

ICIMOD  SANDEE

Sustainability Reporting for Sustainable Economy

International Conference on Sustainability Reporting

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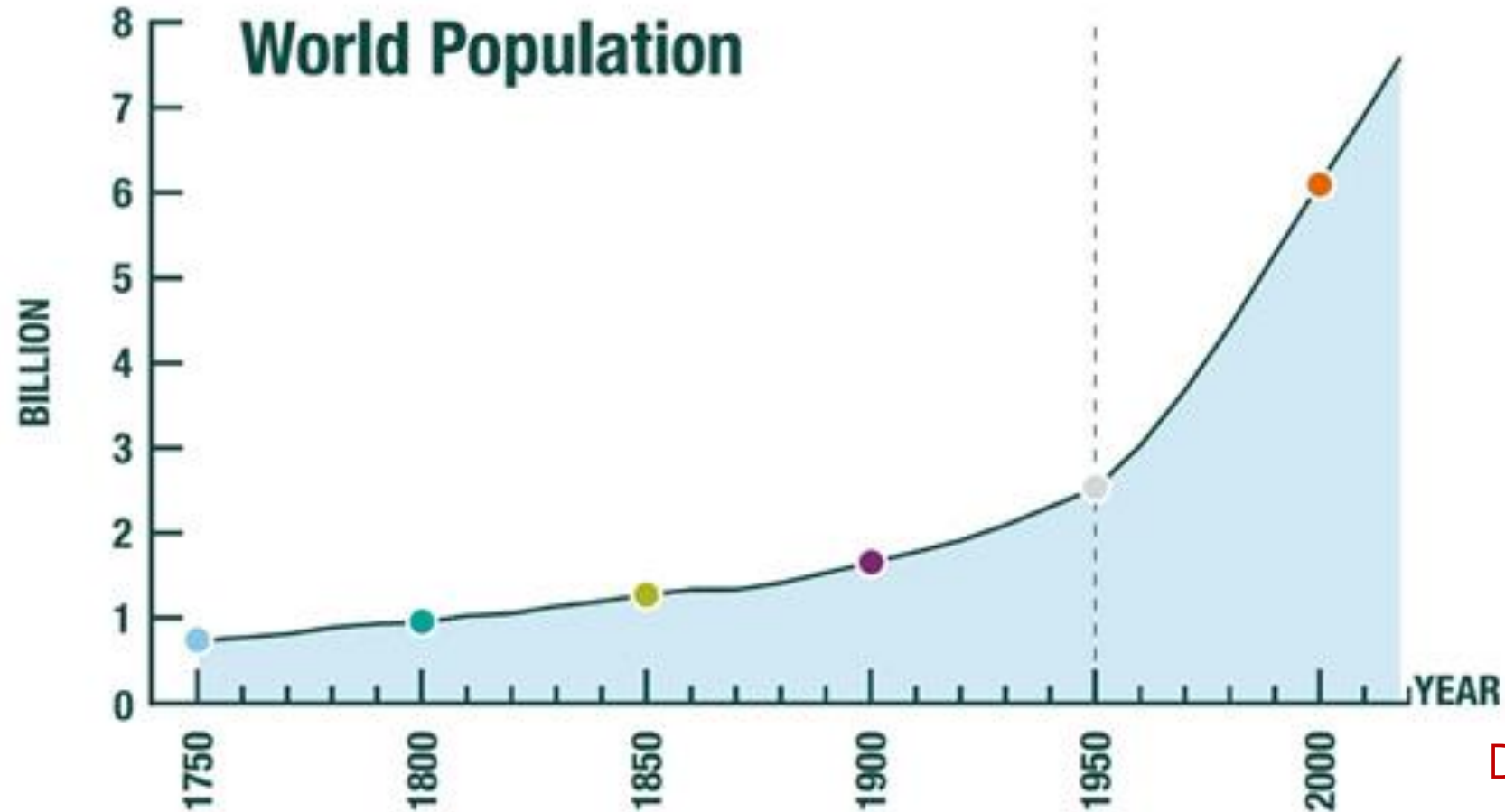
Outline

- Our progress
- Sustainability
- Fundamental reason(s) of unsustainable practices
- How to address these challenges
- Further challenges for sustainability reporting

