

Earth4All – A Survival Guide for Humanity

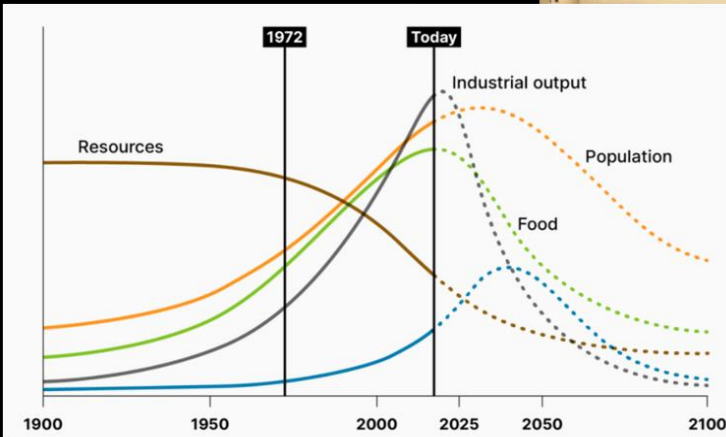
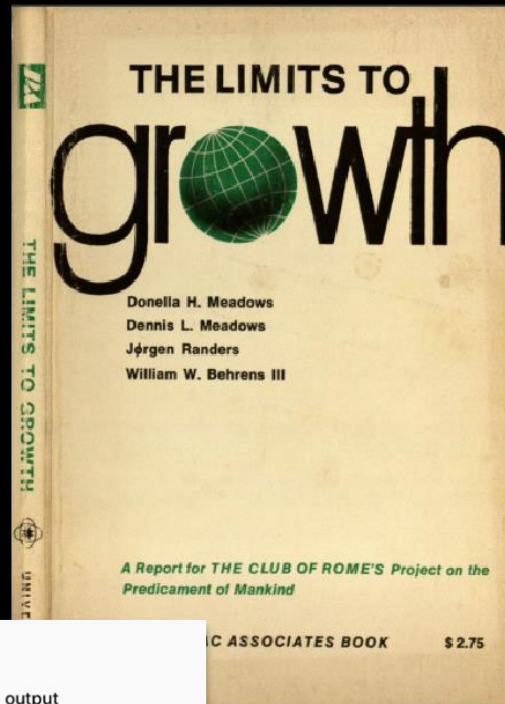
October 4th 2023
caCOR Talks

Sandrine Dixson-Declève, Co President, The Club of Rome
Co-Author, Earth for All: A Survival; Guide for Humanity



50 YEARS AGO

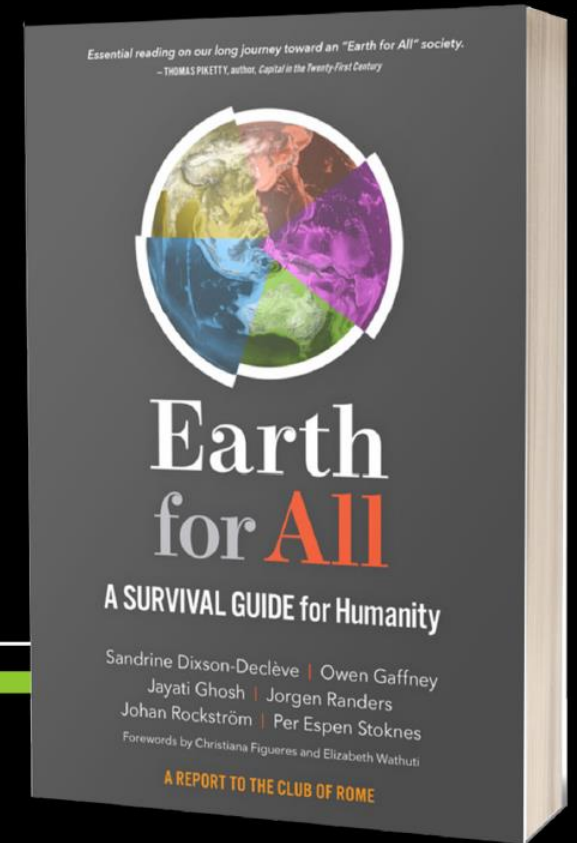
In 1972, *The Limits to Growth* warned that if growth trends continued, we would overshoot Earth's capacity.



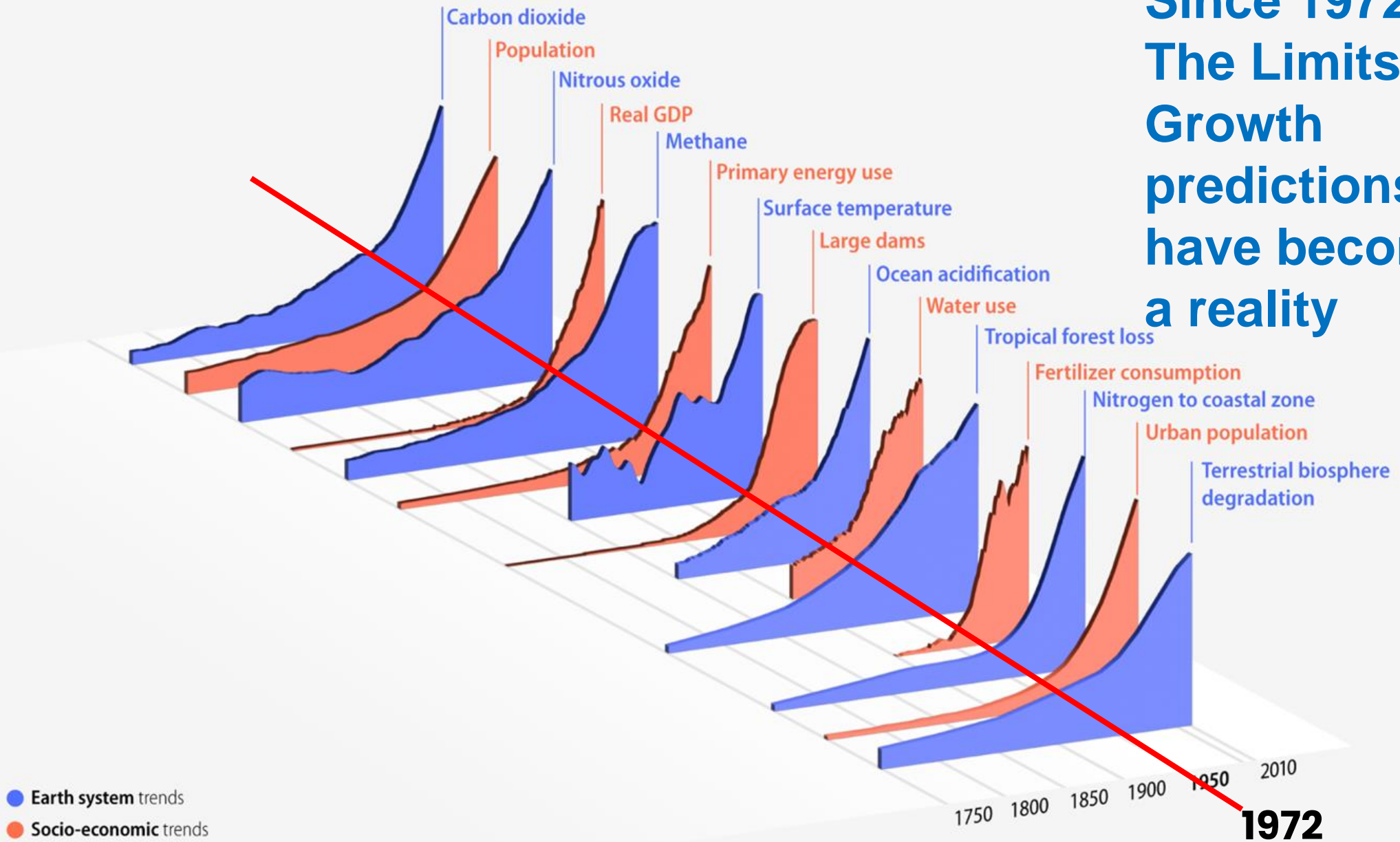
TODAY

There is still time to change course.

Earth for All provides a pathway to help steer humanity away from social and ecological catastrophe.



Since 1972:
The Limits to
Growth
predictions
have become
a reality



(based on Steffen et al., 2015)

Top 10 Risks

“Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period”



