Webinar

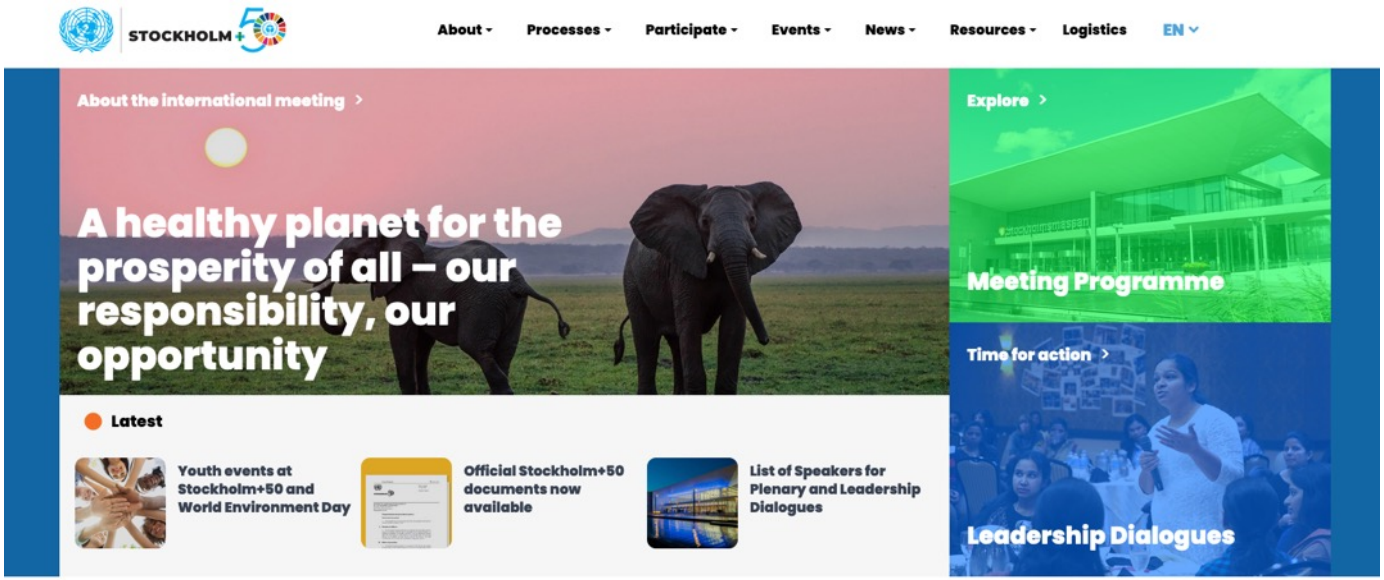
Un planeta sano para el bienestar de todas las personas

Nuestra responsabilidad, nuestra oportunidad

Con el objetivo de celebrar el Día Mundial del Medio Ambiente

2 de junio de 2022

Luiz A C Galvão, MD, MPH, DSC



It's time for bold choices. It's time for urgent action. It's time for a better future on a healthy planet.

On 2 and 3 June 2022, a crucial international environmental meeting will be held in Stockholm, Sweden. Anchored in the Decade of Action, under the theme "Stockholm+50: a healthy planet for the prosperity of all – our responsibility, our opportunity," this high-level meeting will follow months of consultations and discussions with individuals, communities, organizations and governments around the world. A one-day preparatory meeting was held at United Nations Headquarters in New York on 28 March 2022.

Stockholm+50 will commemorate the 1972 United Nations Conference on the Human Environment and celebrate 50 years of global environmental action. By recognizing the importance of multilateralism in tackling the Earth's triple planetary crisis – climate, nature, and pollution – the event aims to act as a springboard accelerate the implementation of the UN Decade of Action to deliver the Sustainable Development Goals, including the 2030 Agenda, Paris Agreement on climate change, the post-2020 global Biodiversity Framework, and encourage the adoption of green post-COVID-19 recovery plans

Main Event

2 - 3 June 2022
Stockholmsmässan, Stockholm

Key Documents >

Stockholm+50 overview
Concept note for meeting
Provisional Agenda
AR >, ZH >, EN >, FR >, RU >, ES >
UNGA Enabling Resolution
UNGA Modalities Resolution
More

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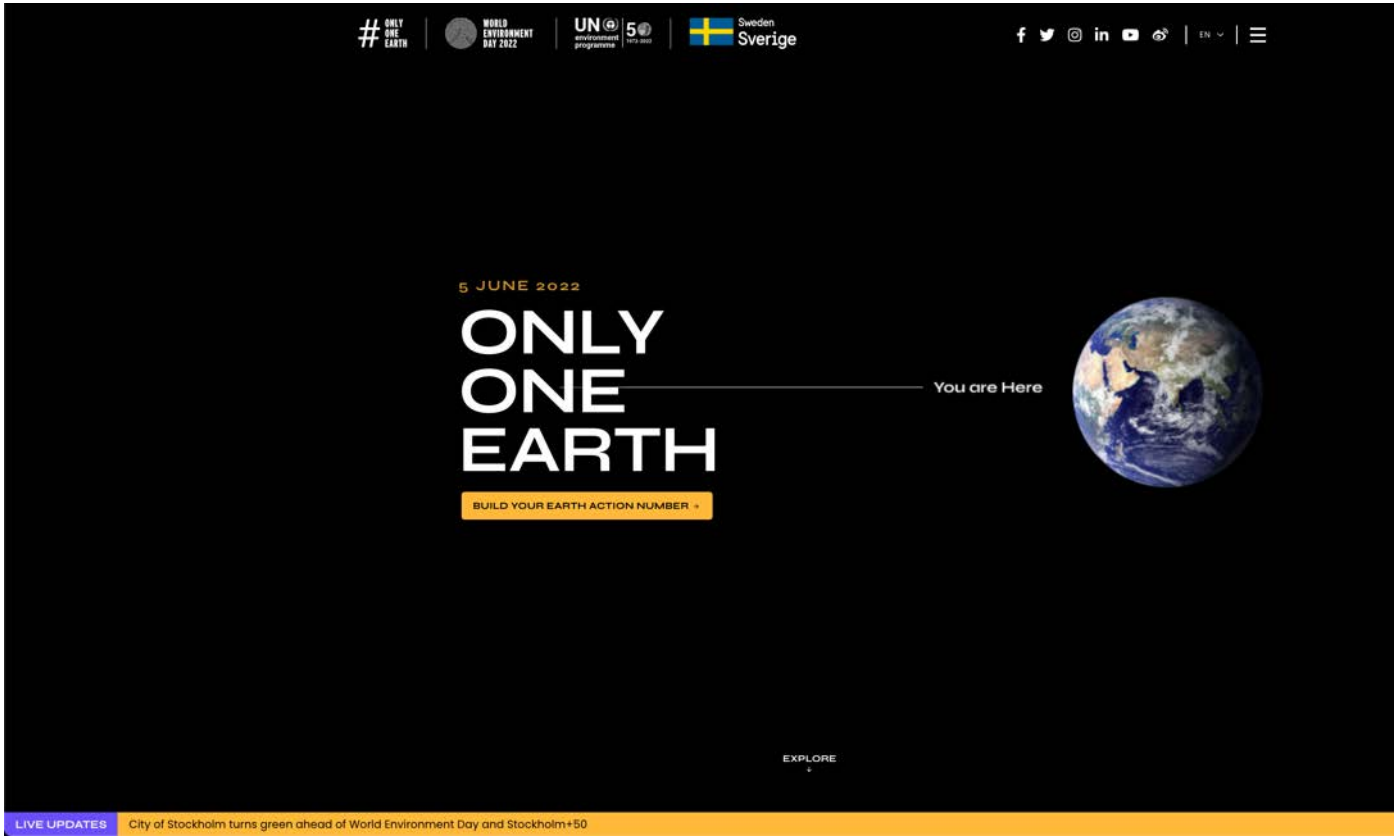
https://www.stockholm50.global/



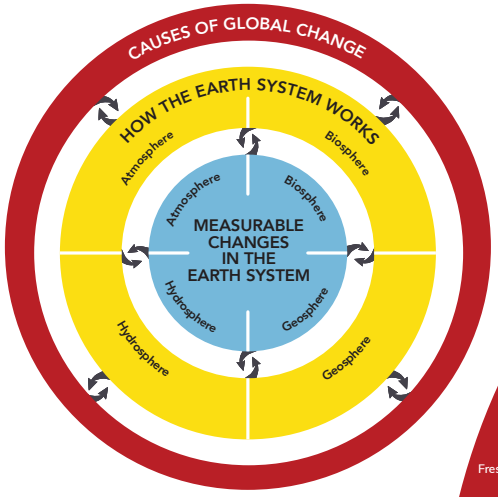
https://action.worldenvironmentday.global/