Our progress – Key indicators

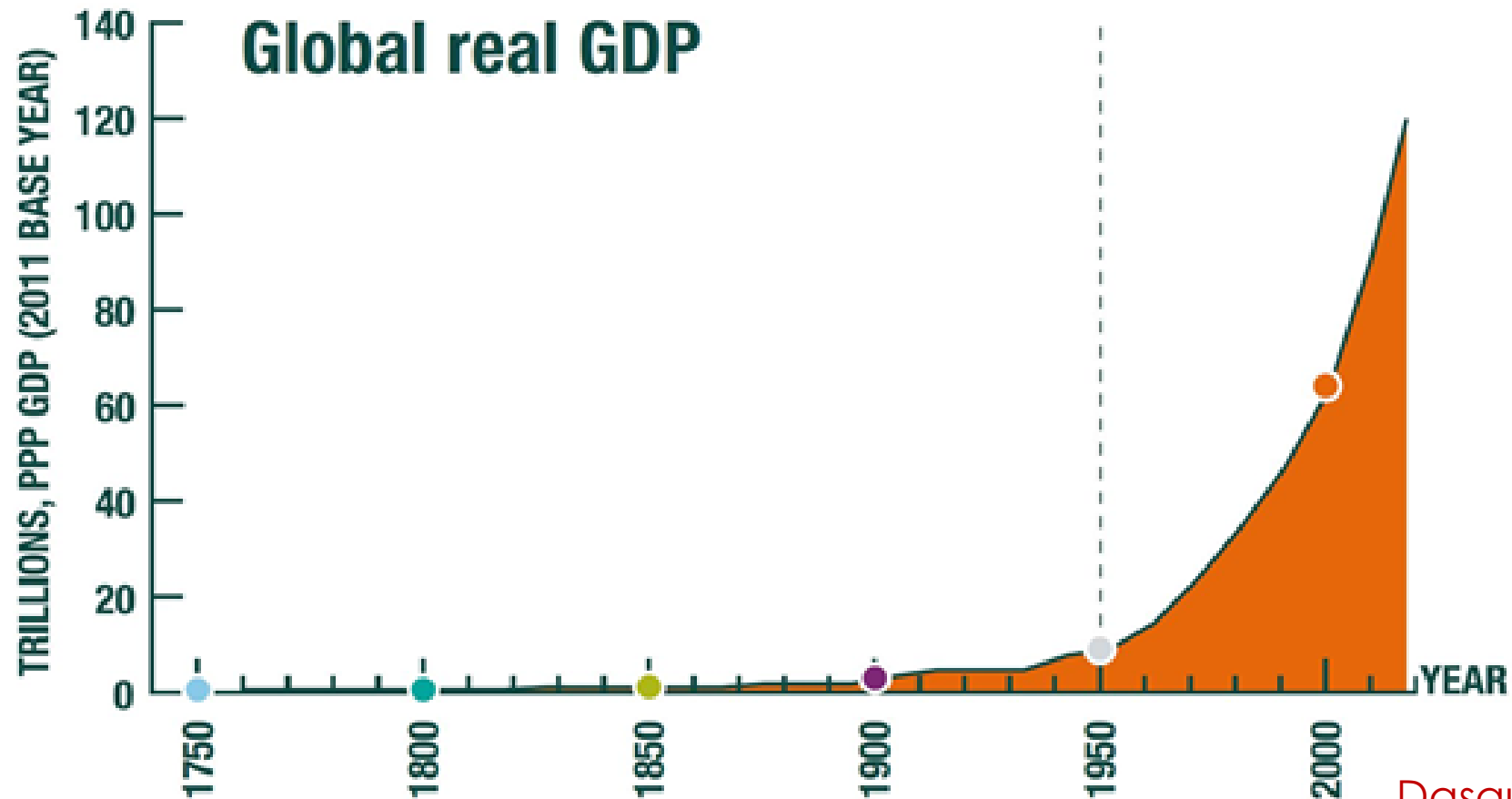


The Global Population Since 1750 CE

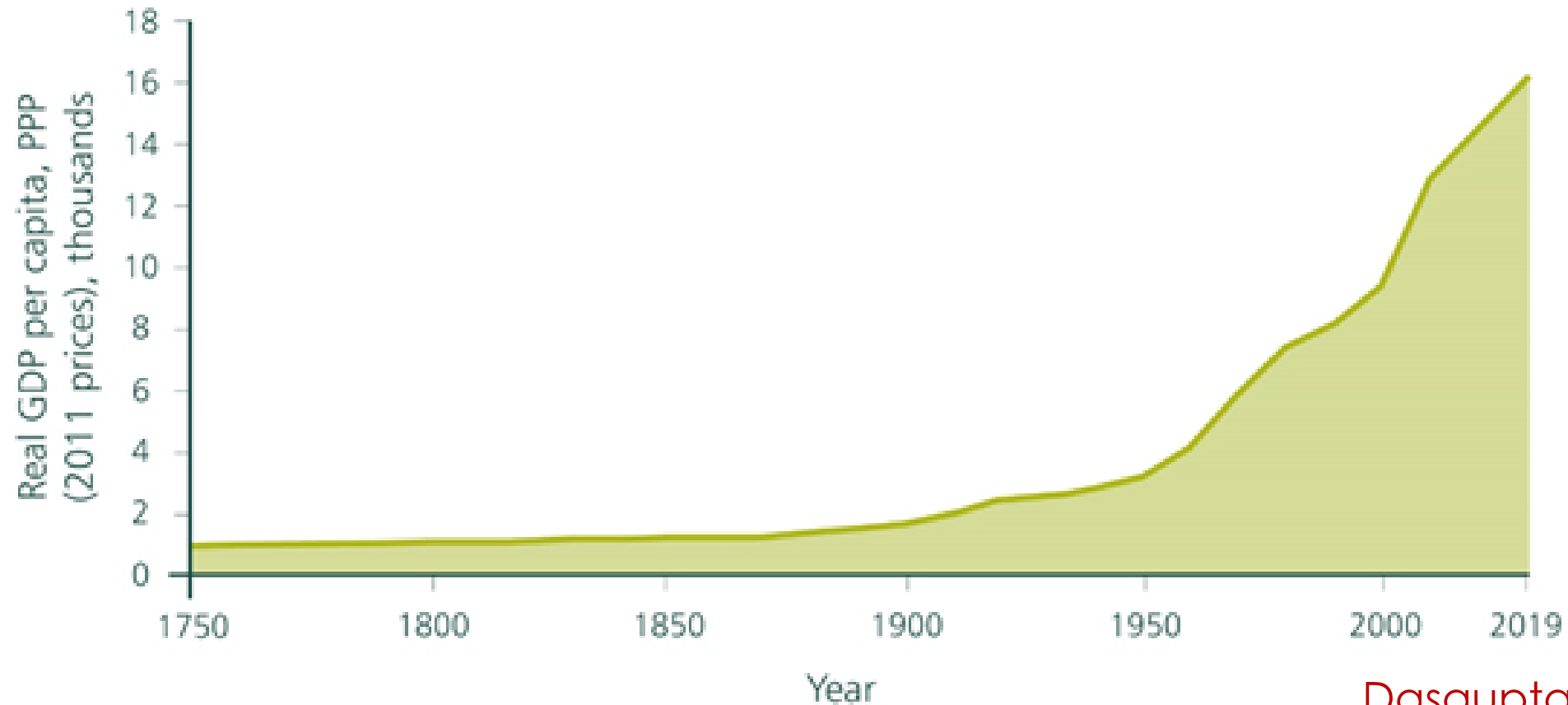


Dasgupta Review, 2021

Global Real GDP since 1750 Ce



Global Real GDP per capita since 1750 CE



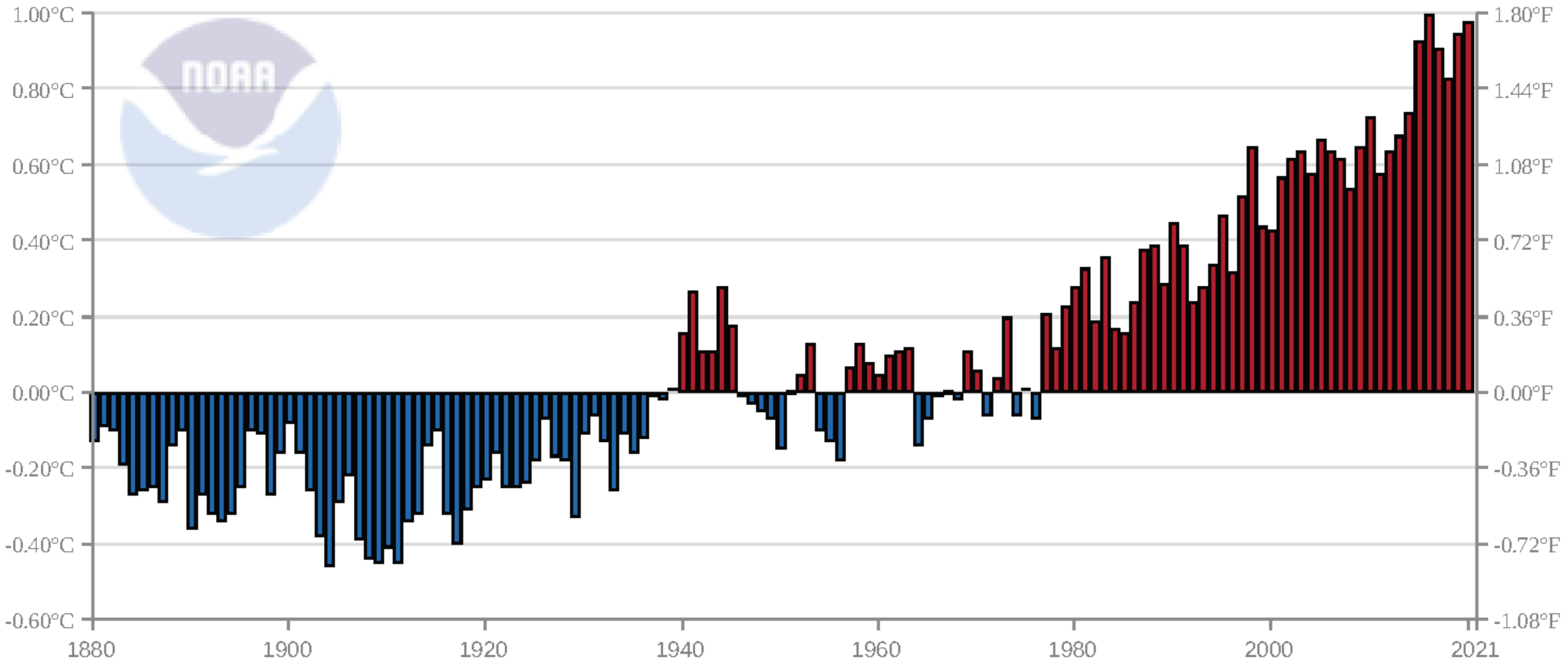
Our challenges

The Triple Planetary Crisis: Climate Change, Biodiversity Loss & Pollution



Global Land and Ocean

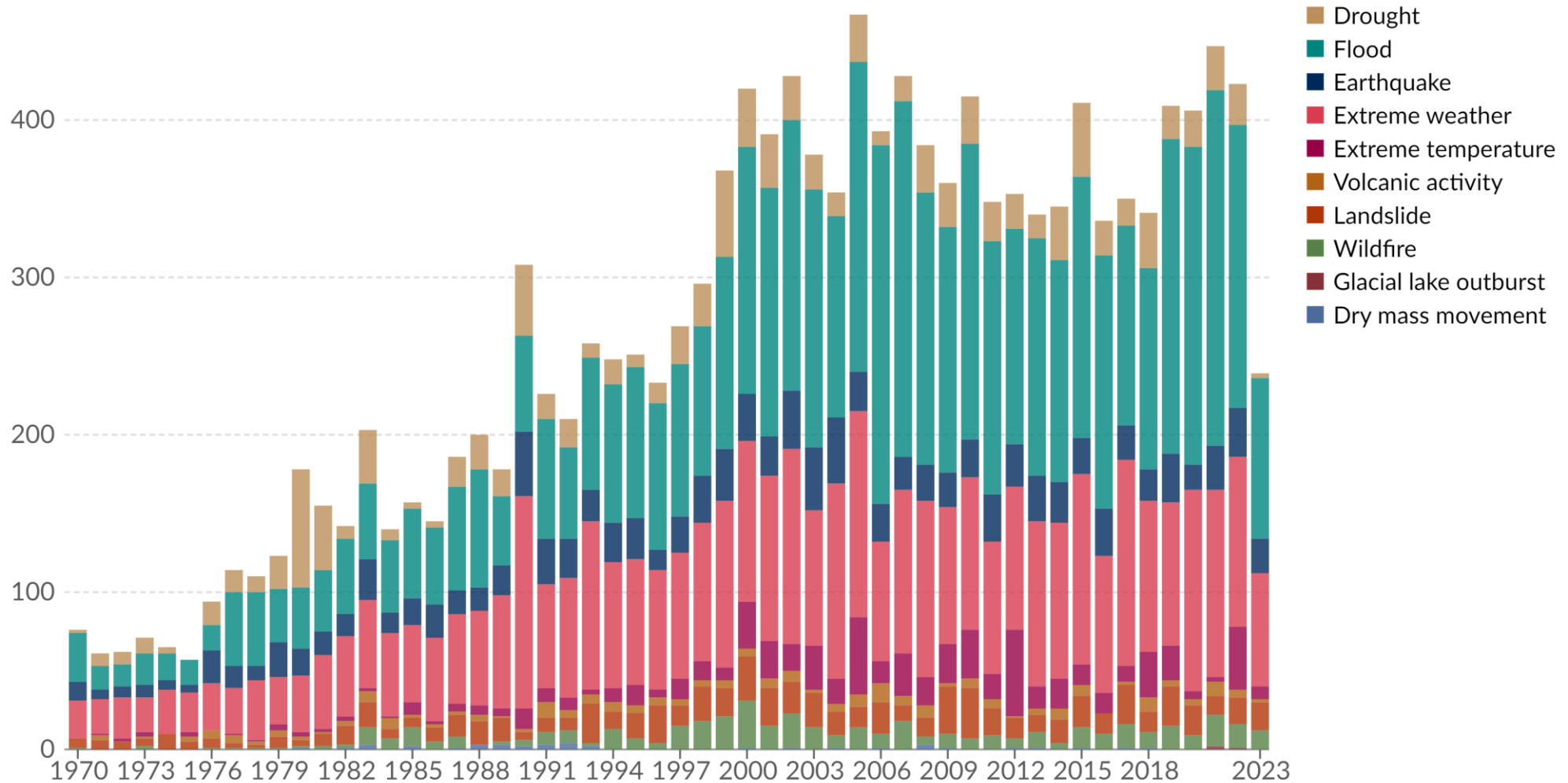
January-December Temperature Anomalies



NOAA - National Oceanic and Atmospheric Administration

Global reported natural disasters by type, 1970 to 2023