2 years



10 years

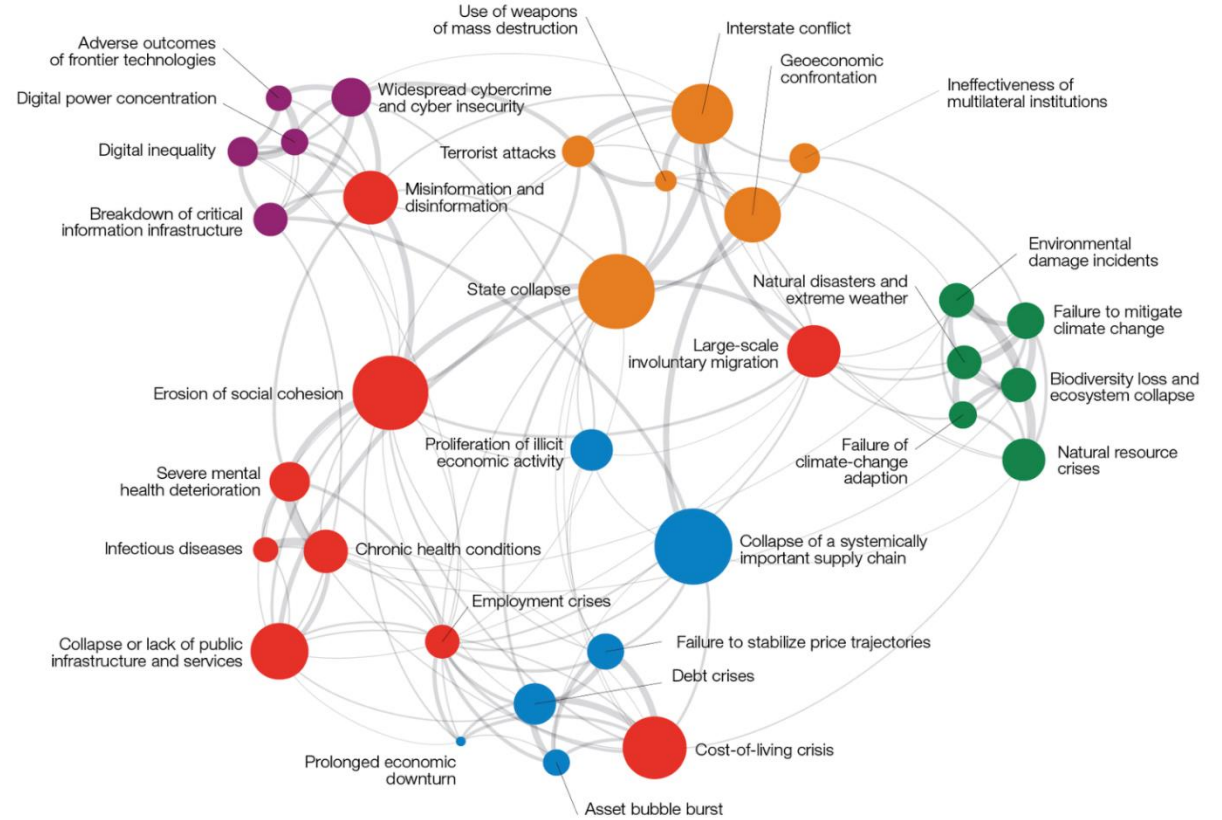


Risk categories



Source: World Economic Forum, Global Risks Perception Survey 2022-2023

Global risks landscape: an interconnections map



Nodes

Risk influence



Edges

Relative influence

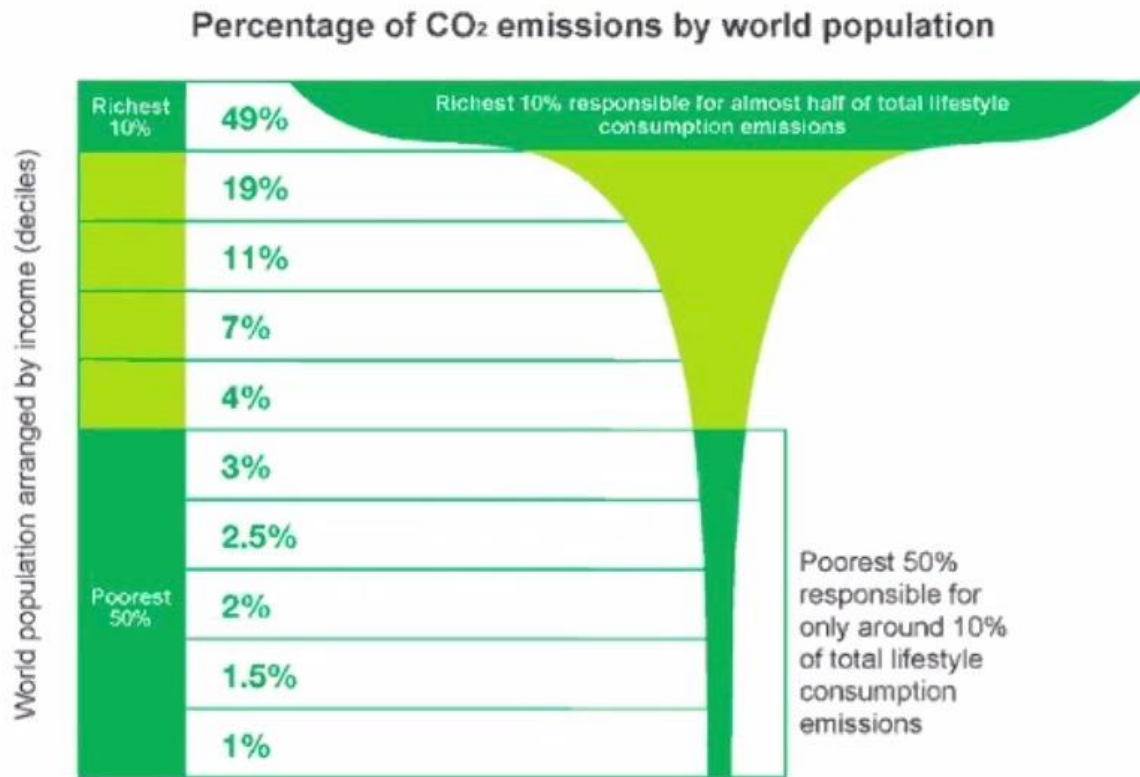


Risk categories



Source: World Economic Forum, Global Risks Perception Survey 2022-2023

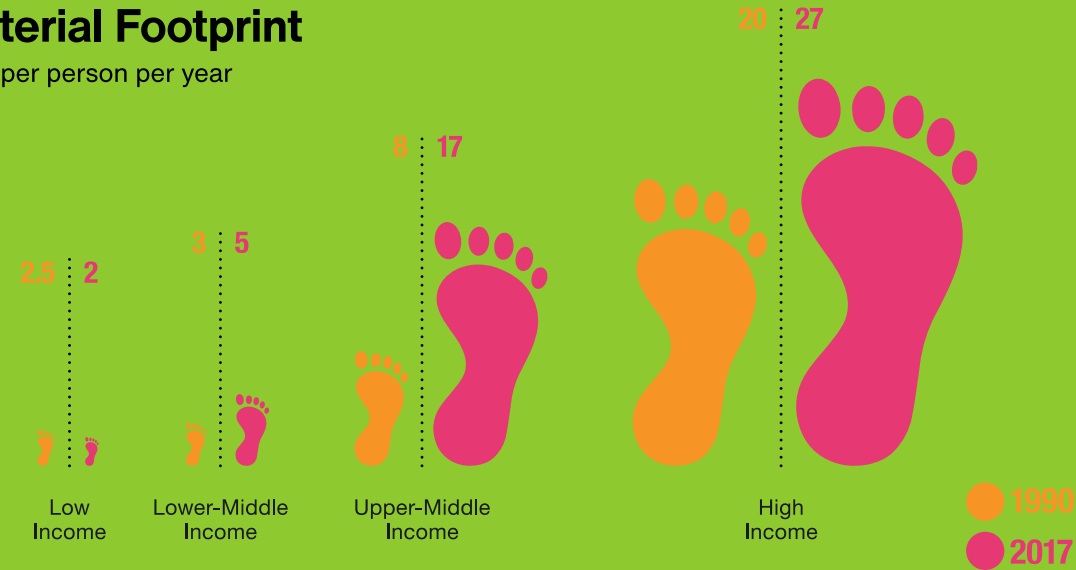
Figure 1: Global income deciles and associated lifestyle consumption emissions

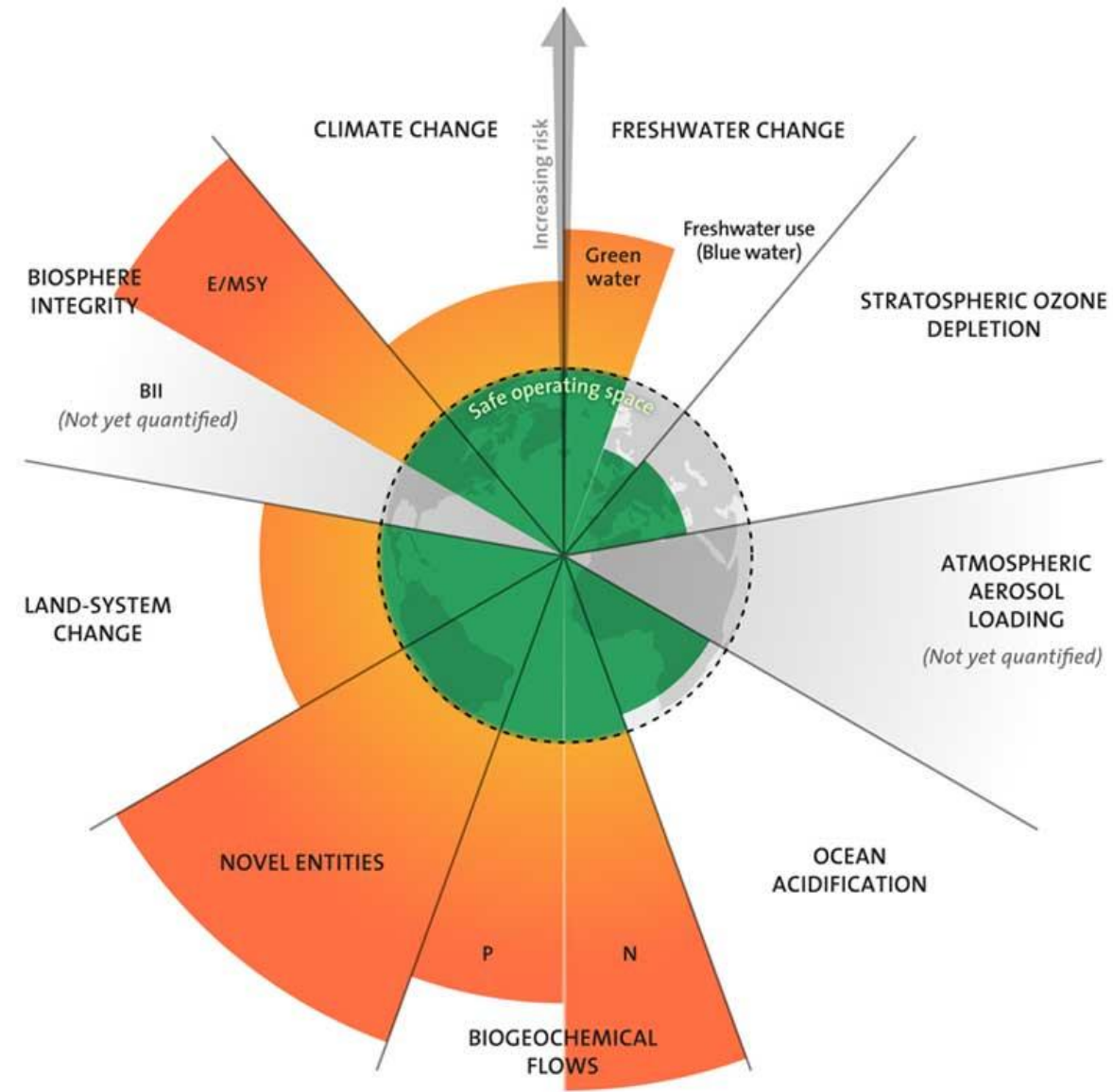


Source: Oxfam

Material Footprint

Tons per person per year

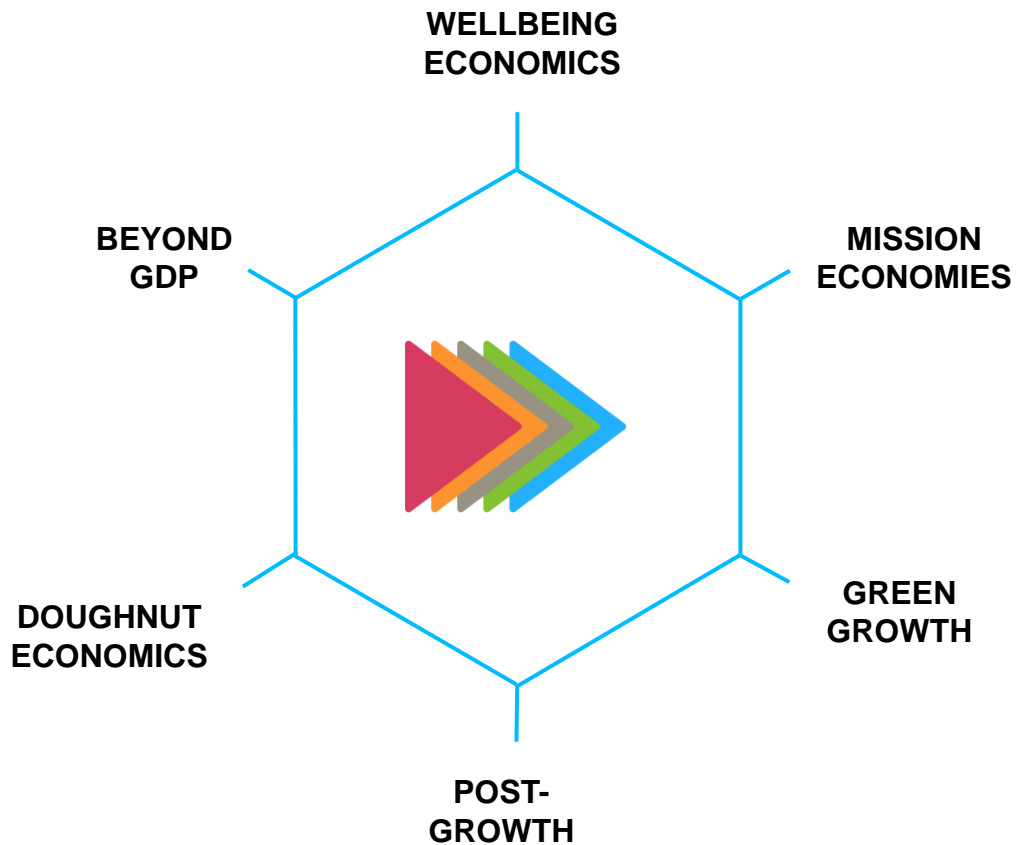




»We can categorically define our current situation as a planetary emergency. To use a Titanic comparison, if sixty seconds remain before colliding with an iceberg and it takes sixty seconds or more to turn enough to avoid collision, this can obviously be described as an emergency situation«