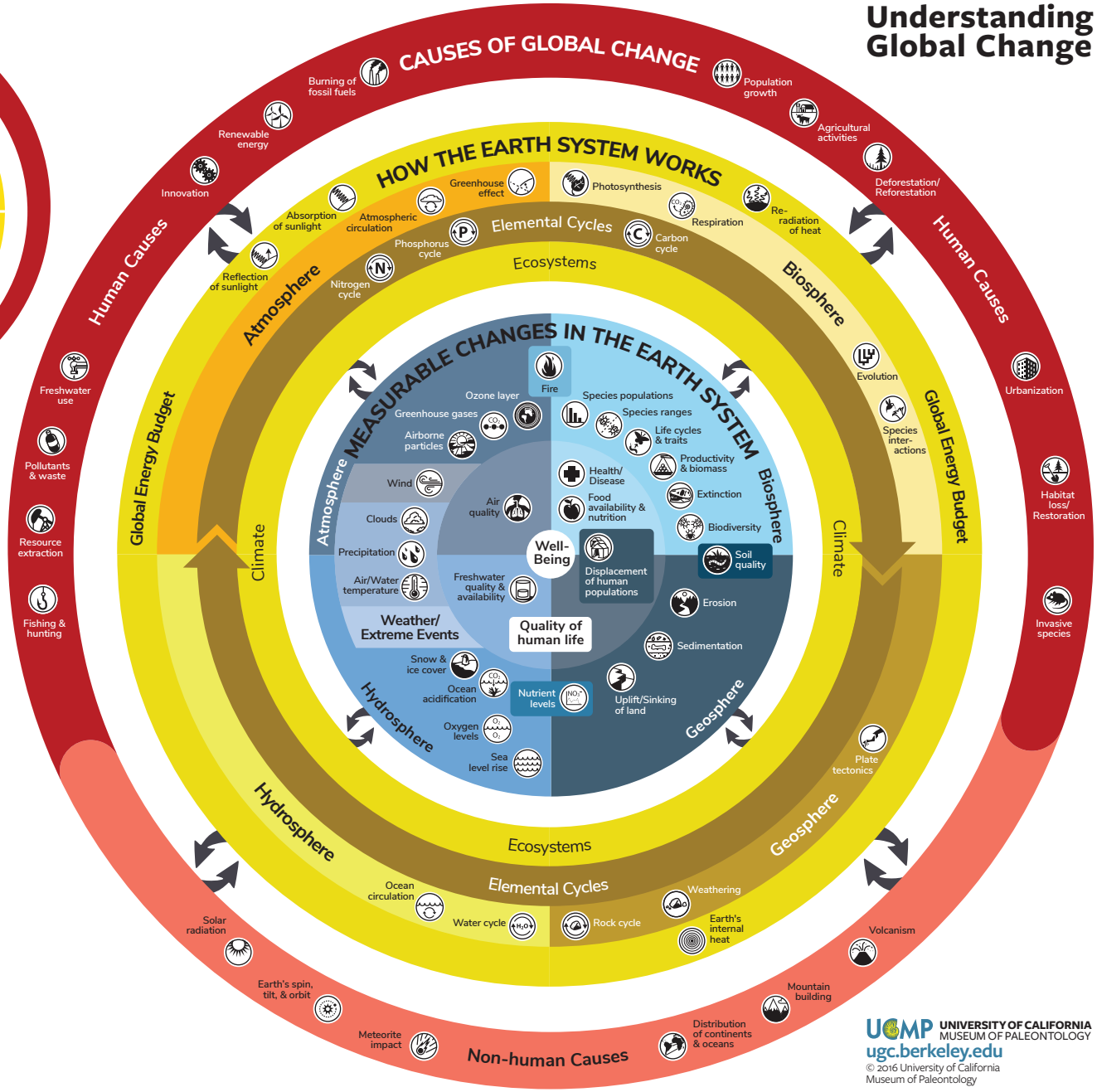
The first photo of Earth taken by humanity from space

The first photo of Earth taken by humanity from space. Credit: White Sands Missile Range/Applied Physics Laboratory

Global Change and Anthropocene

Understanding Global Change





This diagram has three components:

CAUSES OF GLOBAL CHANGE

Human activities and non-human factors that affect Earth system processes.

EARTH SYSTEM PROCESSES

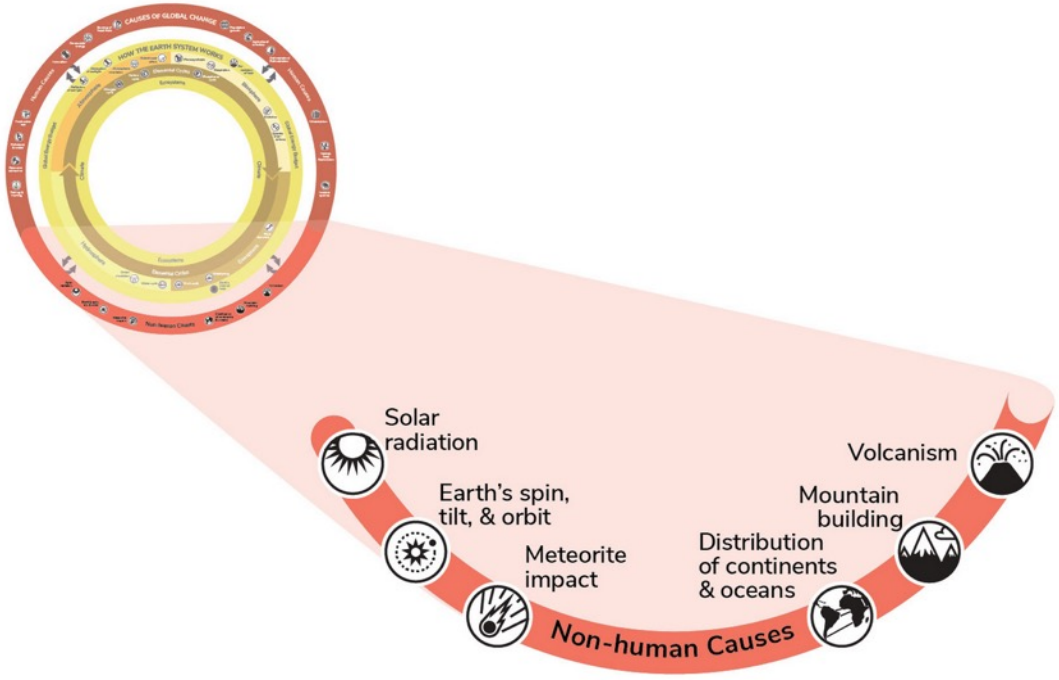
Ongoing processes that shape the Earth through time.

MEASURABLE CHANGES

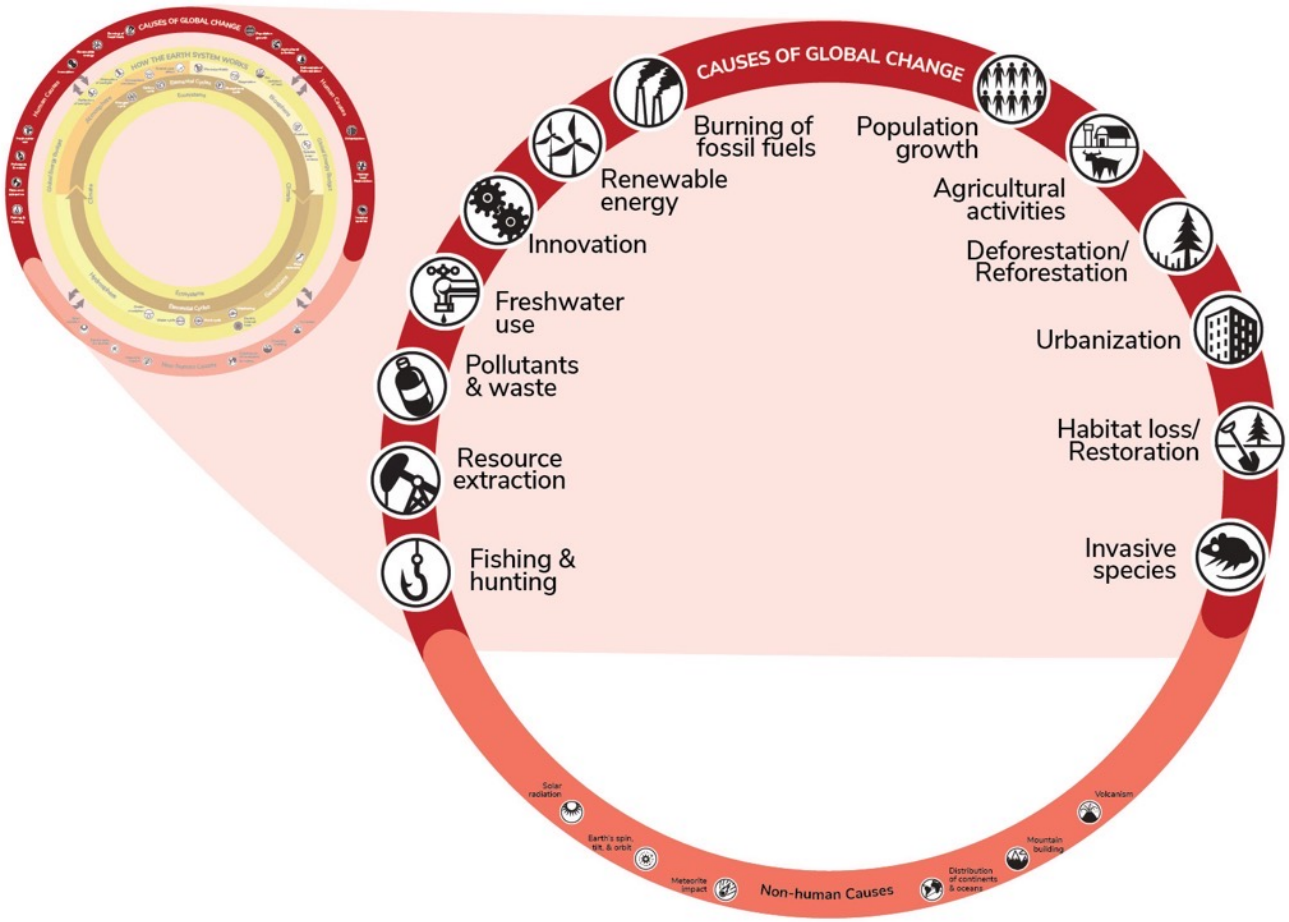
The evidence for global changes through time. Non-human causes of change tend to operate over long timescales (thousands to millions of years), while humans are causing major disruptions to the Earth system we can measure over relatively short timescales (decades, years, or less).