The annual reported number of natural disasters, categorised by type. The number of global reported natural disaster events in any given year. Note that this largely reflects increases in data reporting, and should not be used to assess the total number of events.



Data source: EM-DAT, CRED / UCLouvain (2023)

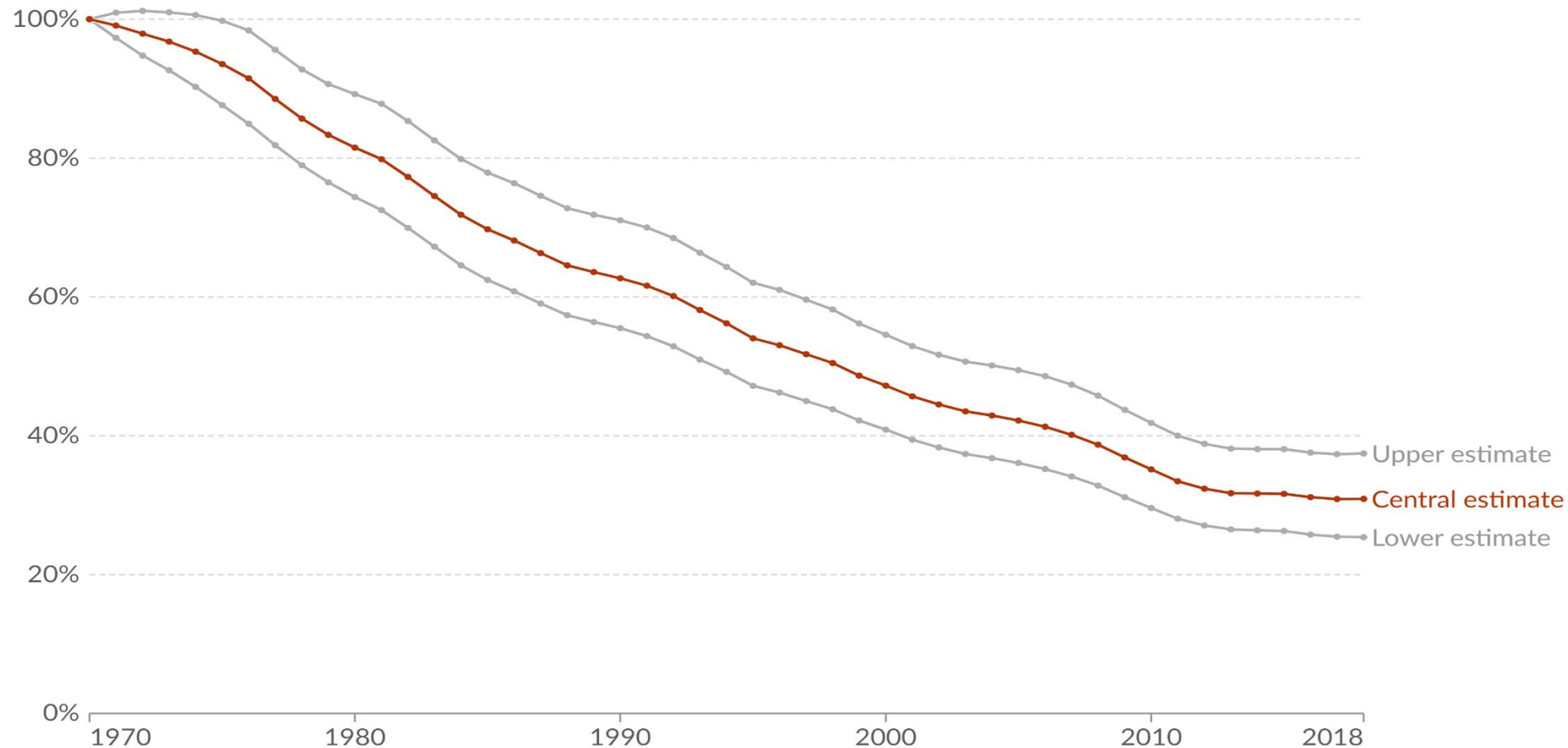
Note: Data includes disasters recorded up to September 2023.

OurWorldInData.org/natural-disasters | CC BY



Living Planet Index, World

The Living Planet Index (LPI) measures the average decline in monitored wildlife populations¹. The index value measures the change in abundance in 31,821 populations across 5,230 species relative to the year 1970 (i.e. 1970 = 100%).