Earth4All, p. 16

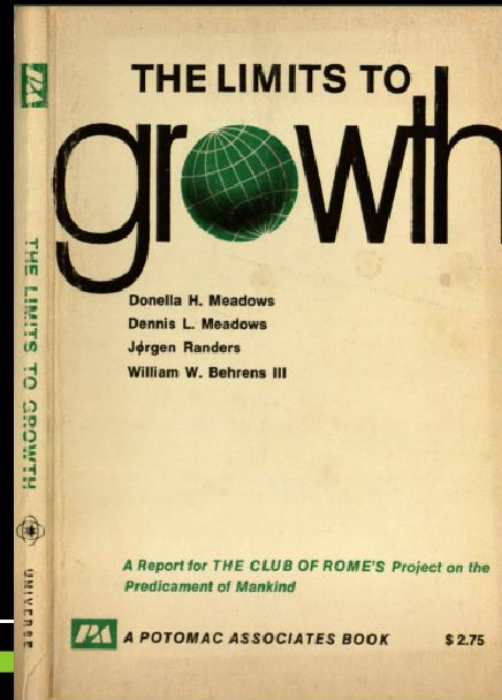
Transformational economics for the 21st century



- ▶ Shift from an Extractive GDP based economy
- ▶ Account for social and environmental risk in financial and economic decision-making
- ▶ Expand our perspective of public goods and socialise the rewards of environmental and social commons
- ▶ Correct the inequity between high and low-income countries created by international finance and trade systems
- ▶ Increase the agency of women and workers to drive the direction of the economy

50 YEARS AGO

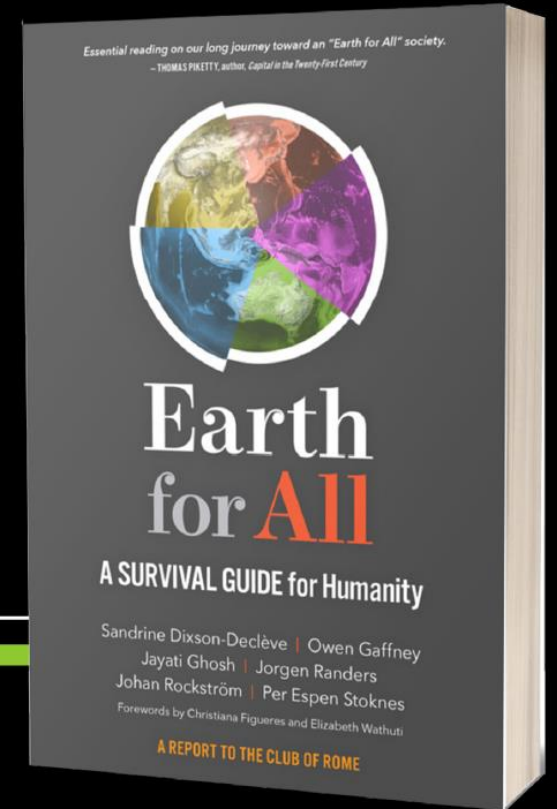
In 1972, *The Limits to Growth* warned that if growth trends continued, we would overshoot Earth's capacity.



TODAY

There is still time to change course.

Earth for All provides a pathway to help steer humanity away from social and ecological catastrophe.



The Earth4All model

- 1 **INEQUALITY**
- 2 **ECOLOGY**
- 3 **PUBLIC SECTOR**
- 4 **FINANCE**
- 5 **LABOR**
- 6 **POPULATION**
- 7 **WELLBEING**

- We investigate the distributional effects in terms of owner & worker share of output from both private investment and public sector activities, confirming the preliminary evidence in favor of the relevance of distributional patterns for the determination of sustainable policy-making (Rao et al, 2017)
- We include the wider effect of the human economy on the main planetary boundaries (climate, nutrients, forests, biodiversity), the impact of the natural boundaries on economic development and their complex feedback effects (Harfoot et al., 2014)
- We model an active public sector with public infrastructure capacity, welfare policies and an active climate-change mitigation policy stance (Mazzucato, 2021)
- We include the effects from debt and money supply, central bank interest rates and corporate capital costs, addressing the call for further integration of financial mechanisms with IAMs (Battiston et al, 2021)
- We are able to simulate a recurrent 10-year unemployment cycle and its macroeconomic consequences, a global first (Ciarli & Savona, 2019)
- In contrast to UN's statistical approach, we have endogenous population dynamics affected by investment levels in public spending, education and income levels, improving on existing IAM with demographic sectors (McIsaac, 2020)
- We integrate a wellbeing index, and social tension index (as a function of GDPpp, unemployment, income inequality, debt burden, government services, local/regional pollution, perceived global warming), illustrating the connection between environmental and social sustainability and integrating the latter within a IAM for the first time (Eizenberg & Jabareen, 2017)

One future, one
choice,
two scenarios.

SCENARIO 1:

Too Little Too Late:

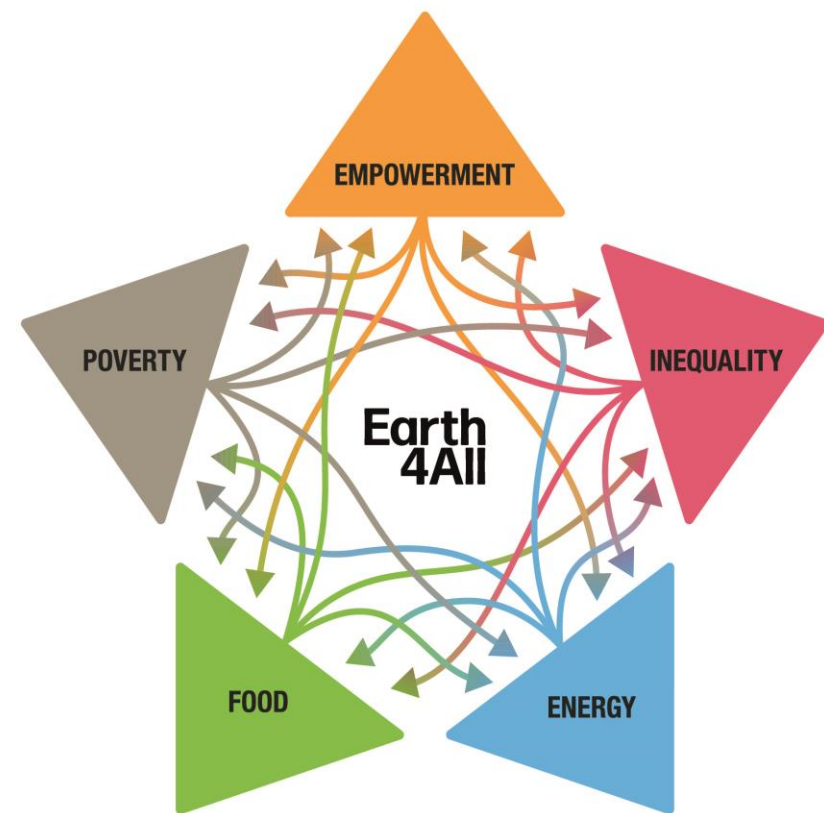
What if we continue
on our current
destructive path?

SCENARIO 2:

The Giant Leap:

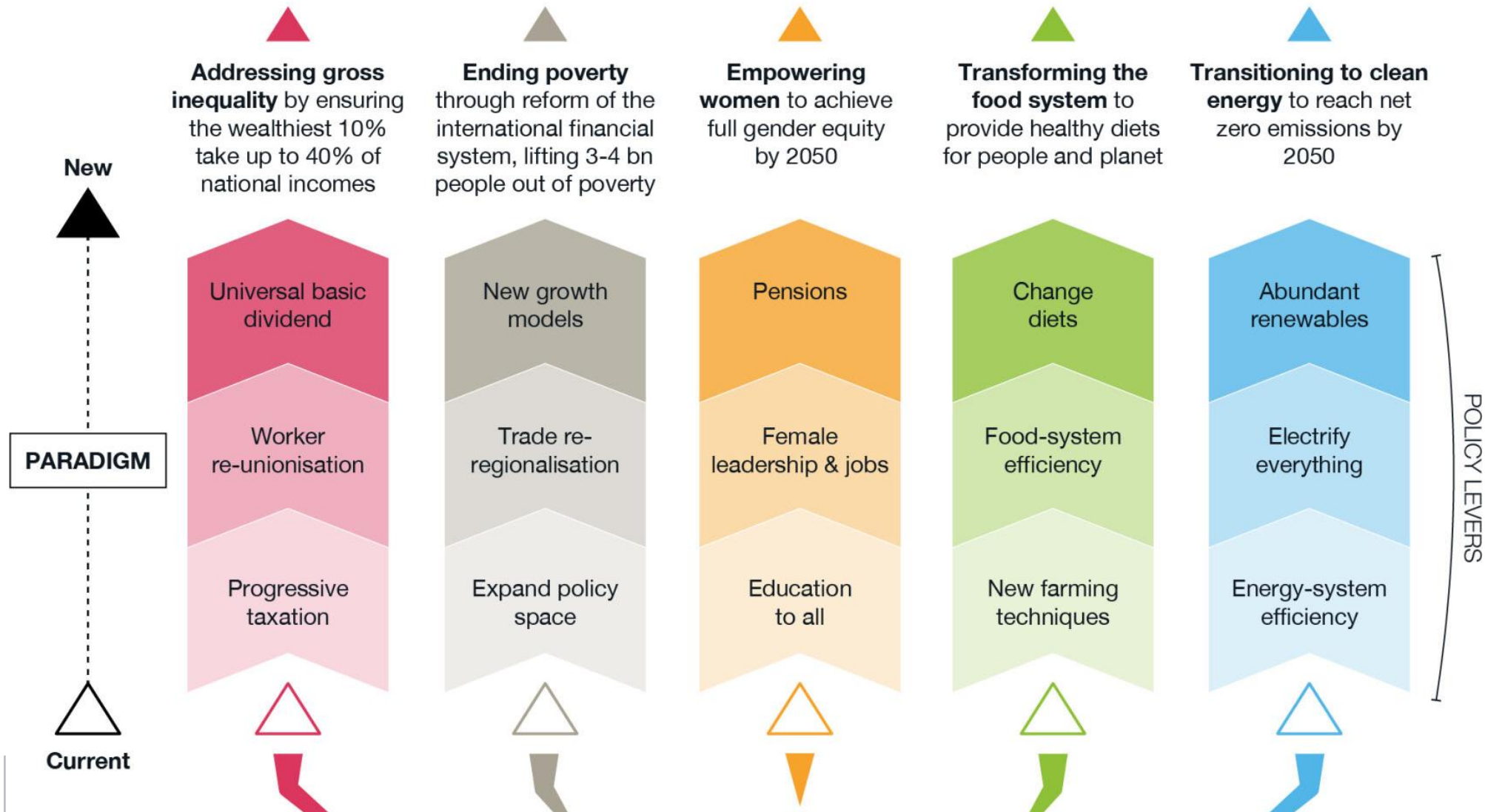
What if we achieve
the fastest economic
transformation in
history?