UCMP UNIVERSITY OF CALIFORNIA MUSEUM OF PALEONTOLOGY
ugc.berkeley.edu

Non-human Causes of Global Change



Human Causes of Global Change



Indicators of Anthropocene

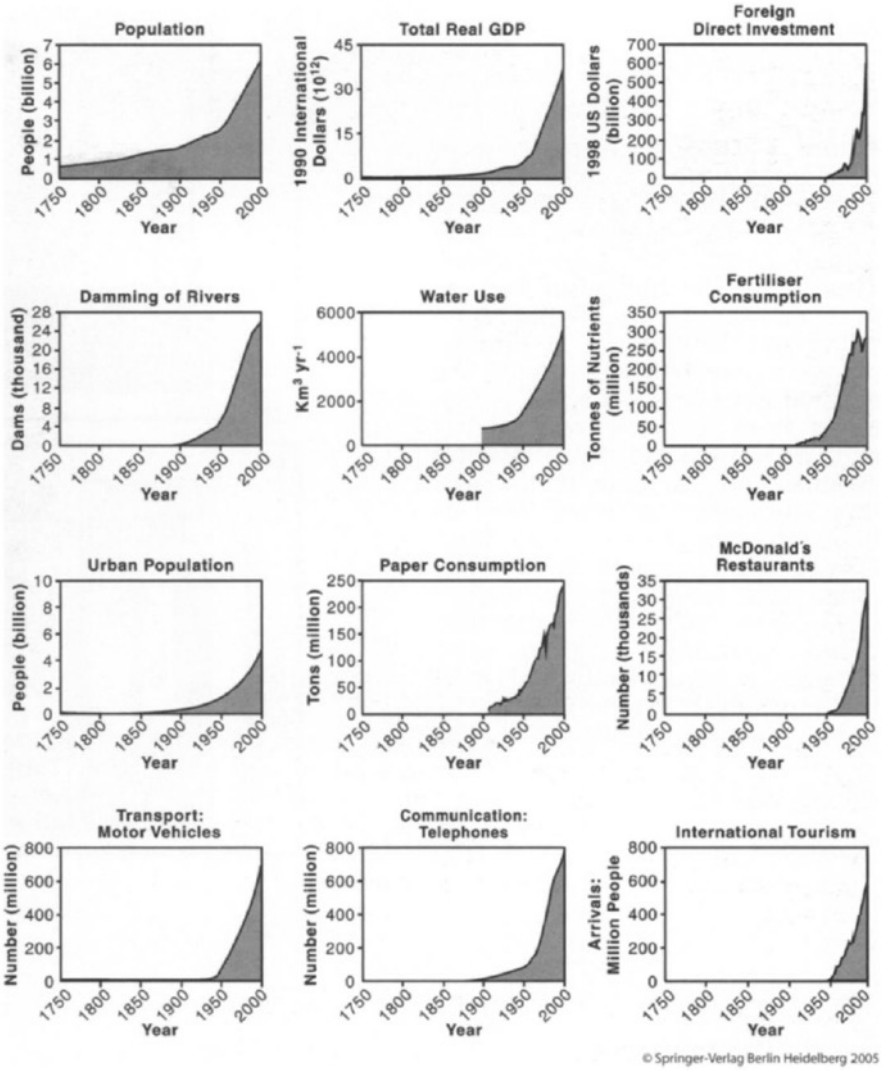
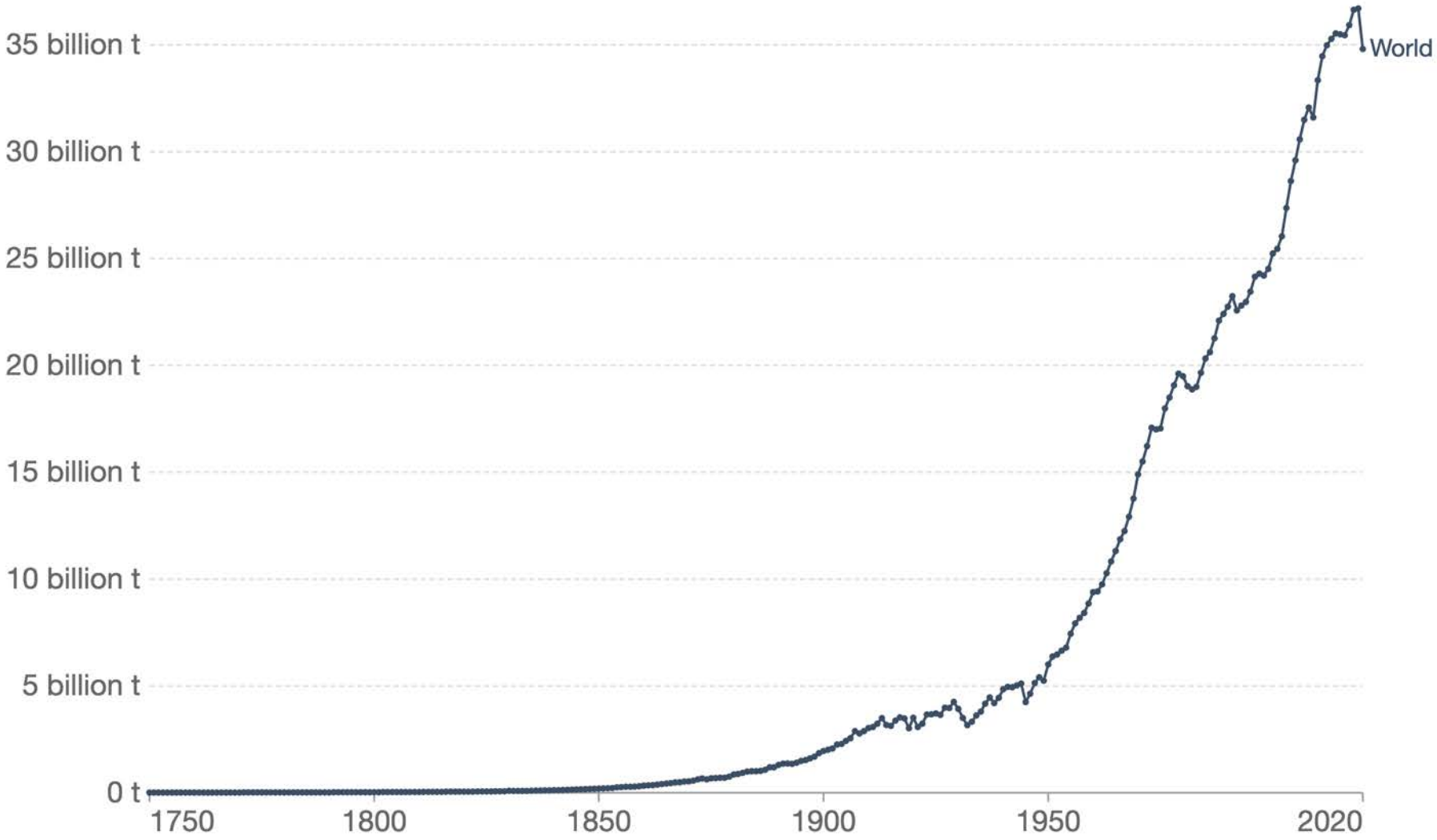


Figure 2. The change in the human enterprise from 1750 to 2000 (28). The Great Acceleration is clearly shown in every component of the human enterprise included in the figure. Either the component was not present before 1950 (e.g., foreign direct investment) or its rate of change increased sharply after 1950 (e.g., population).

Steffen, Will, Paul J. Crutzen, and John R. McNeill. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" Ambio 36, no. 8 (2007): 614–21. http://www.jstor.org/stable/25547826 .

Annual CO_2 emissions

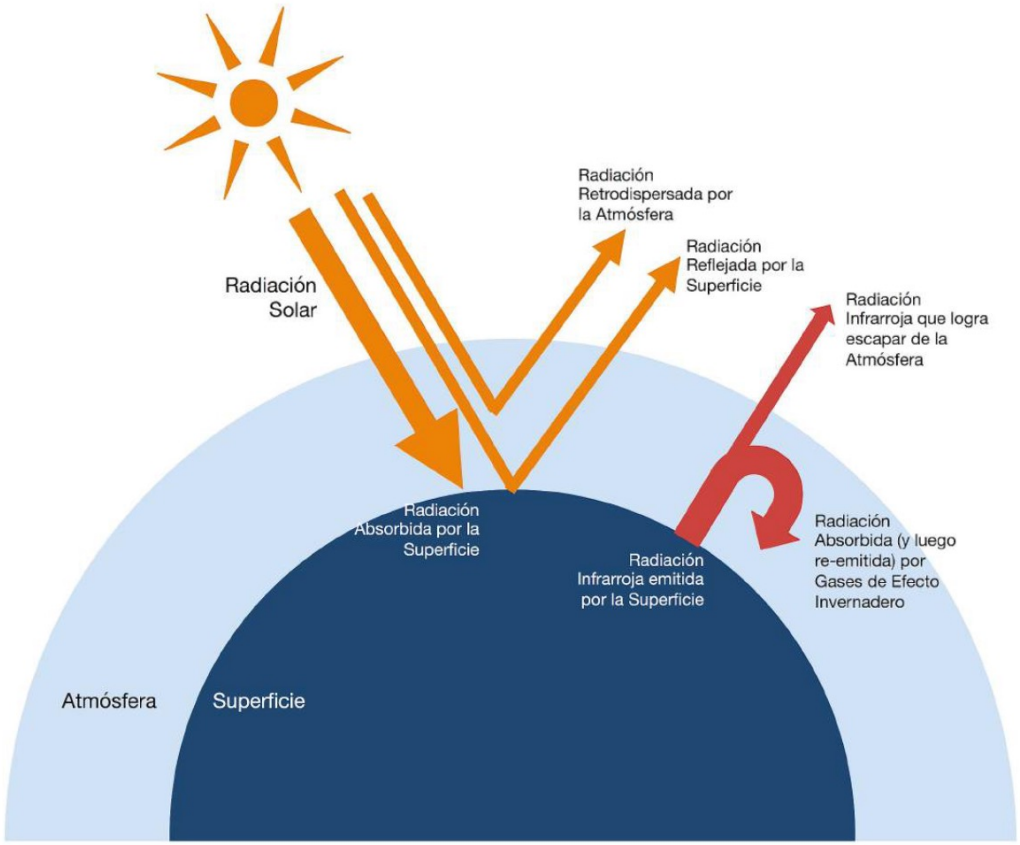
Carbon dioxide (CO_2) emissions from the burning of fossil fuels for energy and cement production. Land use change is not included.