Data source: World Wildlife Fund (WWF) and Zoological Society of London

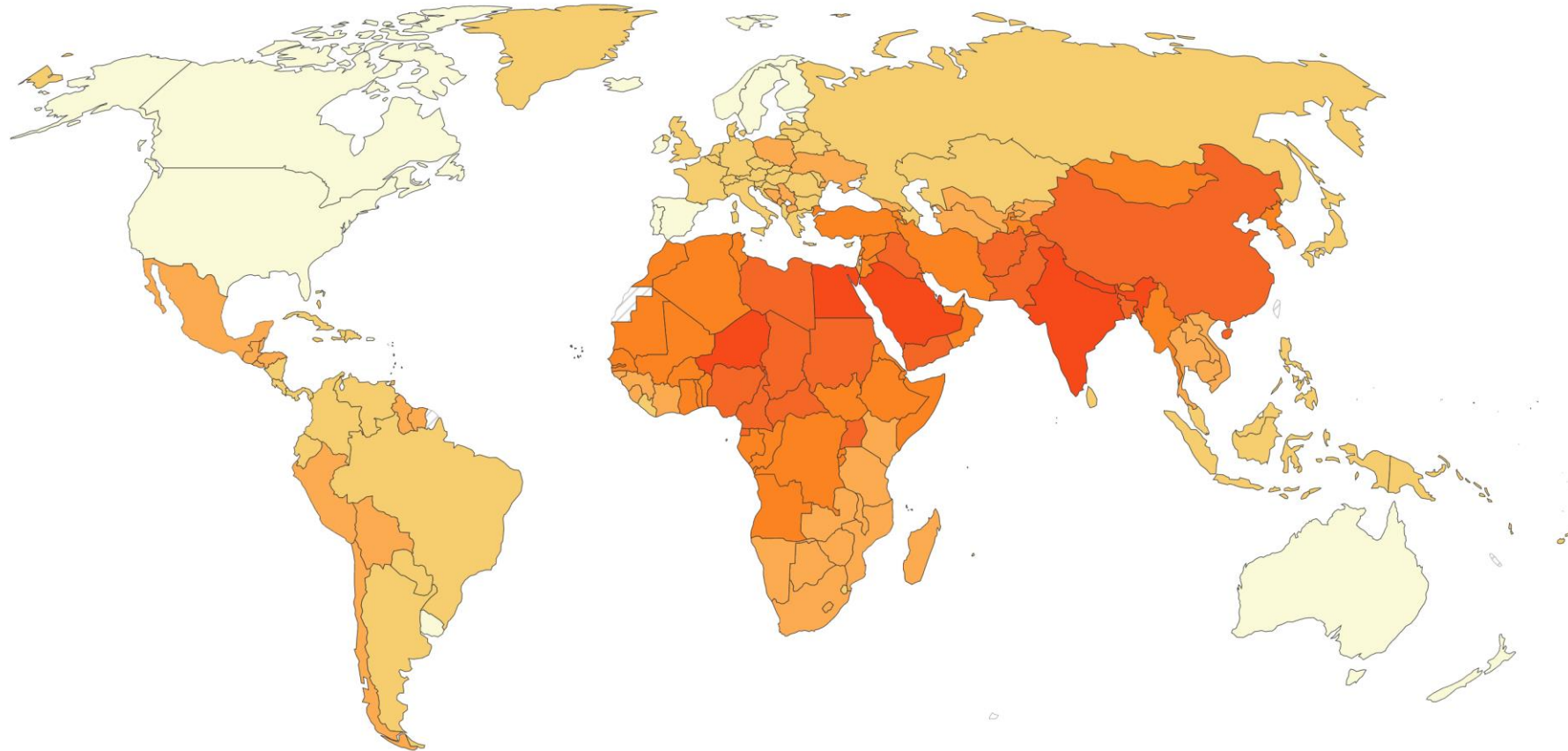
OurWorldInData.org/biodiversity/ | CC BY

1. Population: A population is a group of individuals of the same species that live in the same geographic area. A species will often have multiple or many populations, each living in a different area.



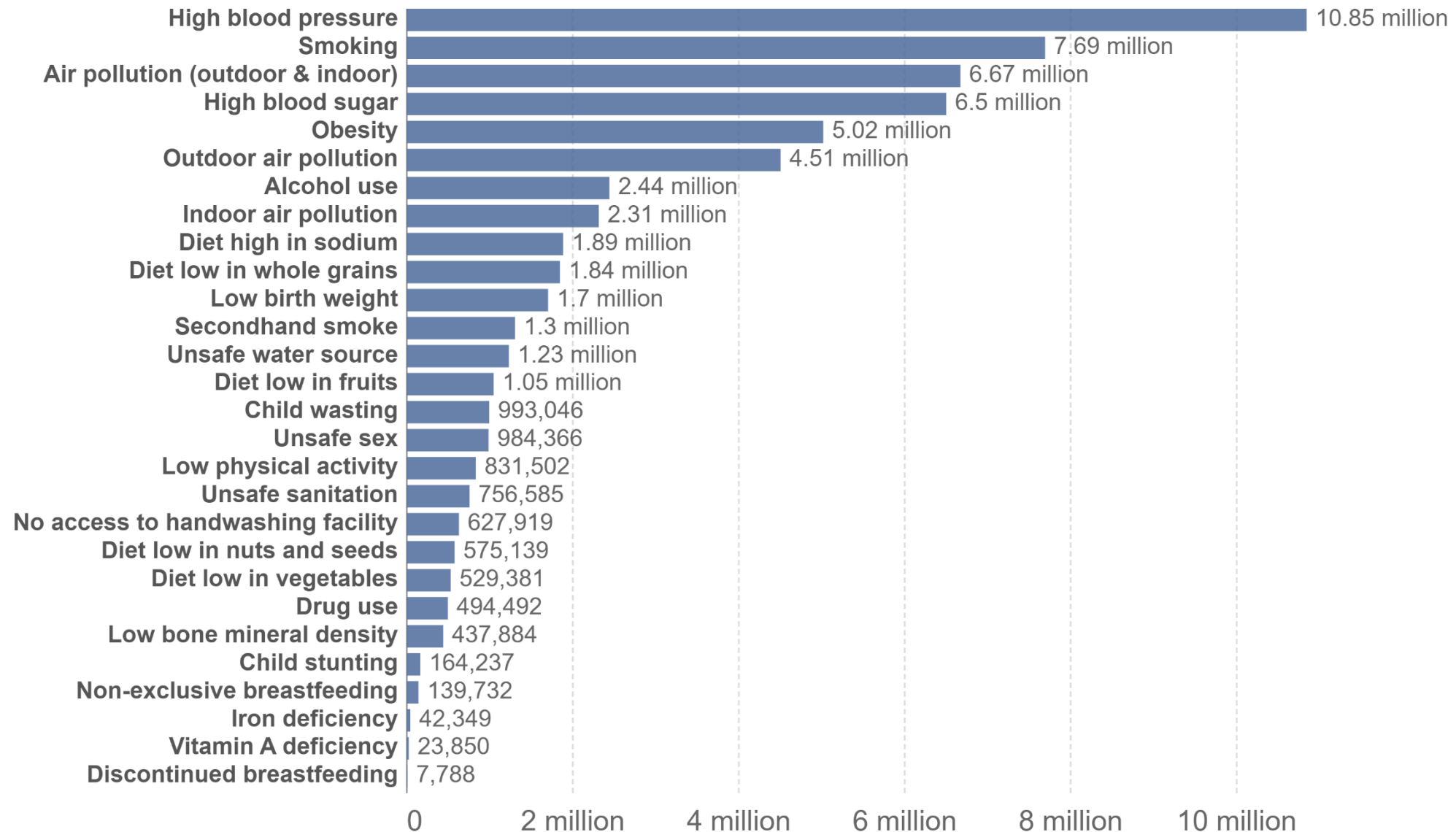
Exposure to air pollution with fine particulate matter, 2017

Population-weighted average level of exposure to concentrations of suspended particles measuring less than 2.5 microns in diameter (PM2.5). Exposure is measured in micrograms of PM2.5 per cubic metre ($\mu\text{g}/\text{m}^3$).