Five Global Turnarounds Needed

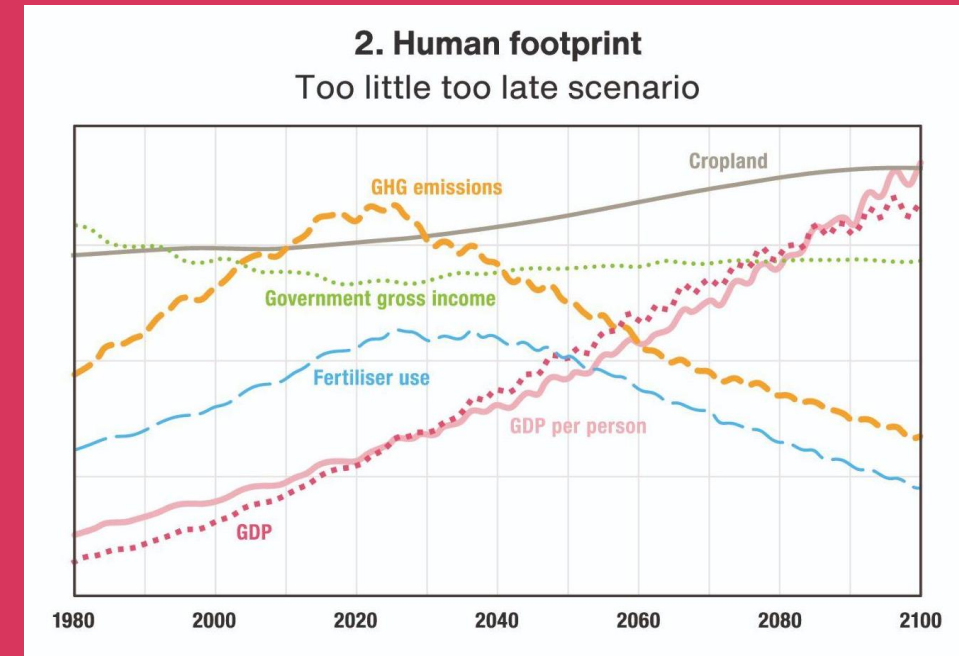
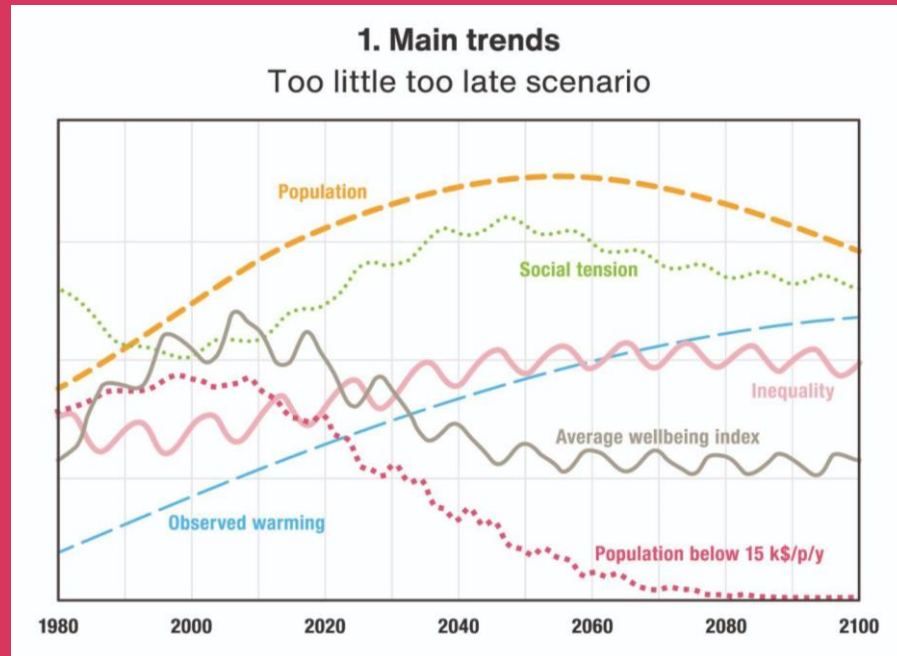


- ▶ Transform and accelerate human development **IN LOW-INCOME COUNTRIES** by reforming the international financial and trade system.
- ▶ Transform **WEALTH DISTRIBUTION** by ensuring the wealthiest 10% have no more than 40% of national income.
- ▶ Transform **ENERGY SYSTEMS** to halve emissions of greenhouse gases every decade.
- ▶ Transform agriculture. The **FOOD SYSTEM** must become regenerative and nature positive.
- ▶ Transform gender power imbalances. **EMPOWER WOMEN** and invest in education for all.

15 Policy Actions

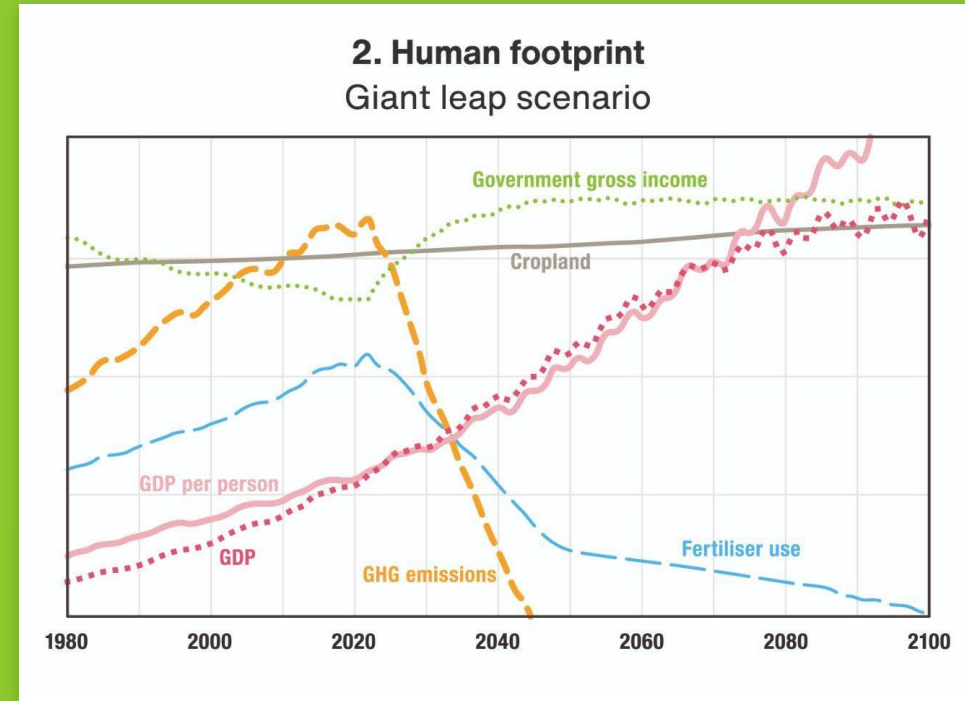
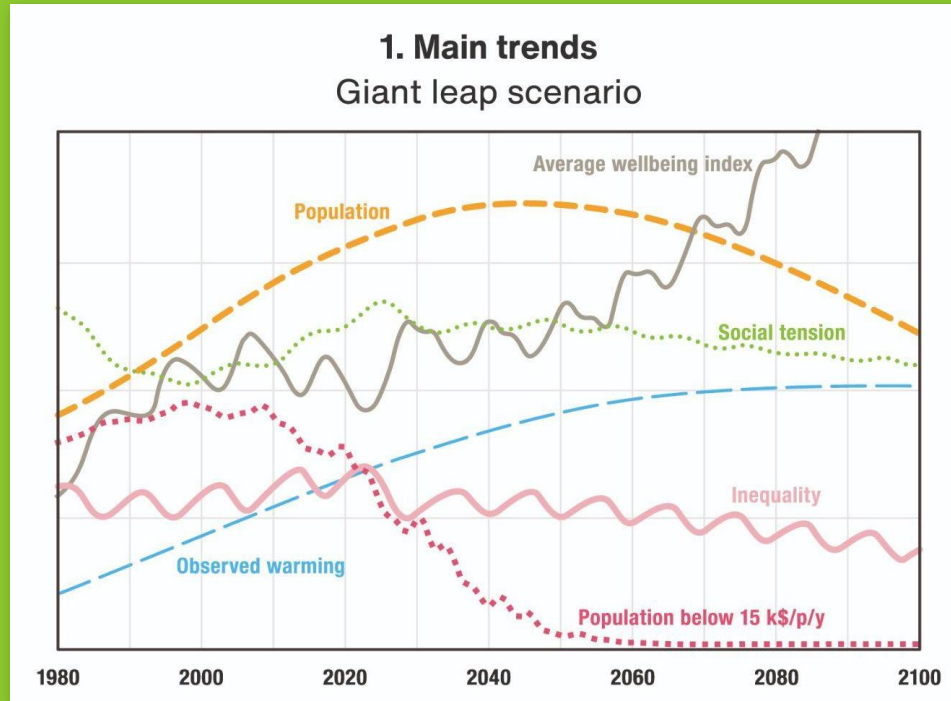


'Too Little, Too Late' scenario



- Poverty reaches zero around 2100
- Social tensions rise this century, conversely wellbeing falls.
- Global average temperature: a catastrophic 2.5°C rise minimum.

'Giant Leap' scenario



- Poverty reaches zero around 2050 (USD 15k pppy).
- Wellbeing rises.
- Temperature stabilises at below 2°C.