Source: Global Carbon Project

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/ • CC BY

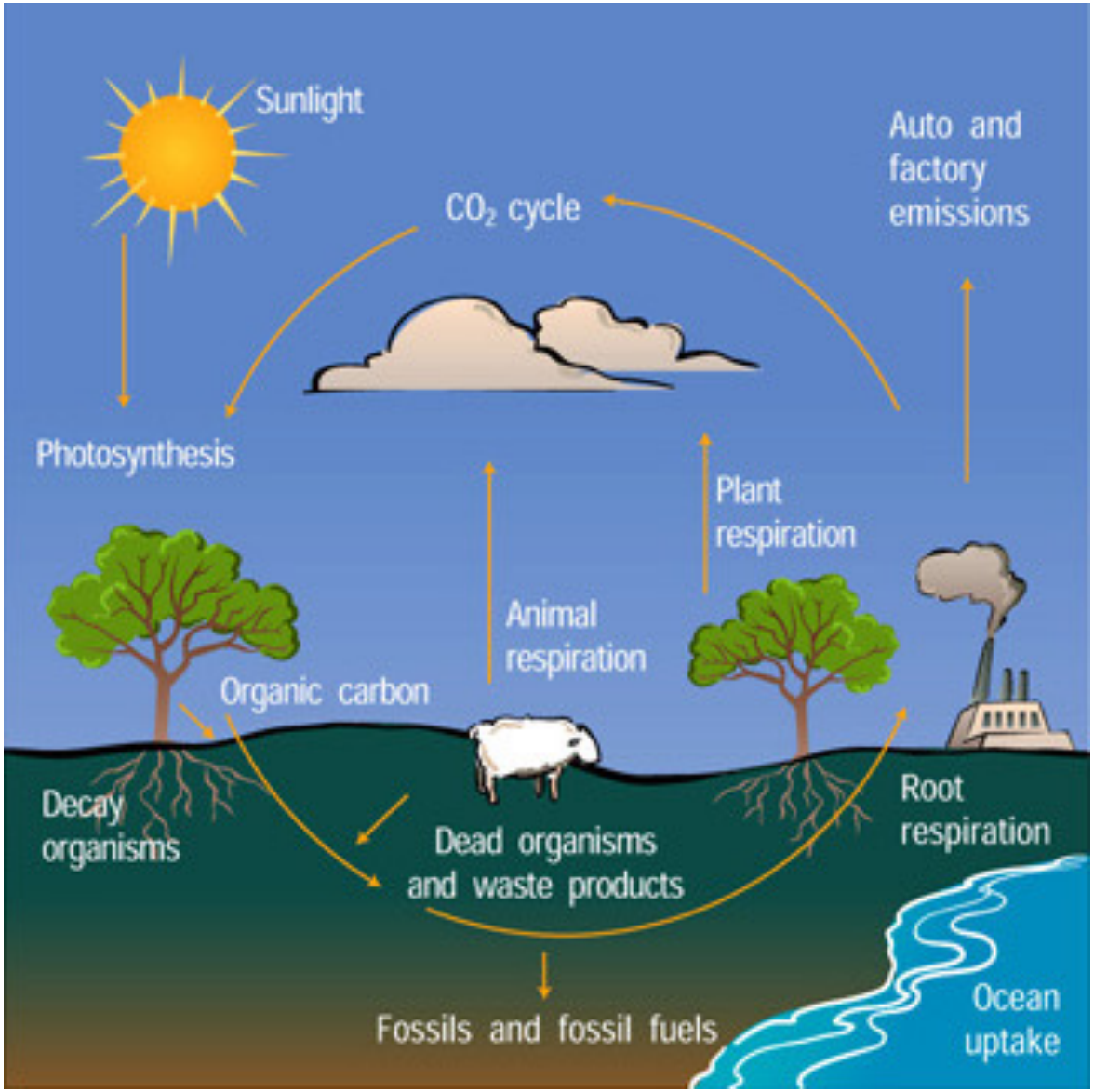
Efecto Invernadero



El alza en la concentración atmosférica de CO_2 (y de otros gases de efecto invernadero) disminuye la fracción de energía infrarroja que logra escapar hacia el espacio, provocando la acumulación de energía en el planeta y su consiguiente calentamiento.

Fuente: Cordero, R. et al. Cambio Climático Respuestas a las Preguntas Claves. www.antarctica.cl

carbon cycle



NATIONAL GEOGRAPHIC

GEOLOGIC TIME

This infographic depicts the history of the Earth and the life that developed upon it. The Earth has been around for nearly 4.6 billion years and much has happened in that immense span of time, from global glaciations to massive asteroid impacts. Scientists have learned about the long, complex history of the planet by studying layers of rock in the Earth's crust. These layers contain fossils of plants and animals that lived on Earth, only a tiny fraction of which still exist today. By examining the composition of rocks and the types of fossils in them, scientists have created a timeline of Earth's history. It is broken up into sections based on major events, like global climate changes and mass extinctions. Use this infographic to explore the evolution of Earth and the life upon it.

Extinct

Mass Extinction event

Anthropocene: Age of Man

We live in the Holocene epoch, but many scientists argue that human impacts, like climate change and increased extinction rates, place us in a new epoch: the Anthropocene.

CENOZOIC

- **Holocene**
- **Pleistocene** — 300,000 years ago: The first "modern" human—*Homo sapiens*—evolves in Africa.
- **Pliocene**
- **Miocene** — 6.5 million years ago: Hominins—early ancestors of humans—evolve from the other primates.
- **Oligocene**
- **Eocene**
- **Paleocene** — 60 million years ago: The first primates appear.

65.5 million years ago

MESOZOIC

- **Cretaceous** — 130 million years ago: The first flowering plants evolve.
- **Jurassic** — 150 million years ago: Archaeopteryx, "the first bird," lives in Europe.
- **Triassic** — 200 million years ago: The first mammals appear.
  250 million years ago: Dinosaurs evolve and begin to dominate Earth.

252.2 million years ago

PALEOZOIC

- **Permian** — 310 million years ago: The four-legged animals, not including amphibians, split into two groups—reptiles and "mammal-like" reptiles. Mammals eventually evolve from the second group.
- **Carboniferous** — 340 million years ago: The first amphibians develop.
- **Devonian** — 397 million years ago: The first animals with four legs (tetrapods) evolve. This is the common ancestor of all creatures with two or four legs, including humans.
- **Silurian**
- **Ordovician** — 500 million years ago: Plants begin to colonize land.
- **Cambrian** — 535 million years ago: Many different types of organisms evolve in a relatively short period of time (a few million years) called the Cambrian Explosion. During this "explosion" the first true vertebrate (animal with a backbone) appears.

541 million years ago

PROTEROZOIC

- **Neo-proterozoic**
- **Meso-proterozoic** — 2 billion years ago: First evidence of eukaryotic cells—cells that contain internal "organs" (organelles), including a DNA-containing nucleus. Recent discoveries suggest multicellular life may have also developed during this time.
- **Paleo-proterozoic** — 2.4 billion years ago: Earth's atmosphere fills with oxygen. A million years later Earth freezes over, creating the first "Snowball Earth."

2.5 billion years ago

ARCHEAN

- **Neo-archean**
- **Meso-archean**
- **Paleo-archean**
- **Eo-archean** — 3.5 billion years ago: First evidence of single-celled organisms.

4 billion years ago

HADEAN

4.6 billion years ago: Earth is formed. The moon forms about 100 million years afterwards.

NATIONAL GEOGRAPHIC

GEOLOGIC TIME

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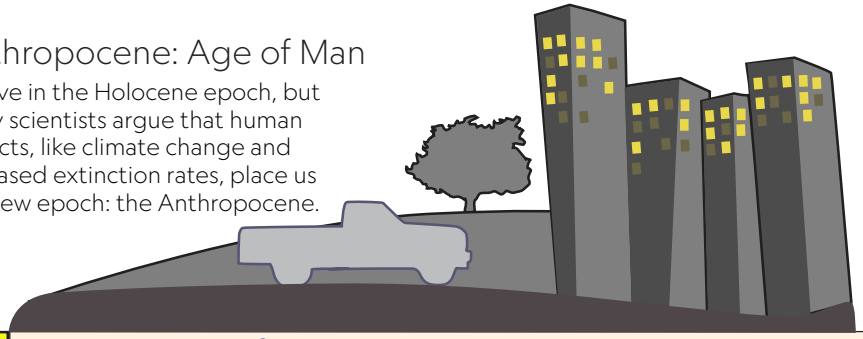

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6.5 million years ago: Hominins—early ancestors of humans—evolve from the other primates.

Oligocene

Eocene

Paleocene

60 million years ago: The first primates appear.