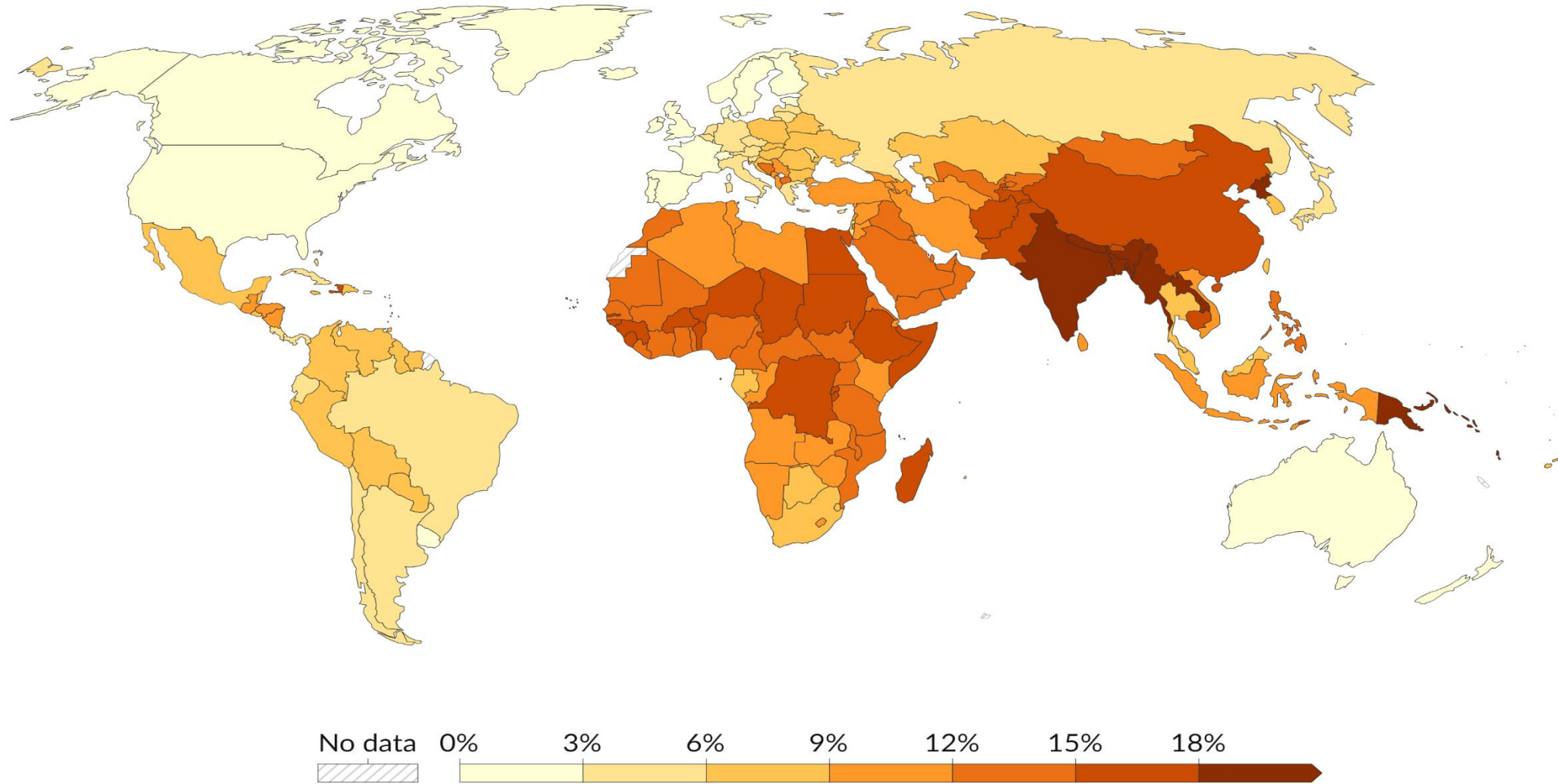
Number of deaths by risk factor, World, 2019

Total annual number of deaths by risk factor, measured across all age groups and both sexes.



Share of deaths attributed to air pollution, 2019

Share of deaths, from any cause, which are attributed to air pollution – from outdoor and indoor sources – as a risk factor.



Other forms of pollution:

- * Water pollution (industrial chemicals & agricultural practices)
- ** Soil pollution (pesticides, fertilizer & chemicals);
- *** Plastic pollution: 9.2 billion tons produced so far but only 9% is re-cycled & 91% goes to the environment as waste

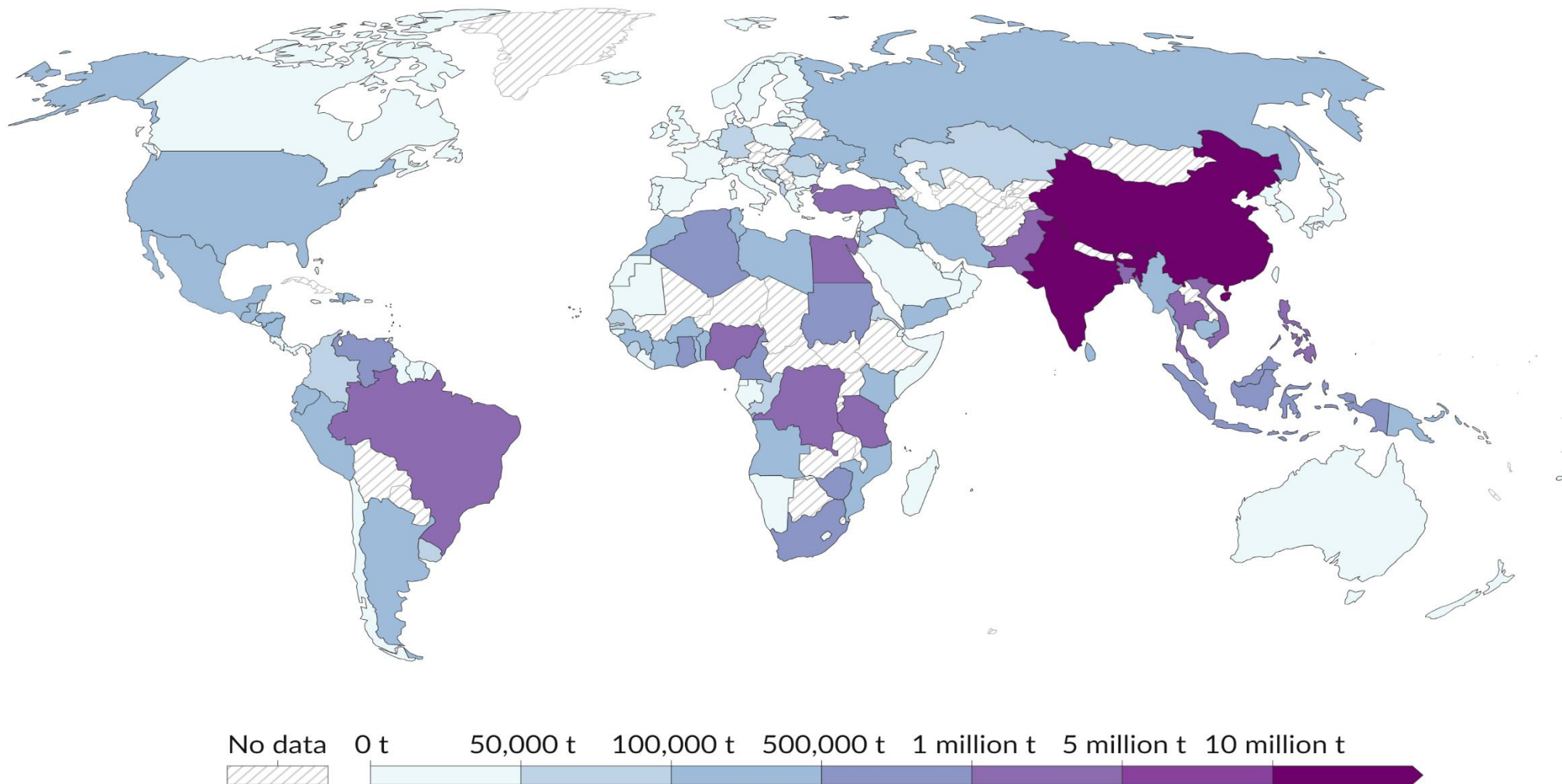
1. Farmers use 4 times more pesticides than the recommended doses in veggie farming in major pockets in Nepal (Jha, 2009, SANDEE)

2. Plastic bags ban in 13 municipalities shows that unless expected cost >> expected benefits, ban never works (Bhardwaj, Baland, Nepal, 2020, SANDEE)



Mismanaged plastic waste, 2019

Mismanaged plastic waste is waste that is not recycled, incinerated, or kept in sealed landfills. It includes materials burned in open pits, dumped into seas or open waters, or disposed of in unsanitary landfills and dumpsites.



What is wrong with our socio-economic and natural system?

- a) Global warming/climate change is accelerating,
- b) We are depleting natural resources at an unprecedented rate;
- c) We are polluting everything at an alarming rate,
- d) However, income (GDP) is rising, which measures our progress.