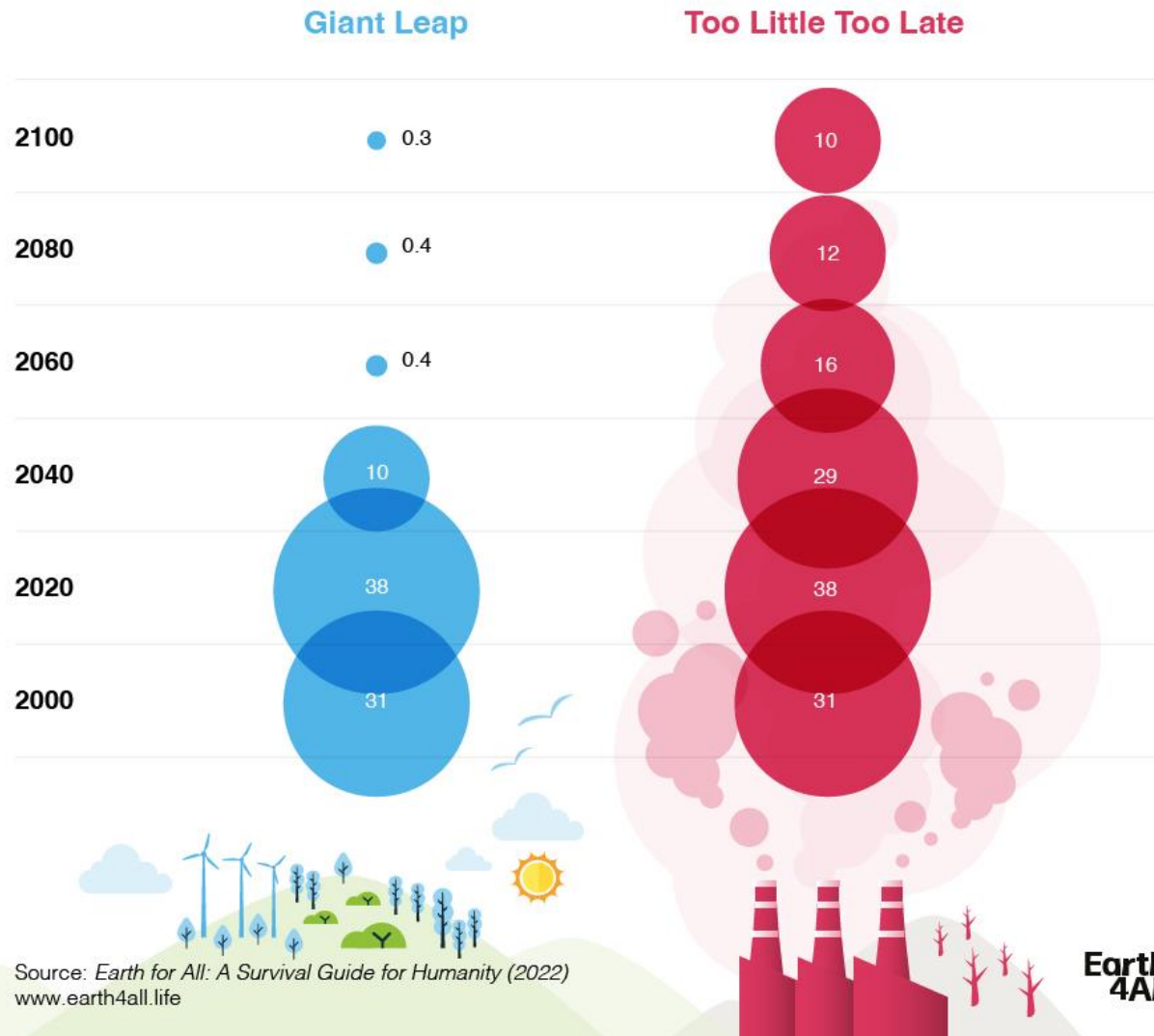


The speed of action on planetary boundaries is a FUNCTION of the speed of action on **inequality and poverty**.

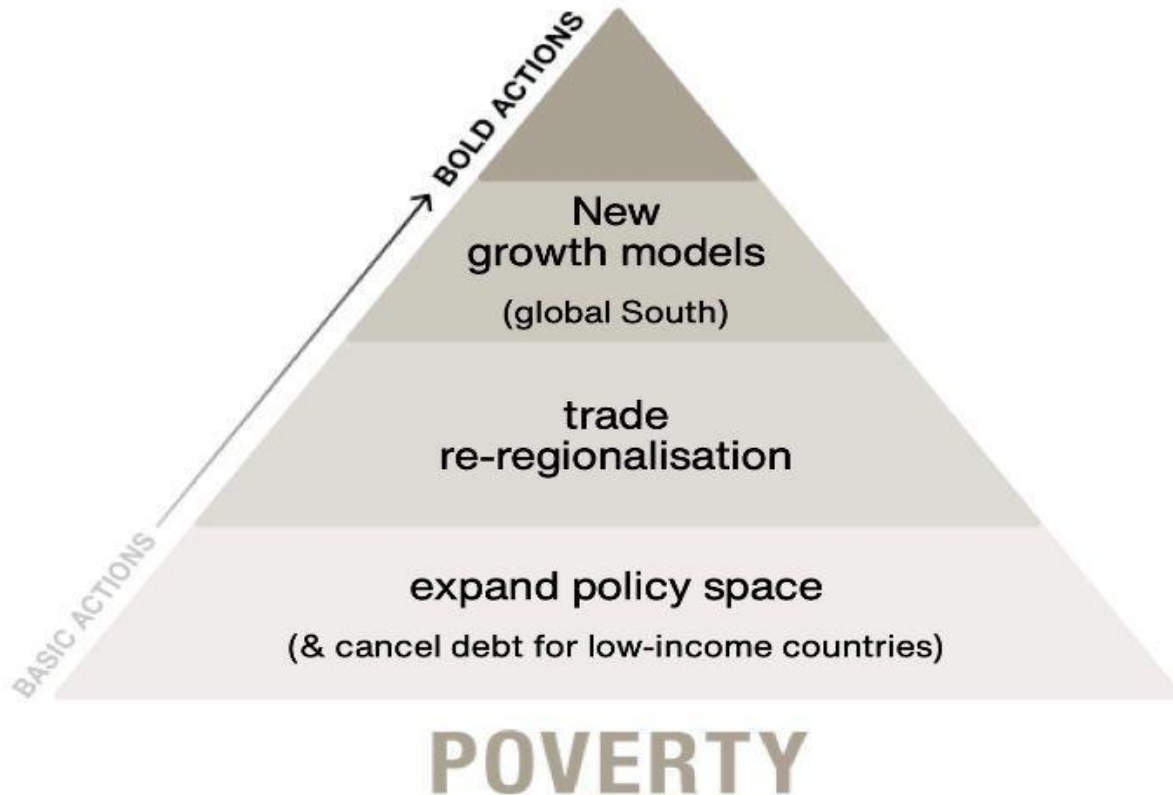
Main causal structure of mov220327 E4A-global jr

Greatly reduced **emissions** with a **Giant Leap**

CO2 emissions from energy and industry (GtCO₂/y)



The Poverty Turnaround



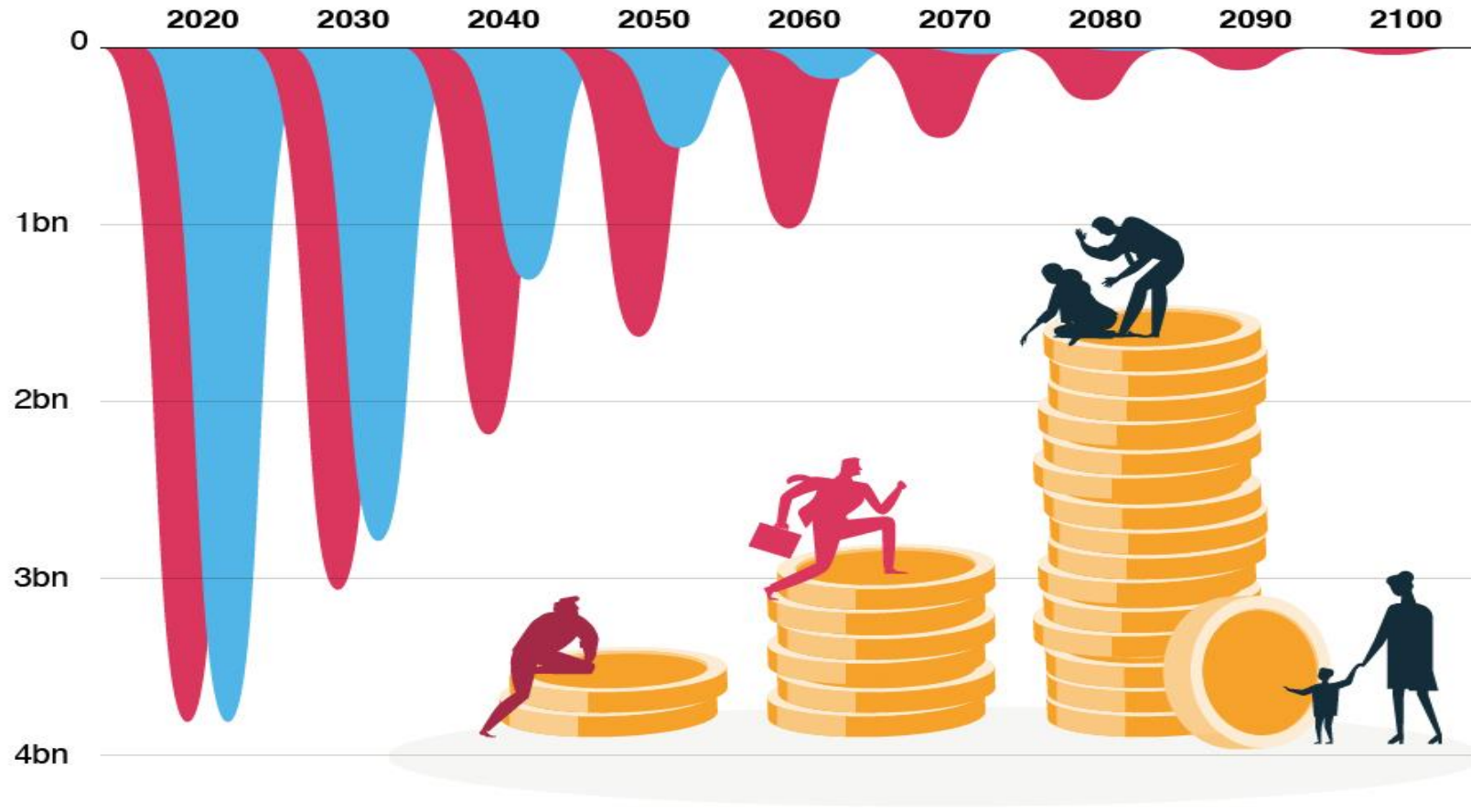
»Crucially, there is an urgent need to remove the constraints on low- and middle-income countries to tackle the dual challenges of climate change and poverty. Without urgent action, it is exceedingly difficult for them to prosper economically and simultaneously reduce carbon emissions or adopt green technology.«

Earth4All, p. 57

Global **poverty** would be drastically reduced by 2050 with a **Giant Leap**

Millions of people below \$6.85 per day

● **Giant Leap** ● **Too Little Too Late**



Source: *Earth for All: A Survival Guide for Humanity* (2022)
www.earth4all.life

Inequality

»Countries that are more equal perform better in all areas of human wellbeing and achievement than countries with divisive levels of income inequality. More equal countries tend to have better outcomes when it comes to trust, education, social mobility, longevity, health, obesity, child mortality, mental health, crime, homicides, and drug misuse. The list goes on.