65.5 million years ago

The Anthropocene

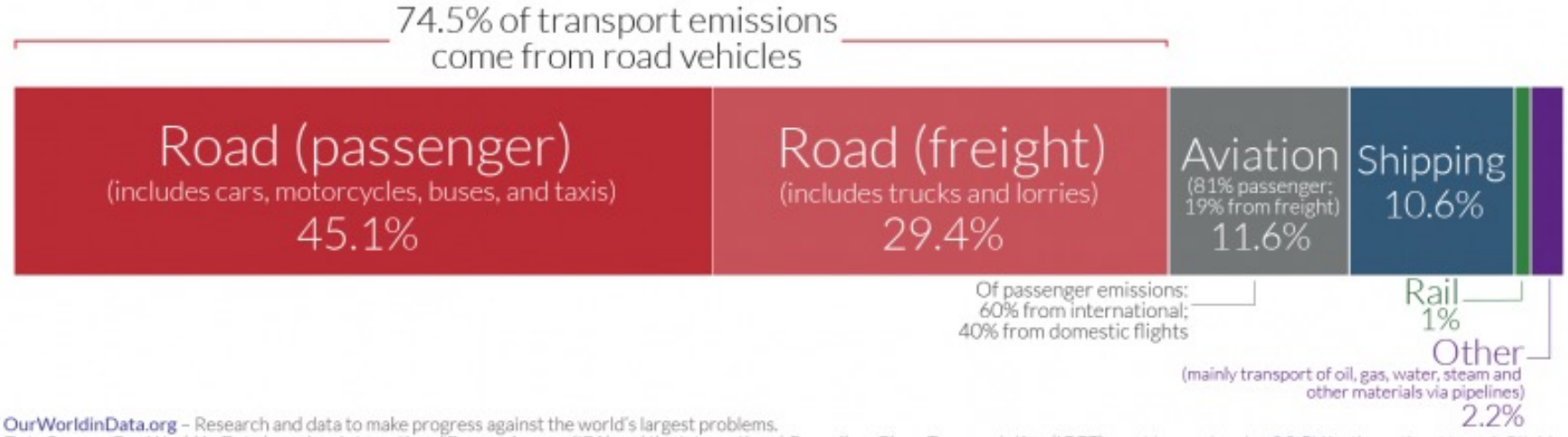
We explore the development of the Anthropocene, the current epoch in which humans and our societies have become a global geophysical force. The Anthropocene began around 1800 with the onset of industrialization, the central feature of which was the enormous expansion in the use of fossil fuels. We use atmospheric carbon dioxide concentration as a single, simple indicator to track the progression of the Anthropocene. From a preindustrial value of 270–275 ppm, atmospheric carbon dioxide had risen to about 310 ppm by 1950. Since then the human enterprise has experienced a remarkable explosion, the Great Acceleration, with significant consequences for Earth System functioning. Atmospheric CO_2 concentration has risen from 310 to 380 ppm since 1950, with about half of the total rise since the preindustrial era occurring in just the last 30 years. The Great Acceleration is reaching criticality. Whatever unfolds, the next few decades will surely be a tipping point in the evolution of the Anthropocene.

Steffen, Will, Paul J. Crutzen, and John R. McNeill. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" Ambio 36, no. 8 (2007): 614–21. http://www.jstor.org/stable/25547826 .

Global CO_2 emissions from transport

This is based on global transport emissions in 2018, which totalled 8 billion tonnes CO_2.
Transport accounts for 24% of CO_2 emissions from energy.

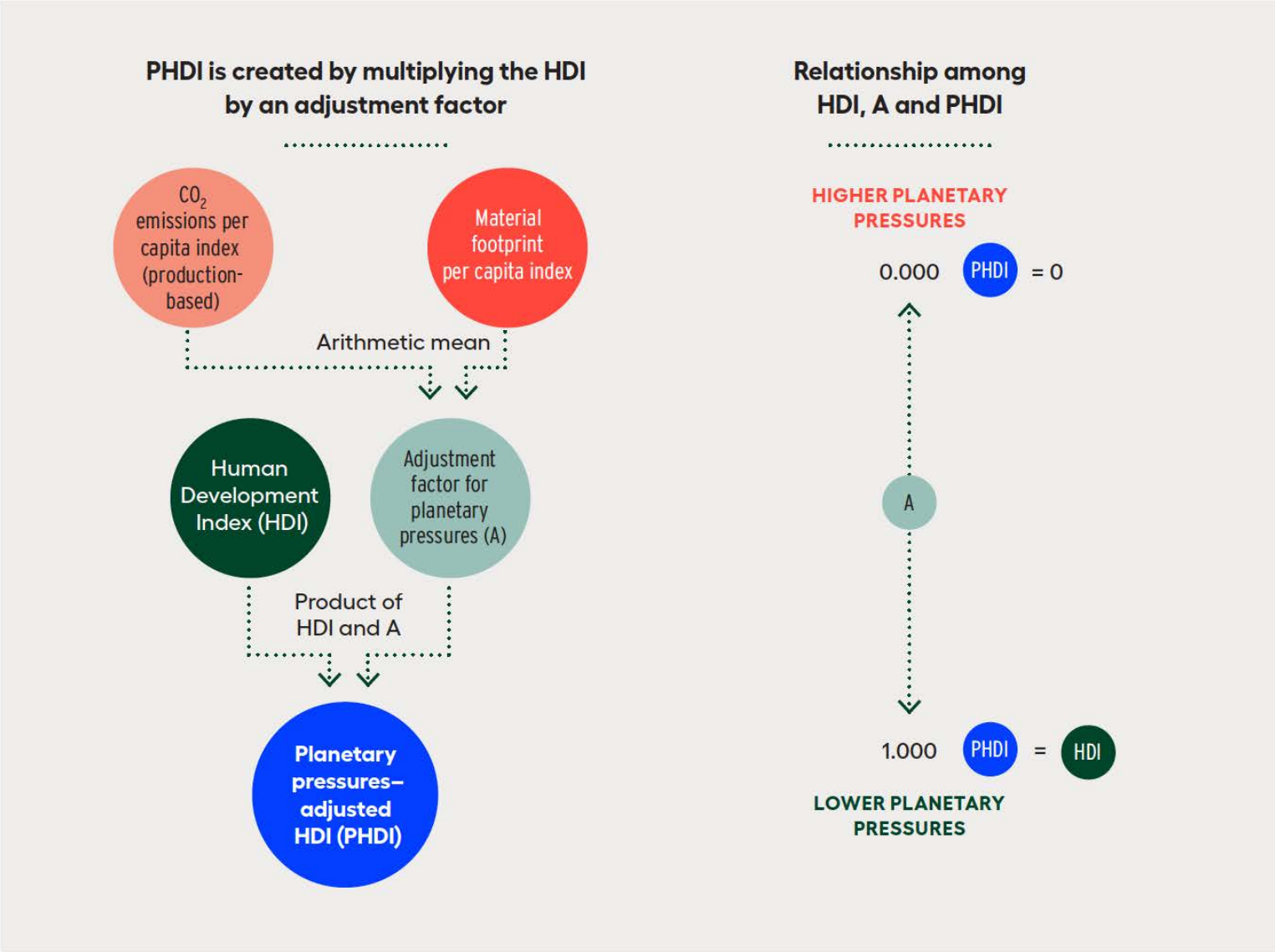
Our World in Data



OurWorldinData.org – Research and data to make progress against the world's largest problems.
Data Source: Our World in Data based on International Energy Agency (IEA) and the International Council on Clean Transportation (ICCT).

Human development index

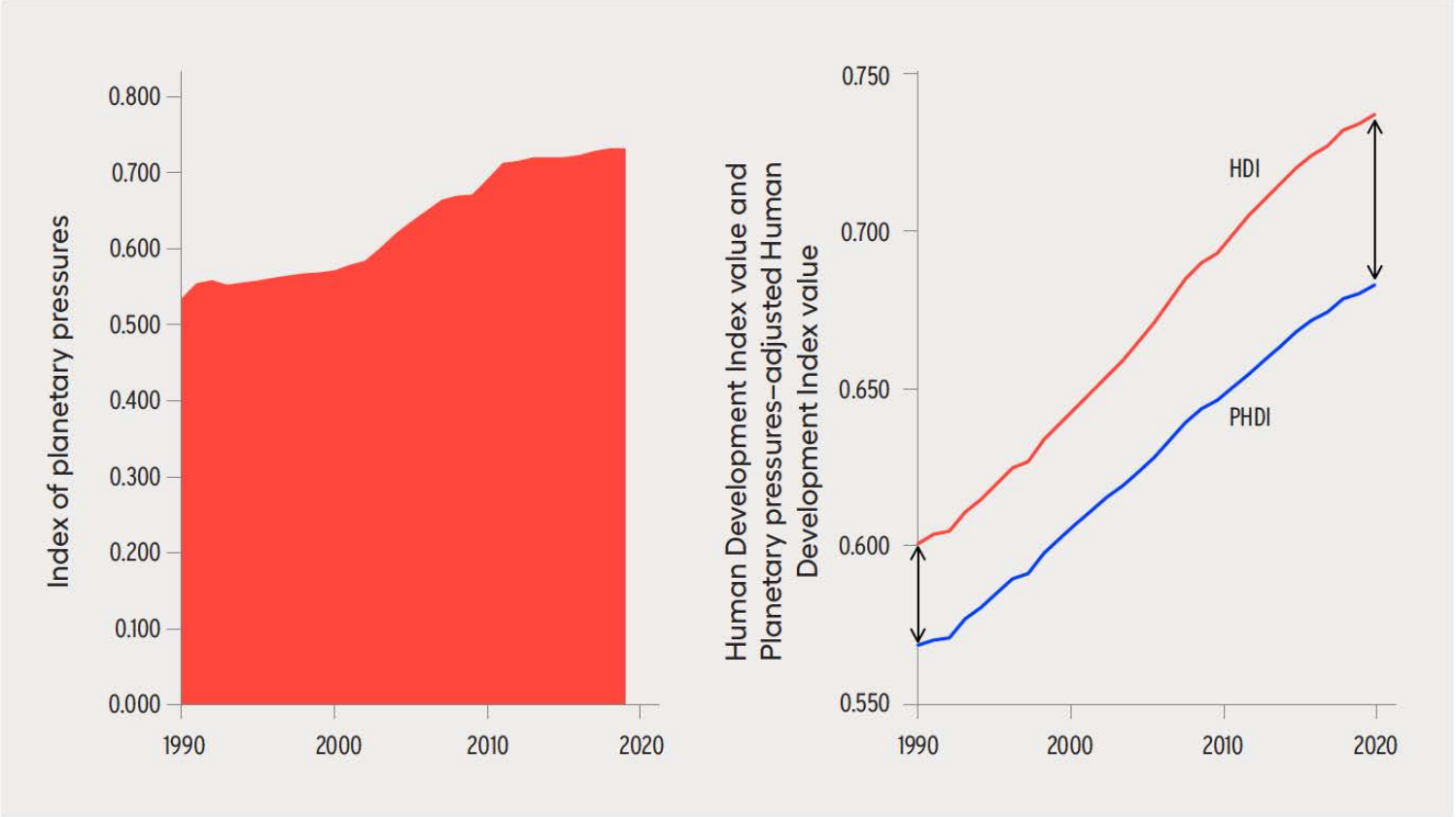
Figure 7.4 Visual representation of the Planetary pressures–adjusted Human Development Index



Source: Human Development Report Office.

