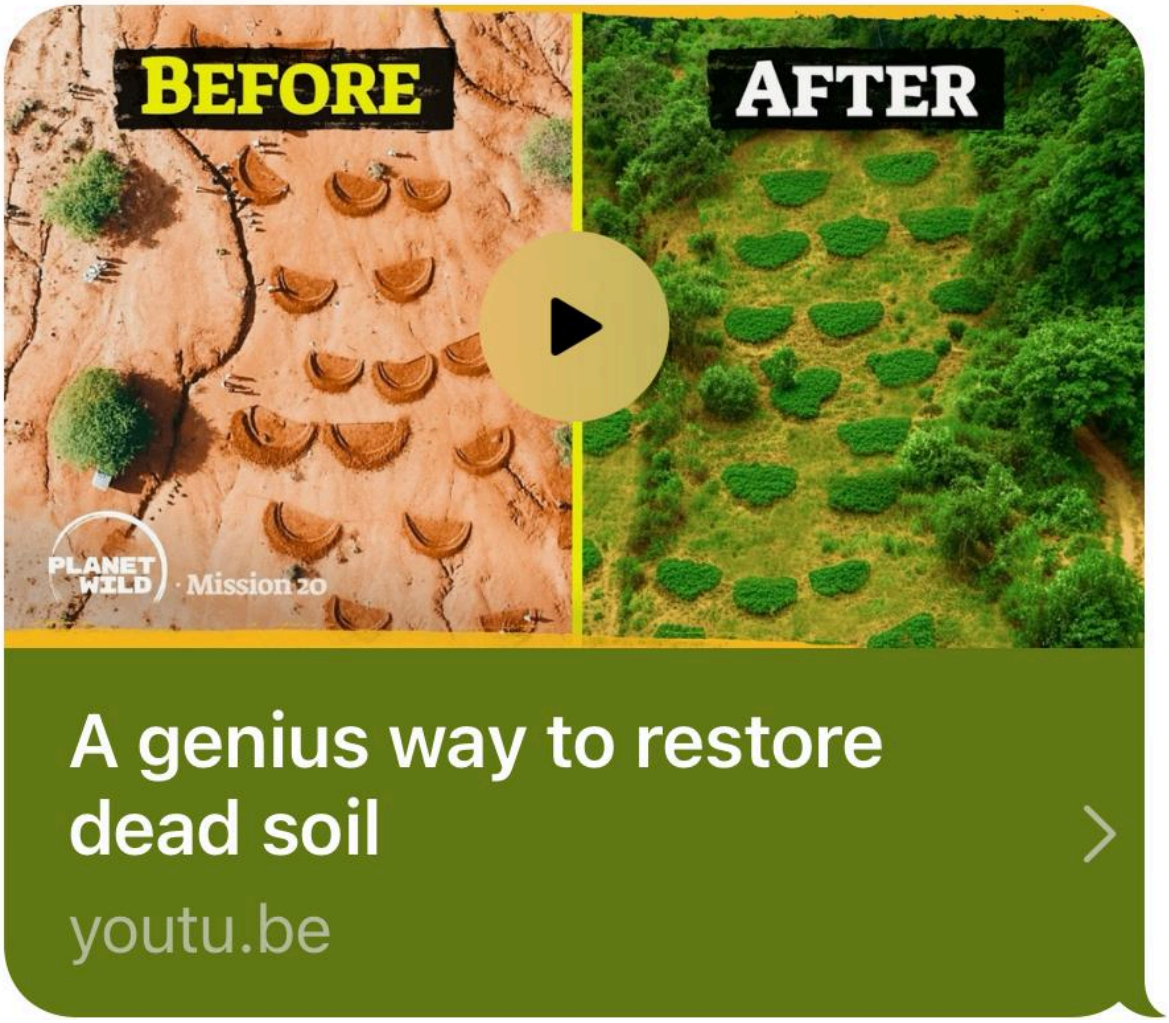
**ppm** = parts per million **$CO_2$** = Carbon Dioxide

**1 tonne** = 1000 kilograms = 2205 pounds **1 gigatonne (1 Gt)** = 1 billion tonnes

**1 trillion tonnes (1Tt)** = 1000 gigatons

# GOOD NEWS CORNER

https://youtu.be/vG1H9Sg4lBM



# Our Natural World

News+

BBC wildlife

## Photo Club: The world's best amateur photography, including a butterfly landing on a turtle's nose