Counter-intuitively, even wealthy people in more equal societies, for example the Nordic countries, have higher levels of wellbeing than wealthy people in countries with high inequality such as the United States, Brazil, or South Africa. »

A world with less **inequality** with a **Giant Leap**

Earth4All inequality index

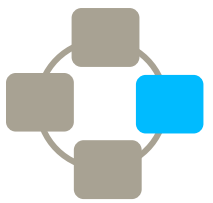
● **Giant Leap** ● **Too Little Too Late**



Footnote: The Earth4All inequality index measures the relative size of workers' incomes in relation to the incomes of capital owners in the Earth4All model.

Source: *Earth for All: A Survival Guide for Humanity* (2022)
www.earth4all.life

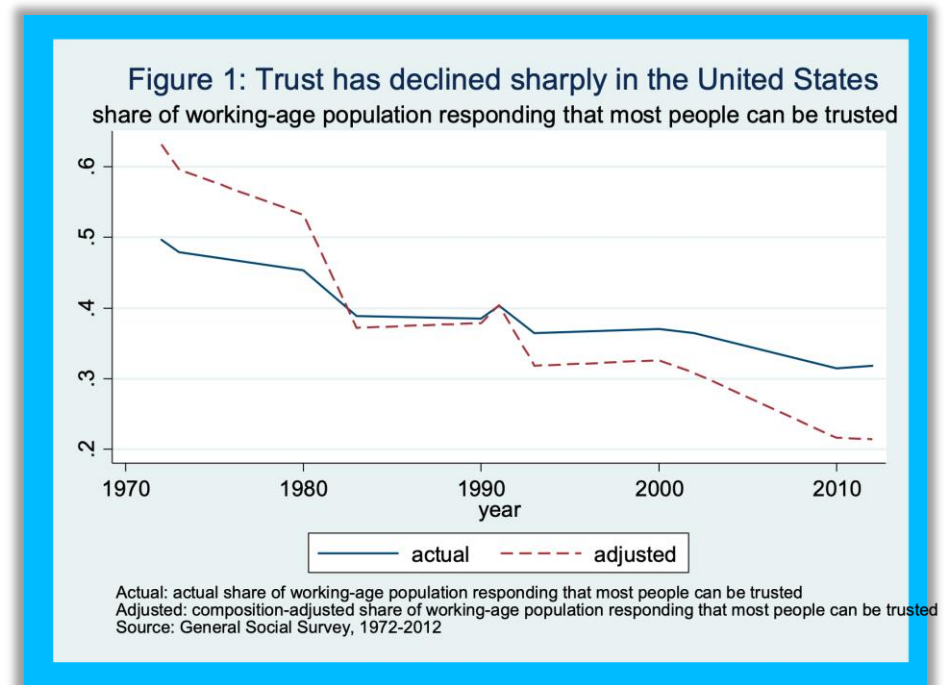
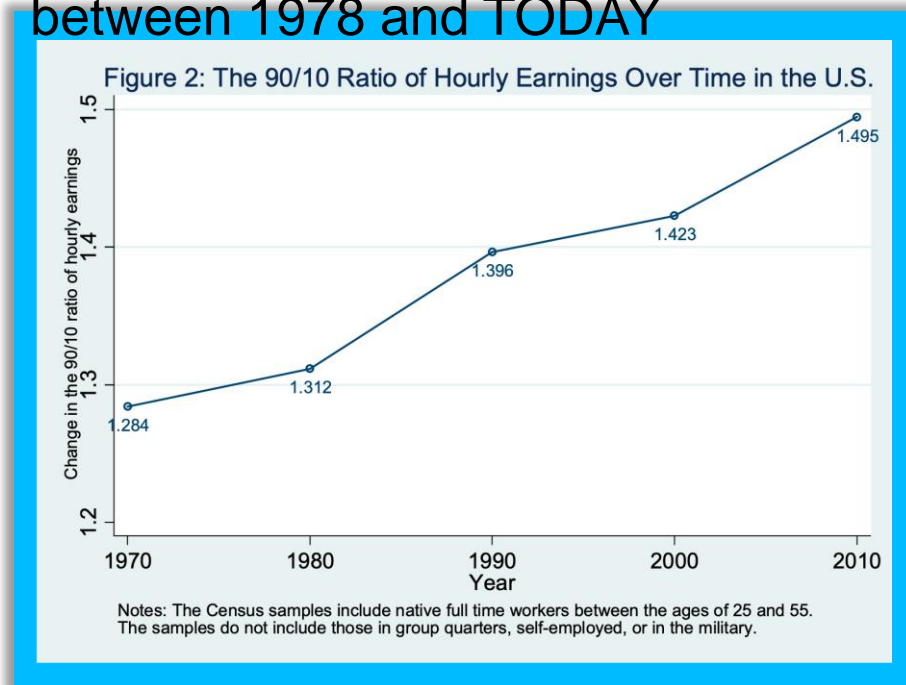
Inequality Reduces Trust



Wage inequality (based on 90/10 ratio) in the US has **increased 14%** between 1970 - 2010 while CEO salaries have increased by 1400% between 1978 and TODAY



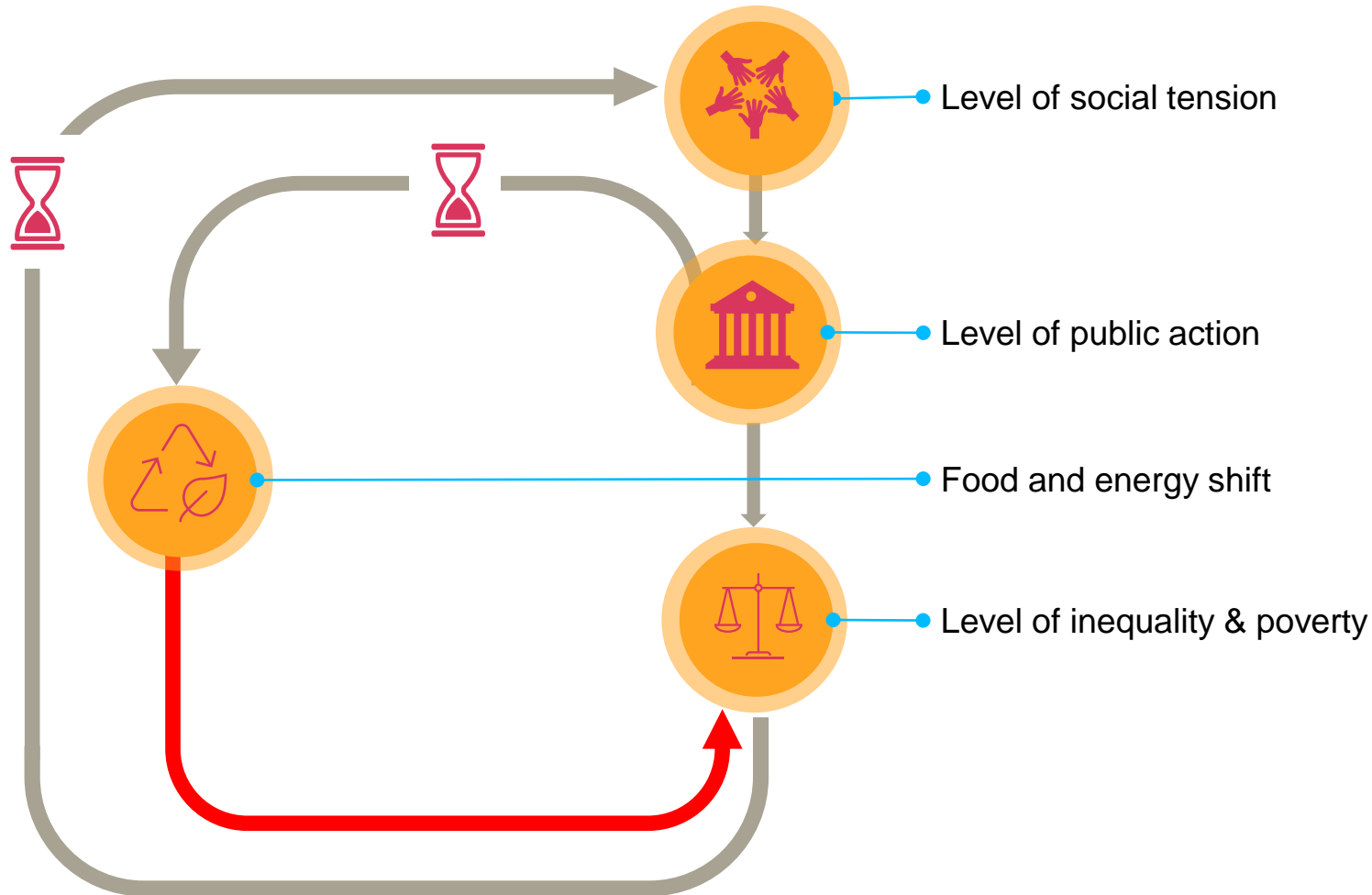
At the same time, surveys of US citizens show **decreasing levels of trust** in people



Sources: IMF - Gould, Eric D, and Alexander Hijzen. Growing Apart, Losing Trust? The Impact of Inequality on Social Capital. International Monetary Fund, 2016.