United Nations Development Programme, *Human Development Report 2020: The Next Frontier—Human Development and the Anthropocene*, December 15, 2020, http://hdr.undp.org/en/2020-report; http://report.hdr.undp.org/.

Figure 7.6 Planetary pressures have increased with gains on the Human Development Index



Note: The Planetary pressures–adjusted Human Development Index (PHDI) values for 2018 and 2019 use material footprint data for 2017, the most recent year for which data are available, and the PHDI value for 2019 uses carbon dioxide emissions per capita data for 2018, the most recent year for which data are available. The index of planetary pressures is equal to 1 – A, with A defined in figure 7.4

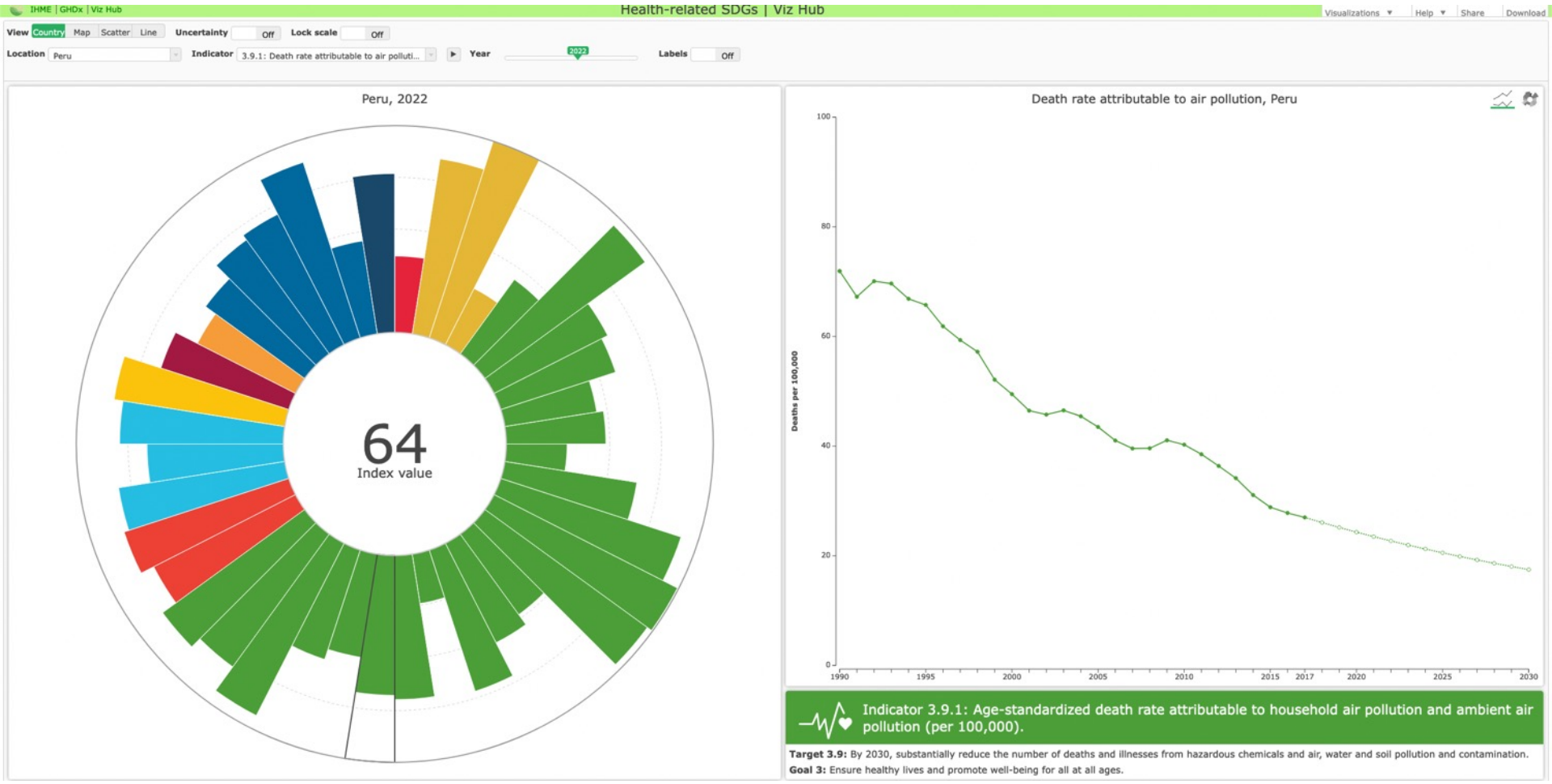
Source: Human Development Report Office calculations based on Human Development Index values from table 2 of the statistical annex, data on carbon dioxide emissions from GCP (2020) and data on material footprint from UNEP (2020d).

United Nations Development Programme, *Human Development Report 2020: The Next Frontier—Human Development and the Anthropocene*, December 15, 2020, http://hdr.undp.org/en/2020-report; http://report.hdr.undp.org/.