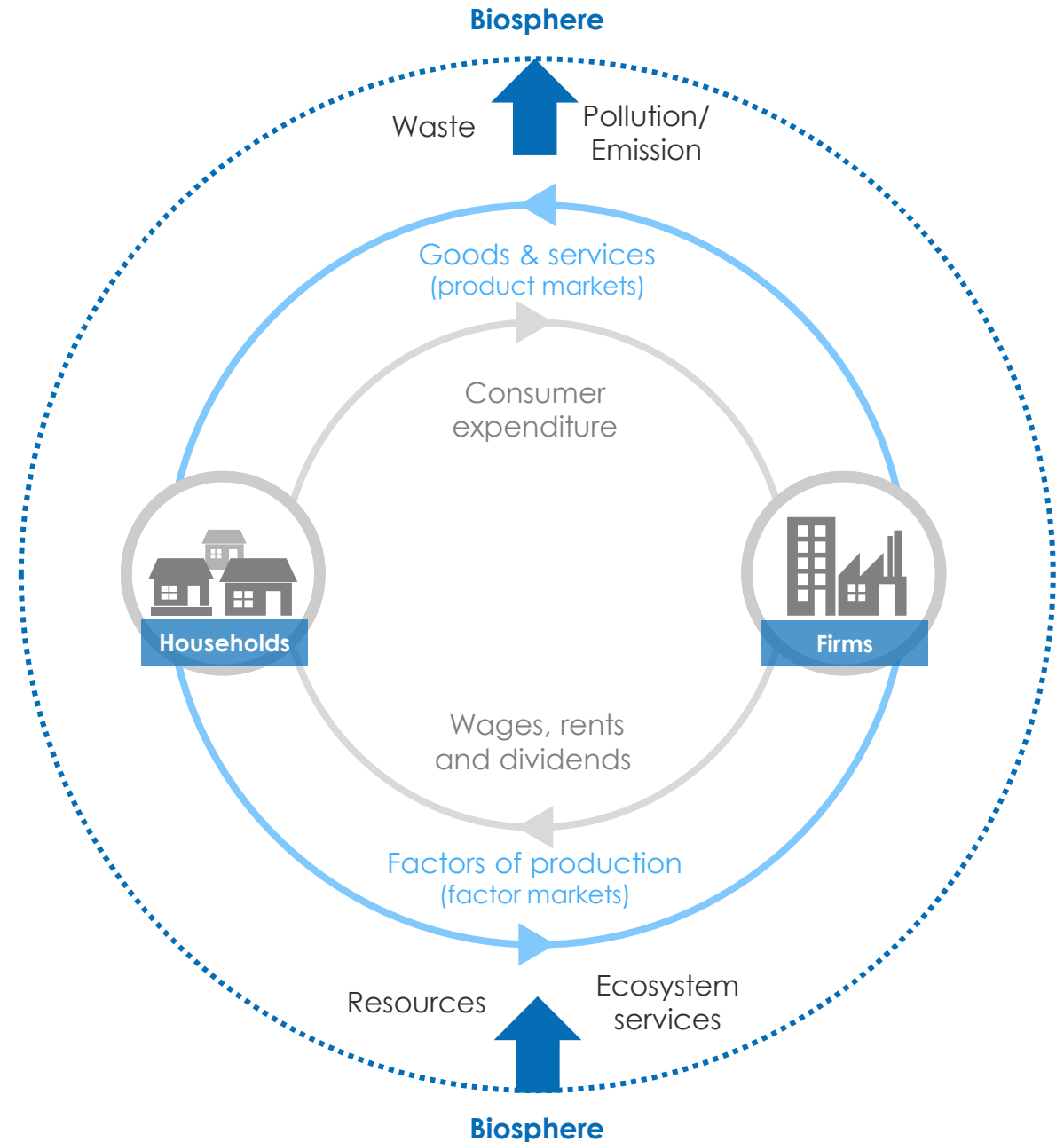
Are we making a real progress? Is it sustainable?