The Critical Feedback Loop

ACTION ON PLANETARY BOUNDARIES IS A FUNCTION OF ACTION ON INEQUALITY AND POVERTY



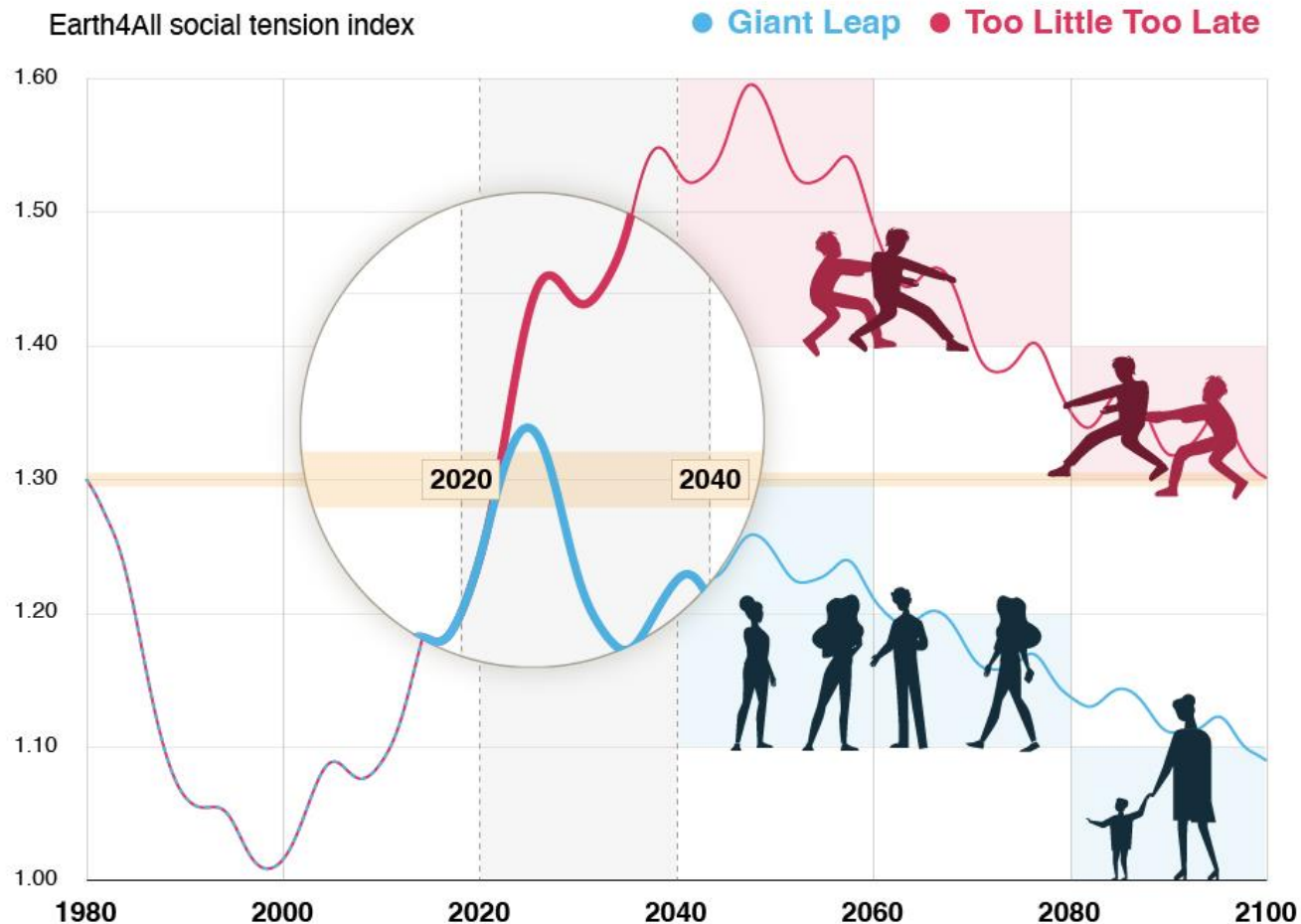
Social trust influences the political space available for transformative public action

How effectively the state intervenes to reduce inequality and planetary breakdown

The regulation of the food and energy system impacts inequality

Inequality drives social tension

Reduced **social tension** by 2030 if we take a **Giant Leap**



Footnote: The Earth4All social tension index measures the inverse of people's perceived rate of progress, defined as the rate of change in the Earth4All Wellbeing Index.

Source: *Earth for All: A Survival Guide for Humanity* (2022)
www.earth4all.life

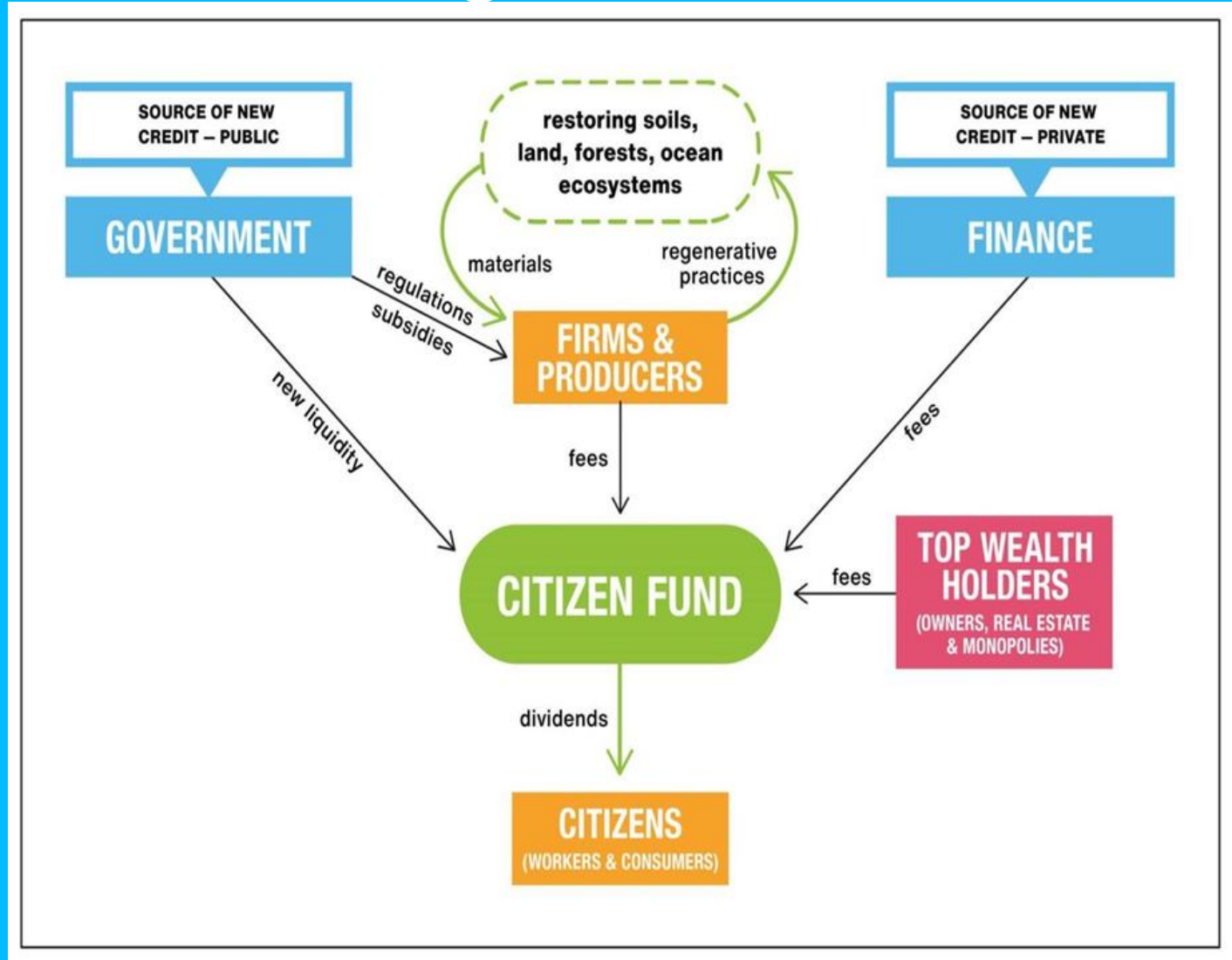
Rentier Capitalism

“Gone is the economy most people think we have – one organized around production, consumption, and exchange. Money is made on money and the shifting value of various assets from stocks and bonds to real estate to intellectual property and crypto. The manipulation of these financial assets now dominates economic decision-making across the globe”

Earth4All, 149

Redrawing the Gameboard

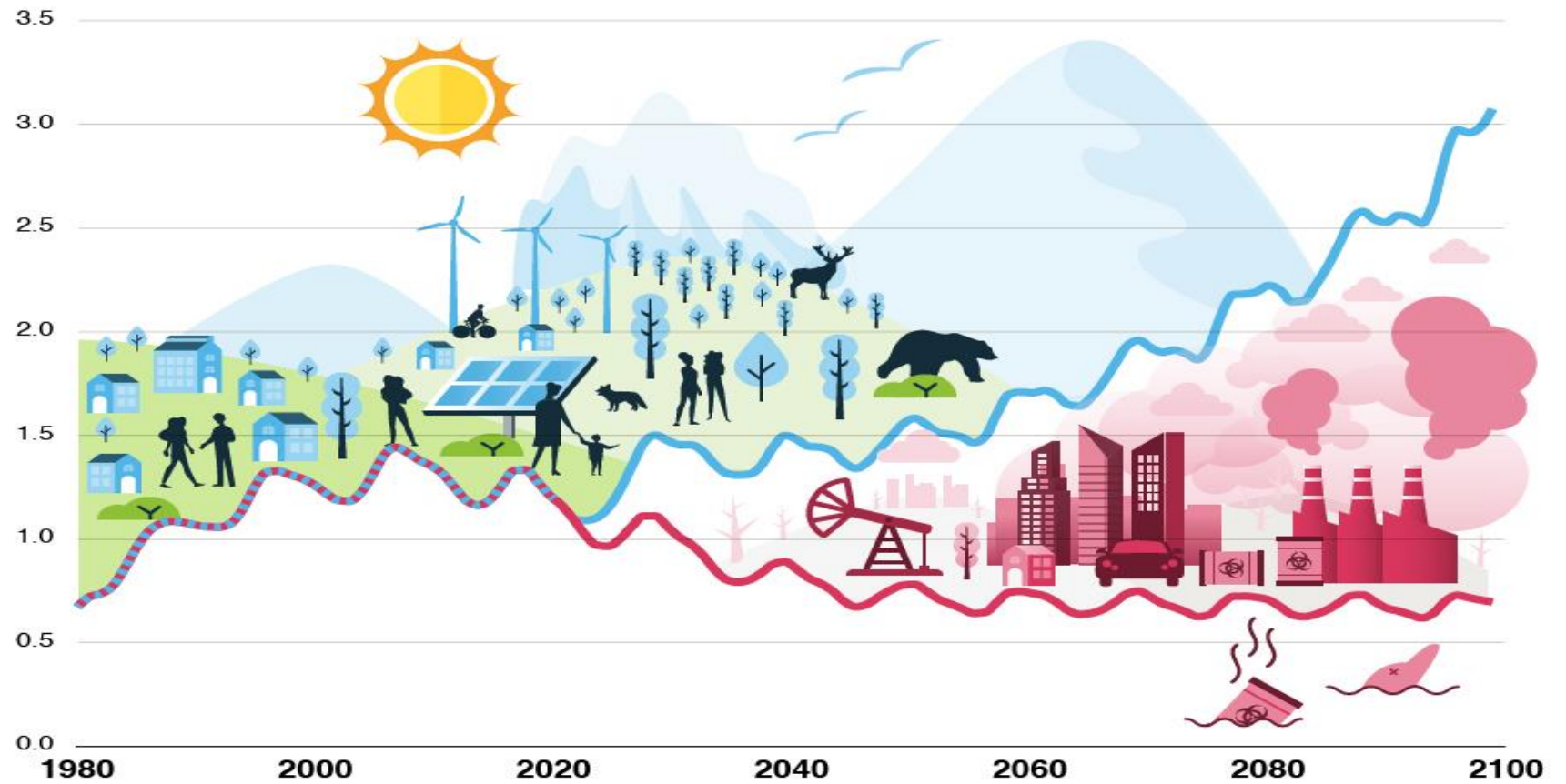
- Setting up citizen funds to distribute the wealth of global commons fairly.
- Government measures (subsidies, incentives, regulations) to expedite restructuring.
- Reforming the international financial system.
- New progress indicators in the context of well-being economies.