2030 Agenda and its SDGs

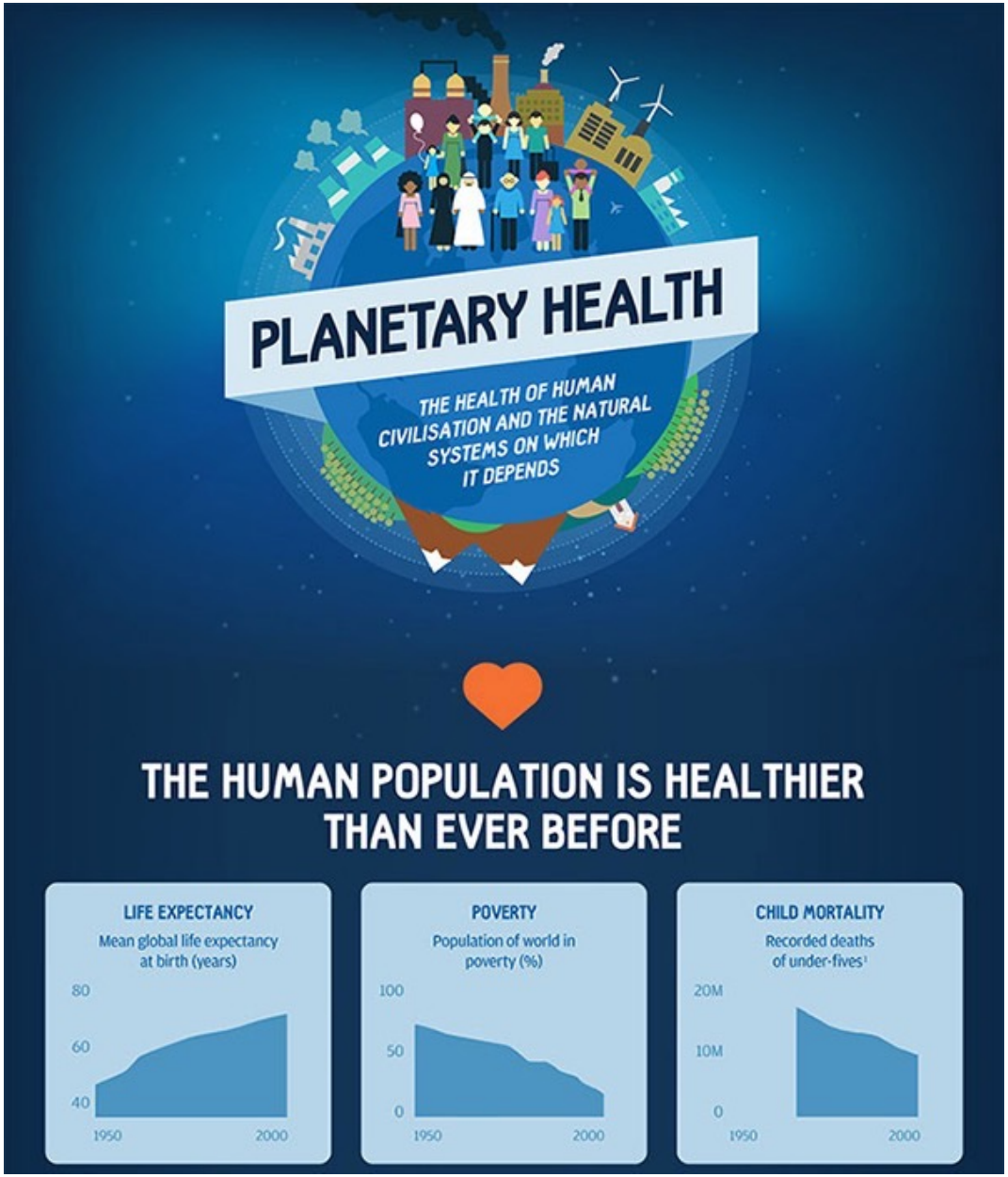
Source: https://sdgs.un.org/goals

IHME-Health-related SDGs | Viz Hub

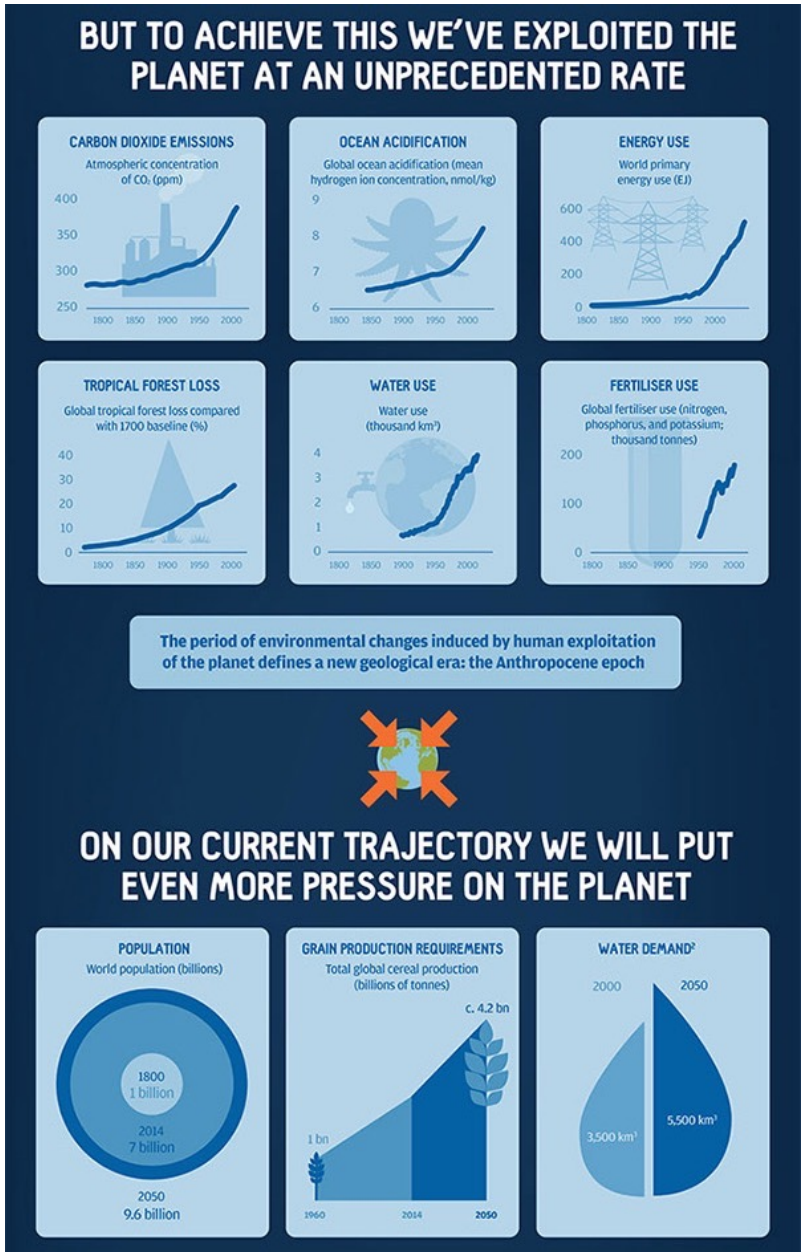


Source: https://vizhub.healthdata.org/sdg/

Planetary health and Climate countdown



Sourcehttps://www.thelancet.com/infographics/planetary-health



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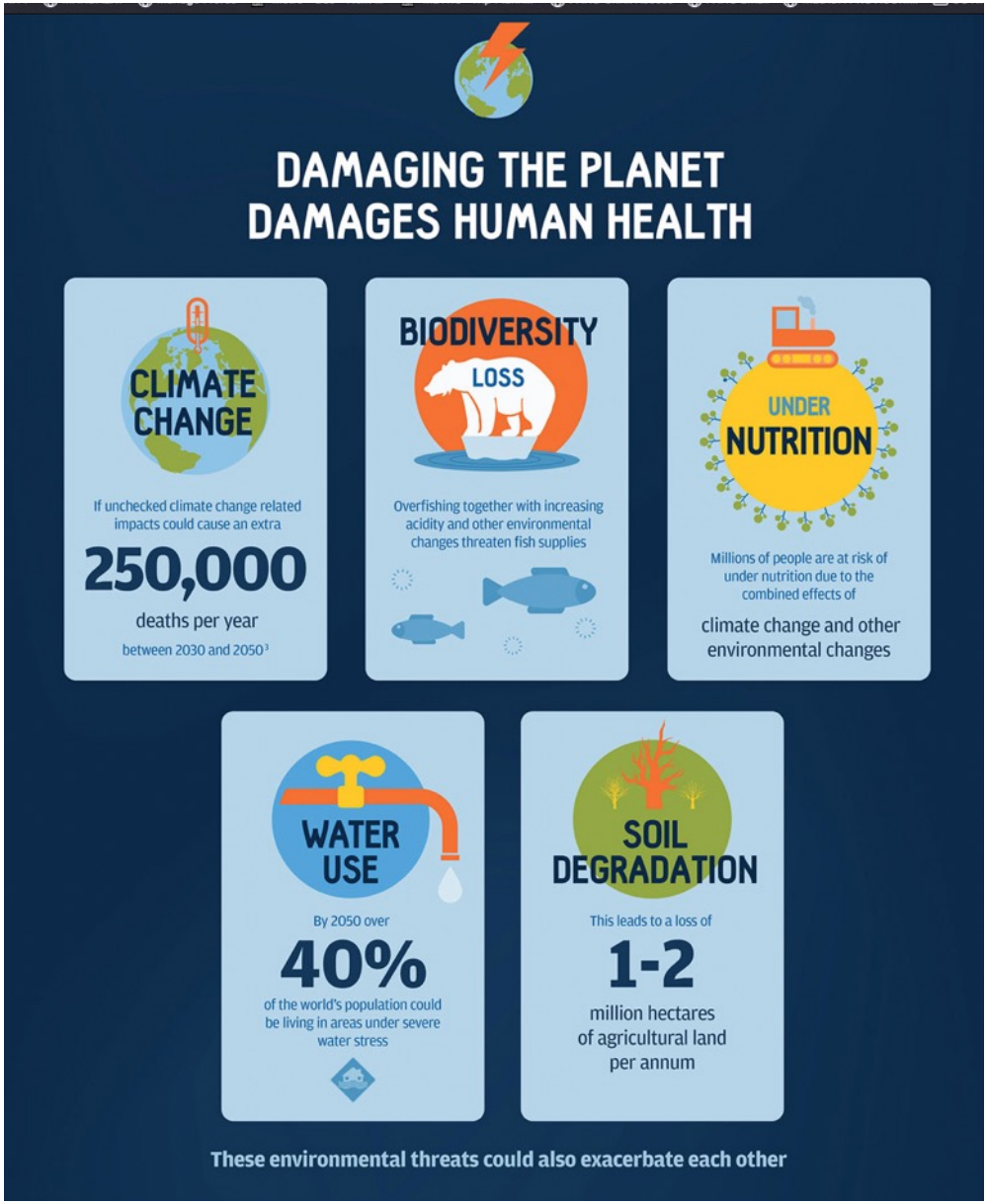