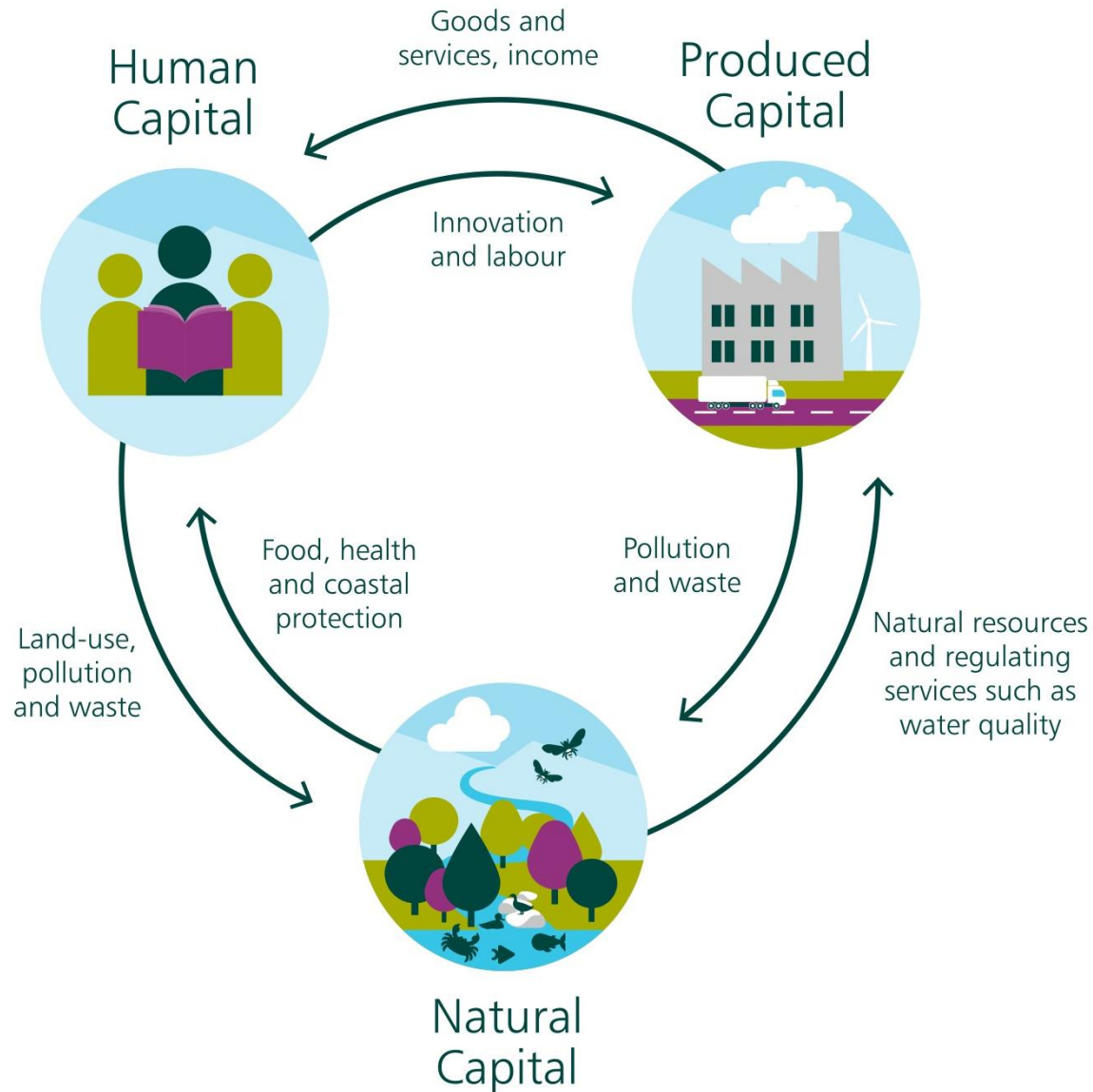


Current mainstream economic thinking is flawed

Nature is absent from the economic accounting system

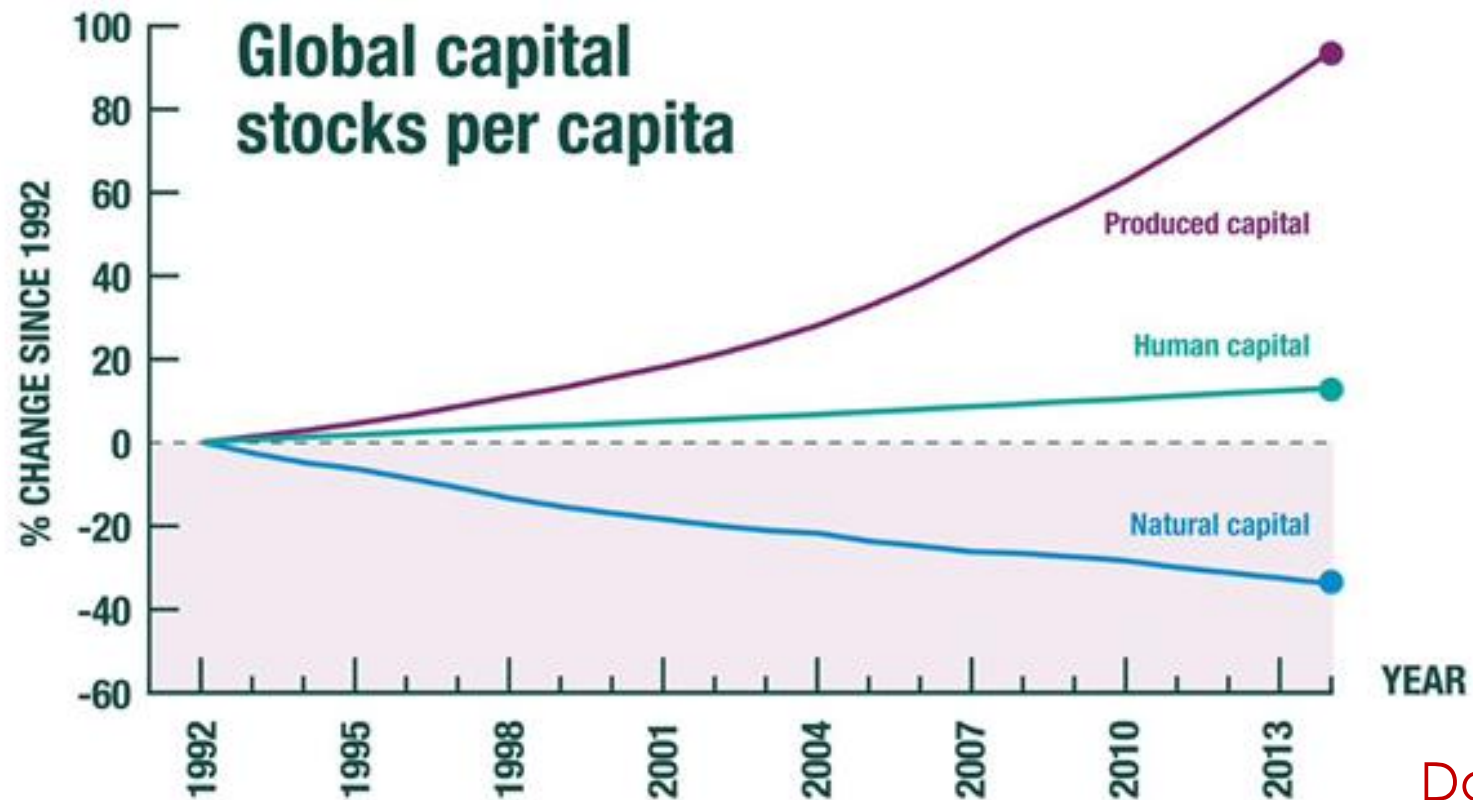
Therefore, environmental and other externalities (e.g. GHGs emission, pollution, wastes, and natural resources use) are not accounted for in GDP



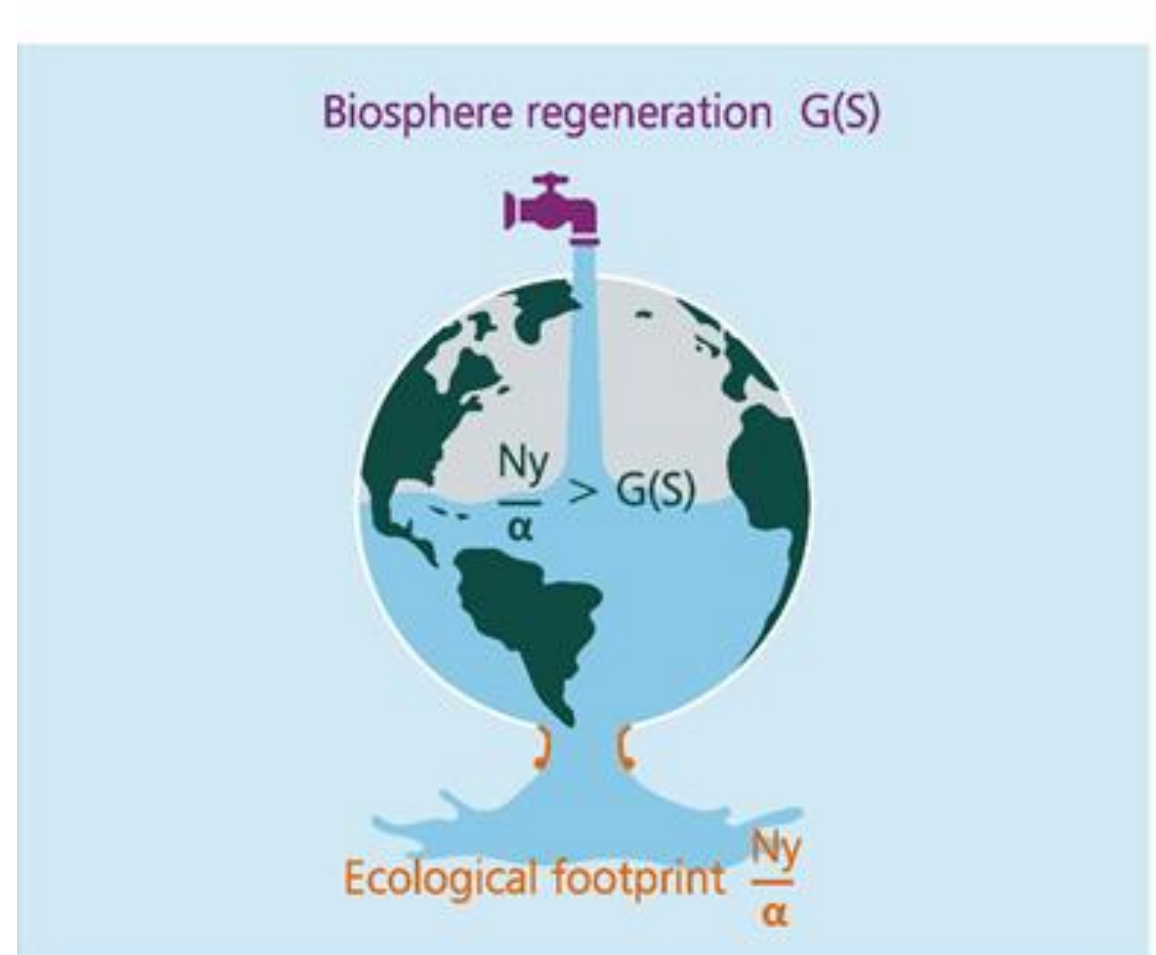


Three types of assets

Global Wealth per capita (1992-2014)⁹⁹²⁻²⁰¹⁴



The impact inequality & Sustainability



Alarming situation

our current demand ~ sustainable
output of 1.6 Earths

The demands humans currently place on nature, in terms of resource extraction and the dumping of harmful waste, are roughly equivalent to the sustainable output of 1.6 Earths



Three key issues

1

Excess demand for nature's service
(demand >> supply)

2

GDP does not account for harm that we inflict on nature and it needs replacement

3

Current institutions and systems need to be changed



What does it mean?