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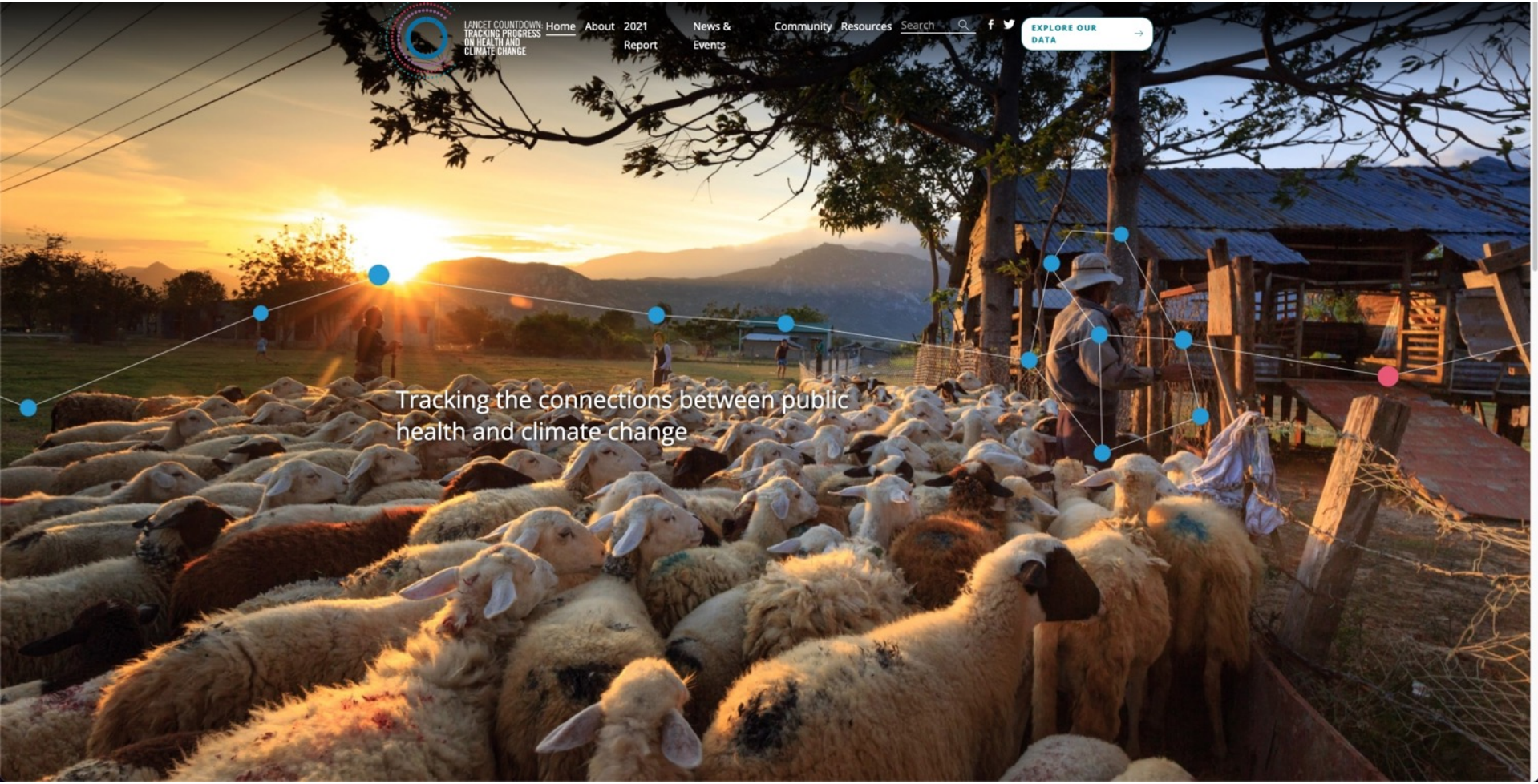
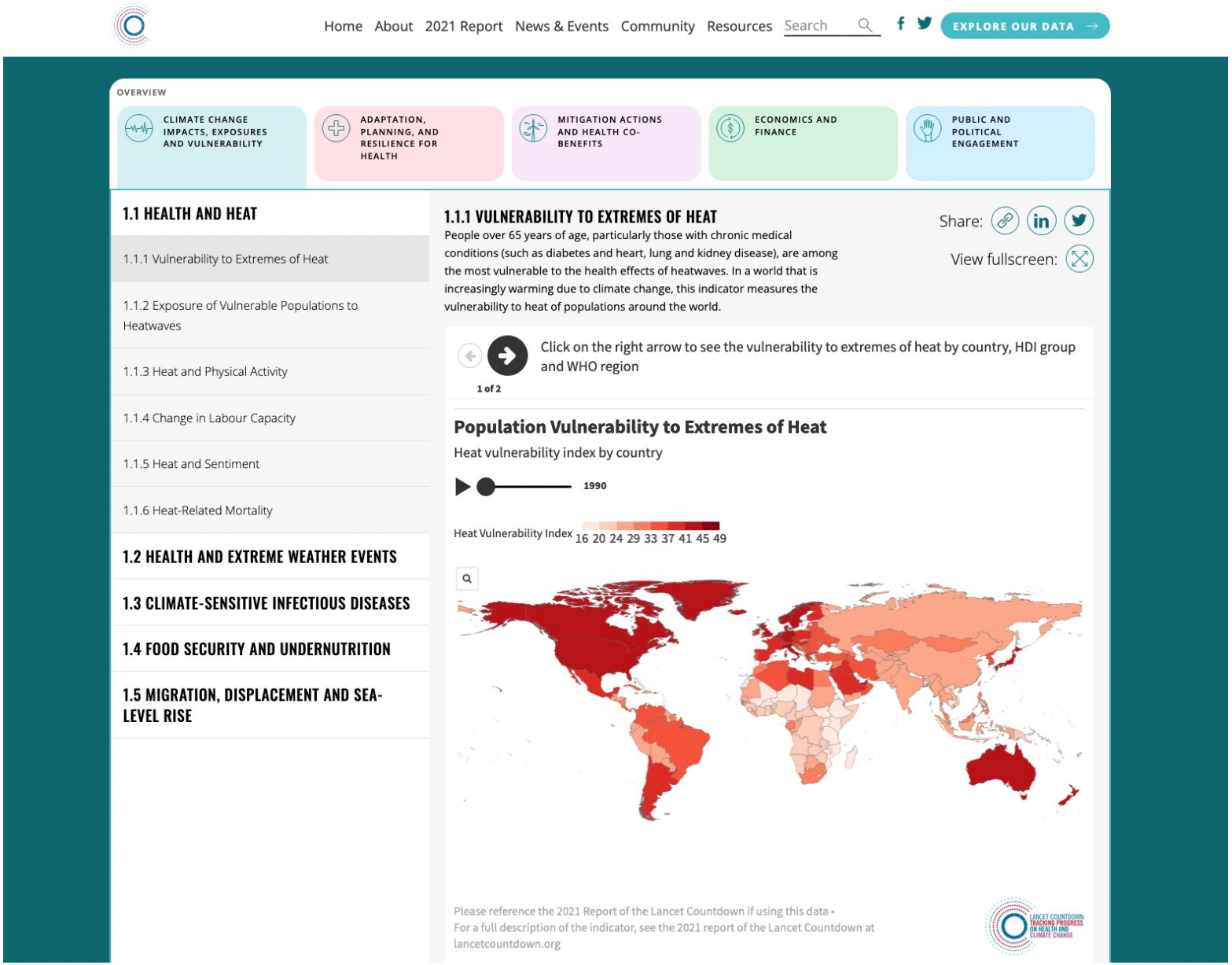
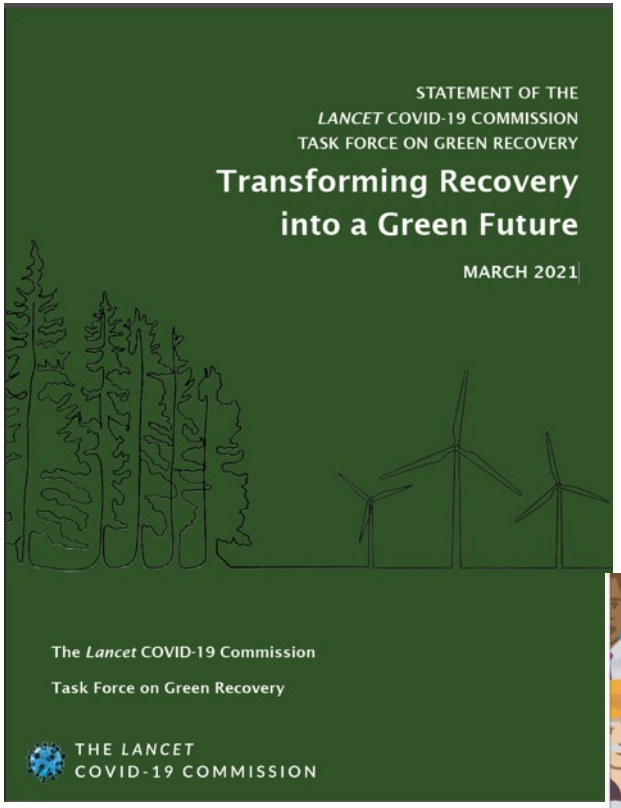


Source https://www.lancetcountdown.org/

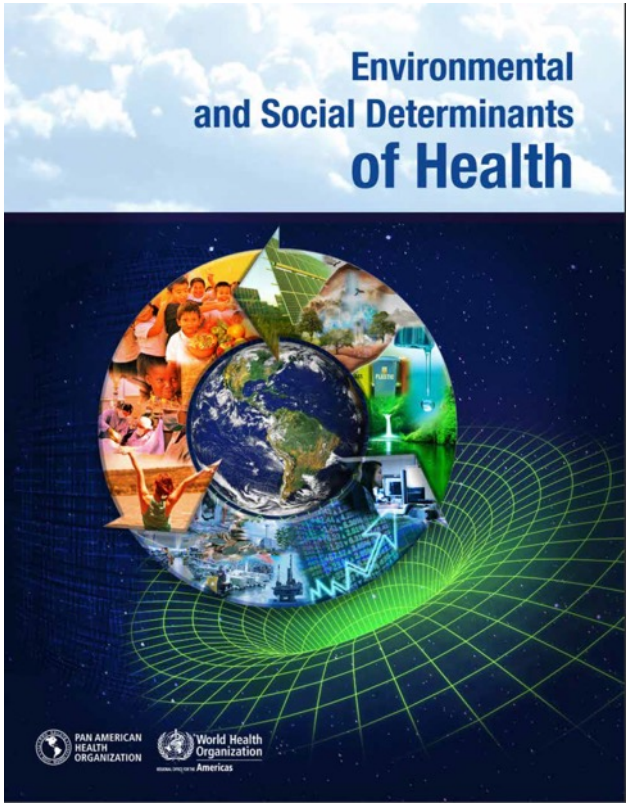


Source https://www.lancetcountdown.org/data-platform/climate-change-impacts-exposures-and-vulnerability/1-1-health-and-heat/1-1-1-heat-vulnerability

Think Globally, Act Locally



Source https://covid19commission.org/green-recovery.



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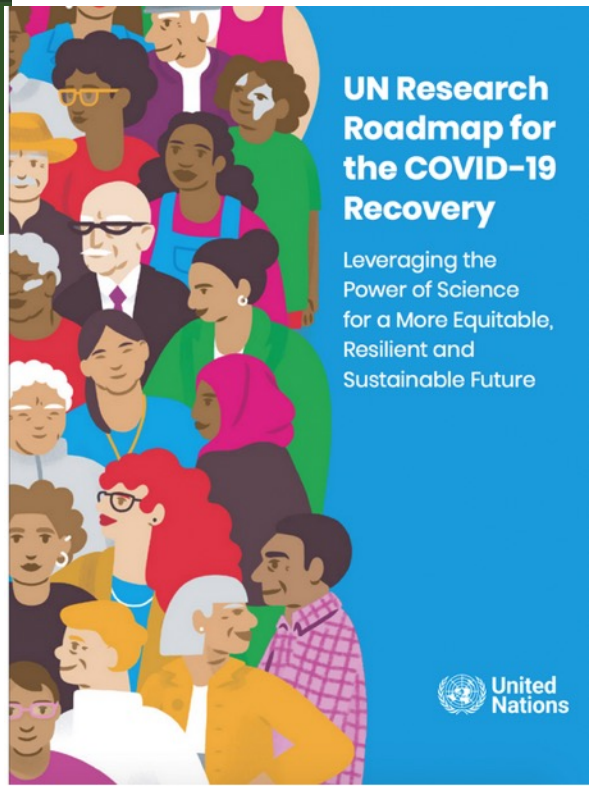

Source: https://www.un.org/en/coronavirus/communication-resources/un-research-roadmap-covid-19-recovery

Thank you