Introducing natural capital into national accounting system

Understanding limits to growth constrained by nature

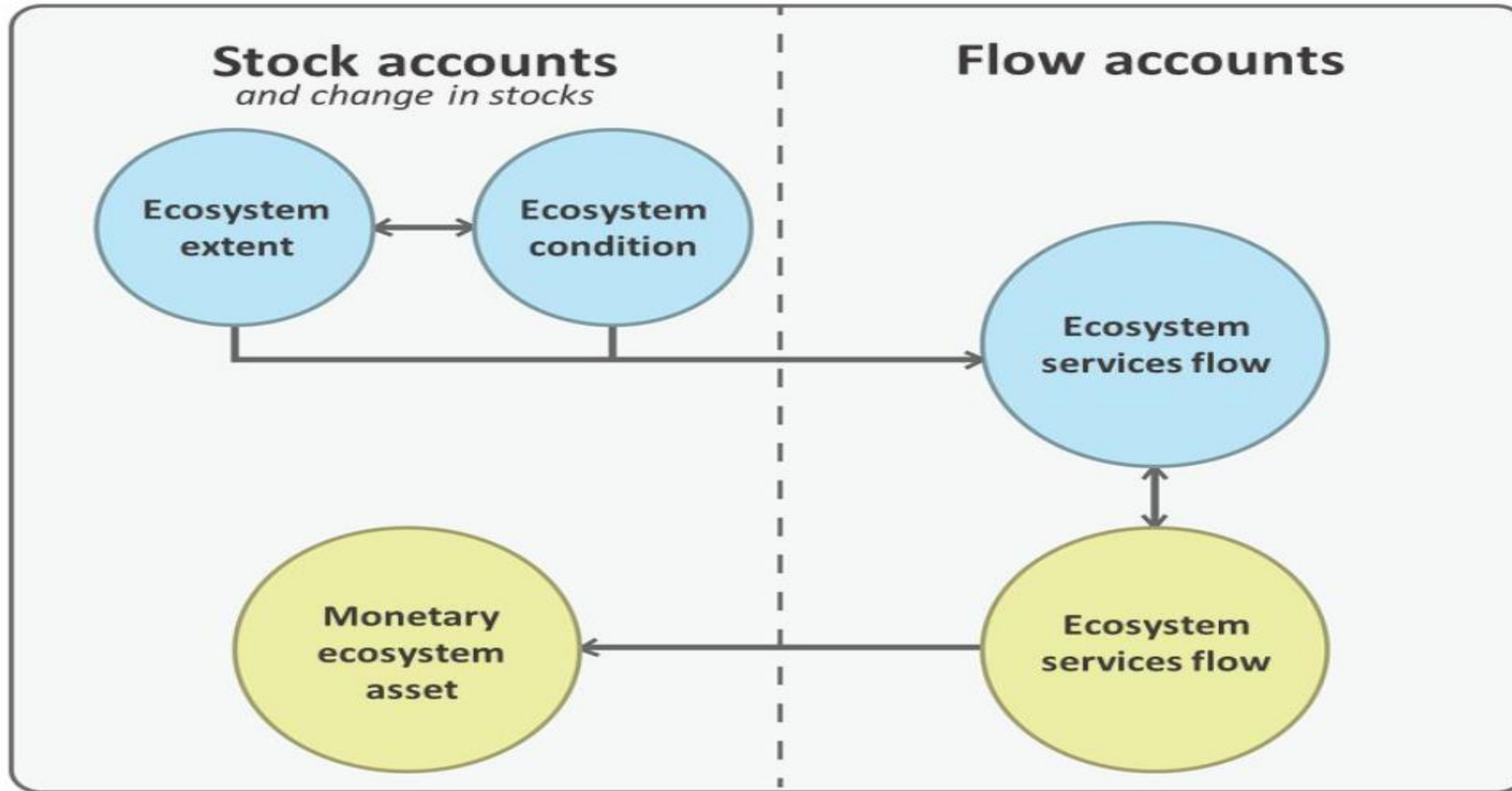
Understanding that nature can benefit from framing it in economic terms

Good news: UN statistics adopts the valuation of nature in principle

The **System of Environmental-Economic Accounting Ecosystem Accounting** (SEEA EA), are set to be adopted by many countries on 11 March 2021

The question now is **how to account for something that isn't bought and sold in a conventional way but not whether to do it.**

Illustrative example of Ecosystem Acc



Source: <https://seea.un.org/ecosystem-accounting>

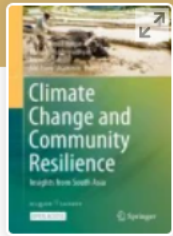
Challenges

Measuring and accounting fully for the impacts of our interactions with nature across all levels of society is quite demanding

Biodiversity and pollution are more complex since they cover the breadth of issues including **natural life and ecosystems** - **unlike climate impact calculations**, which centers around carbon emissions

We **require interdisciplinary team** for addressing such challenges (Accounting, Env Economics, Natural Science, etc)





Book | [Open Access](#) | © 2022

Climate Change and Community Resilience

Insights from South Asia

[Home](#) > [Book](#)

Editors: [A. K. Enamul Haque](#), [Pranab Mukhopadhyay](#), [Mani Nepal](#), [Md Rumi Shammin](#)

This book is open access, which means that you have free and unlimited access

Provides heterogeneous, locally grounded community solutions to climate change in different institutional settings

Thematically binds the geographical diversity of the South Asia region

Essential reading for anyone looking for examples of adaptation and resilience from the grassroots

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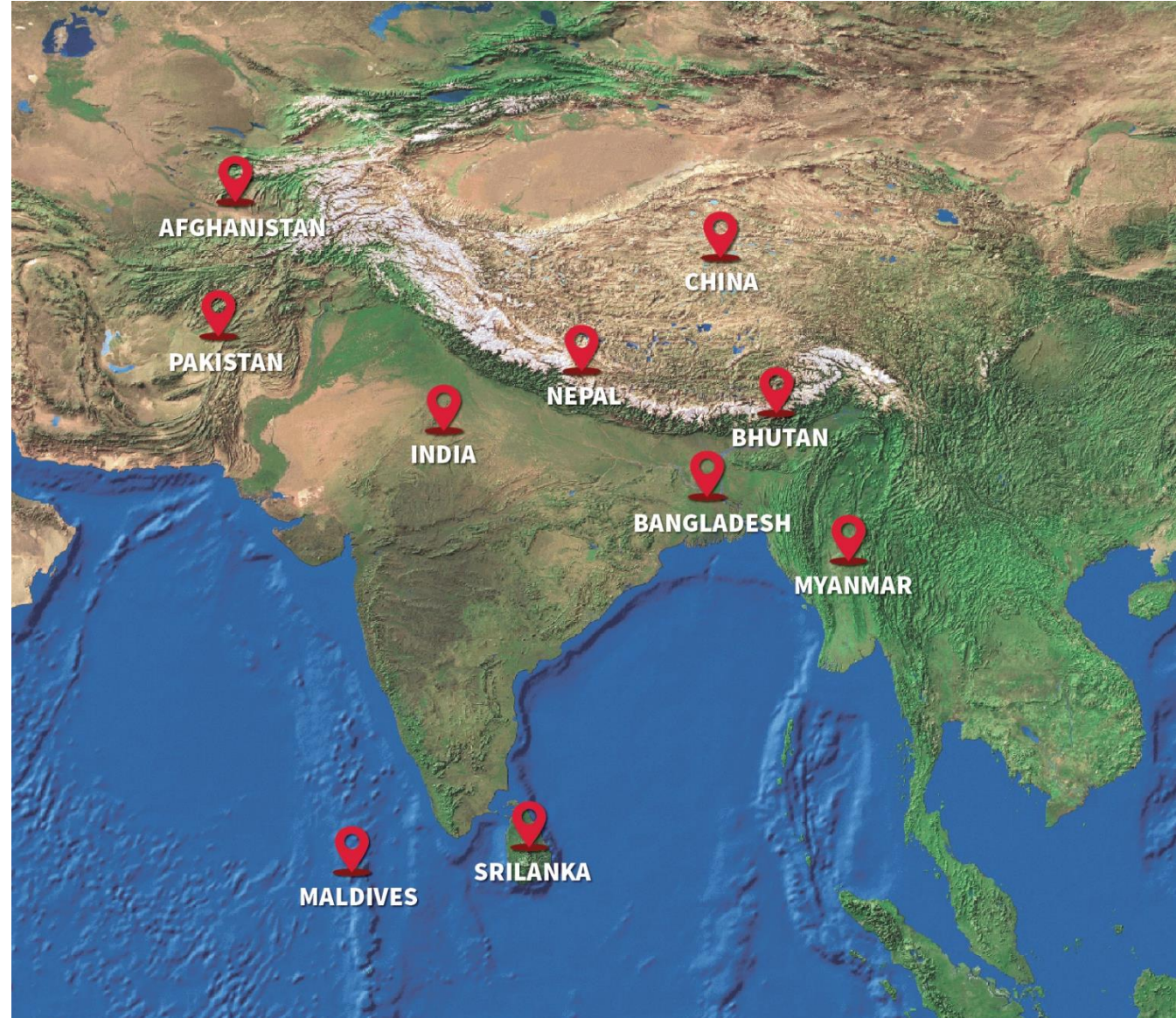
Thank you

SANDEE



Brief introduction to SANDEE

- South Asian Network for Development and Environmental Economics
- Established in 1999
- Hosted by IUCN (1999 – 2008) & ICIMOD (2008-2017)
- Part of ICIMOD since July 2017
- Works in 10 countries
Afghanistan, Bangladesh, Bhutan, China, India, Maldives, Myanmar, Nepal, Pakistan, and Sri Lanka



Objectives and activities

Objectives

- **Creating research capacity and academic leadership** for understanding interlinkages between economic development, poverty and the environment
- Generating **evidence base** for informing development & environmental policies
- Supporting Universities to introduce **environmental economics in their curricula**

Activities

- Advanced and basic **trainings**
- **Research grants** with dedicated mentoring
- **Technical support** to the researchers for conducting quality research
- **Dissemination and dialogues for research into policy**



SANDEE network includes

Some 250+ research associates

Global Advisors/Partners/Experts

A Steering Committee

SANDEE Fellows

Some 1500+ SANDEE
trained trainers/teachers

A small secretariat

6000+ members
on list-serve