Achieving **wellbeing** for all with a **Giant Leap**

Earth4All wellbeing index

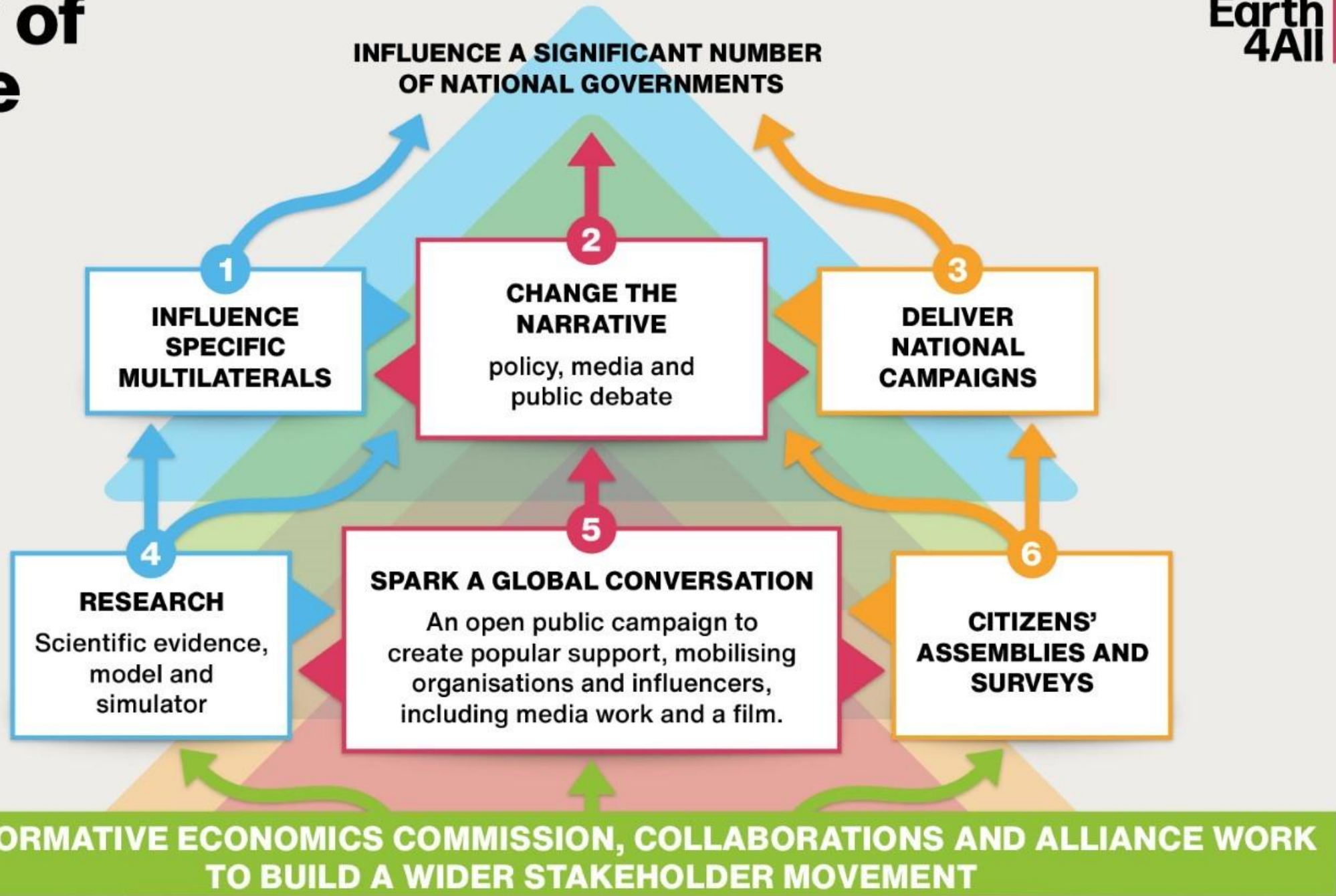
● **Giant Leap** ● **Too Little Too Late**

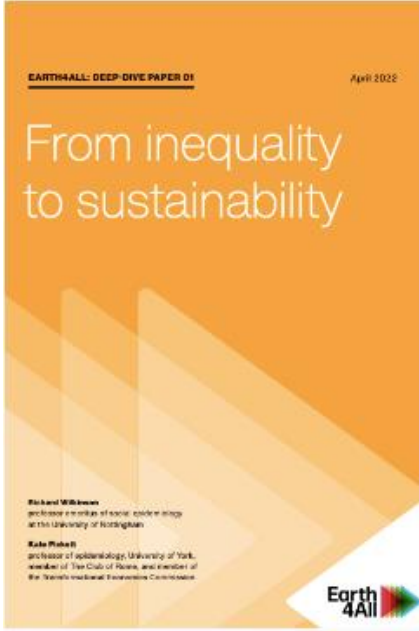


Footnote: The Earth4All wellbeing index is inspired by the Wellbeing Economy Alliance's framework and includes measurements for dignity, nature, institutions, fairness and inequality, and citizen participation.

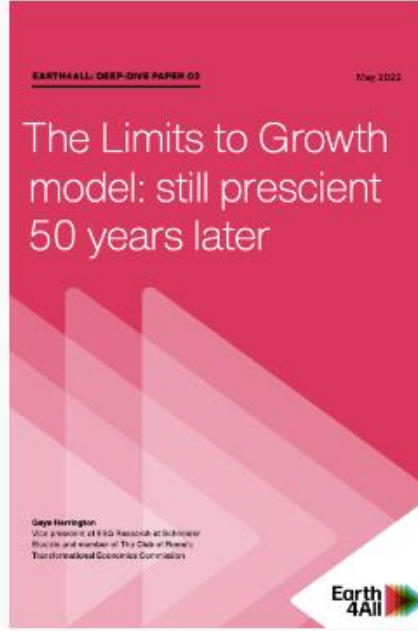
Source: *Earth for All: A Survival Guide for Humanity* (2022)
www.earth4all.life

Theory of Change





Richard Wilkinson and Kate Pickett detail six reasons for why greater equality is essential to a world facing the consequences of overshoot and the climate crisis.



The World3 model was used by the authors of The Limits to Growth in 1972, and this paper sets to conduct a quantitative comparison between empirical data and the most recent version of World3 scenarios to see if we are still following the business as usual scenario.



This paper details five extraordinary turnarounds to address the environmental, ecological and socio-economic problems we face. It also explores the financial opportunities and costs in implementing the necessary actions.

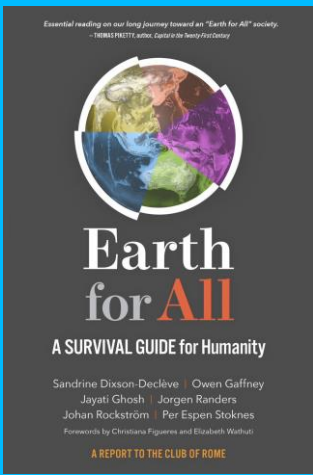


Debamanyu Das, Shouvik Chakraborty and Jayati Ghosh investigate focus the possible adverse effects of well-meaning climate mitigation strategies, and consider how these adverse effects can themselves be mitigated.

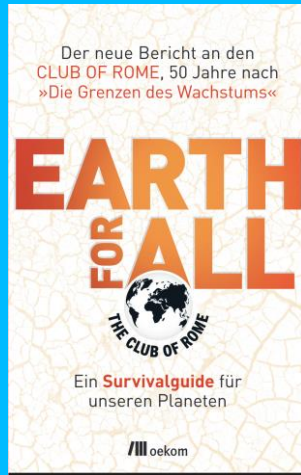


Ken Webster proposes sharing the earth's fruits and redistributing the proceeds to all. The paper asks, what and how to produce, and who gets the benefits?

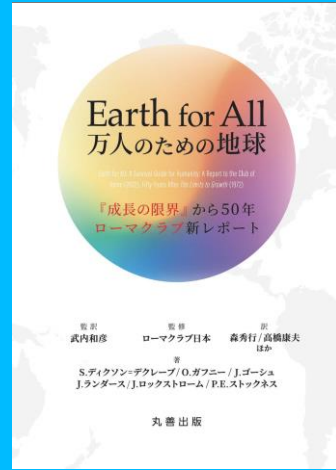




English



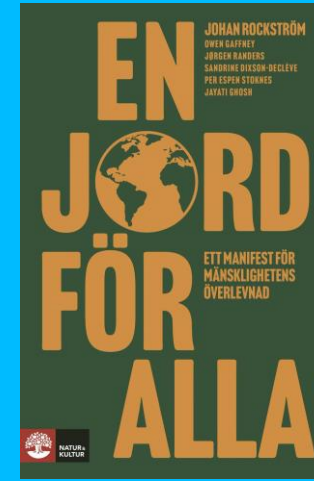
German



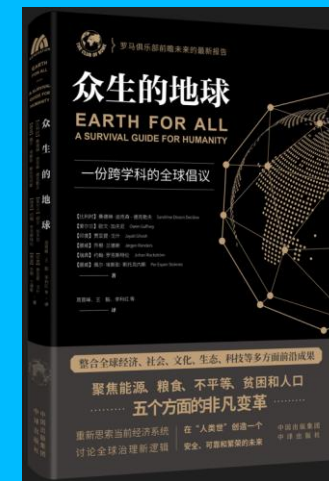
Japanese



Italian



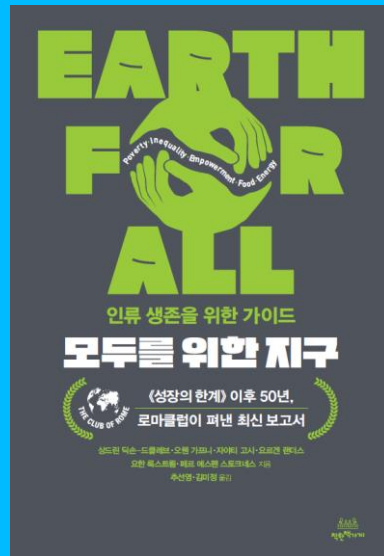
Swedish



Chinese



French,
30.08.2023



Korean,
Summer 2023



Spanish
Q4 2023



Hebrew
Q4 2023



Romanian
Q4 2023

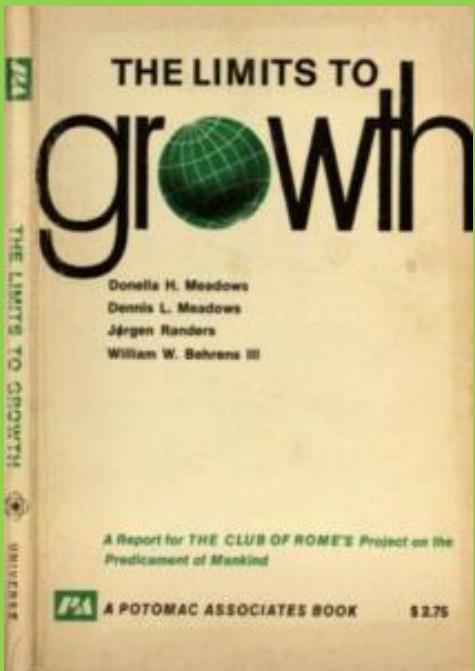


Greek
(confirmed)

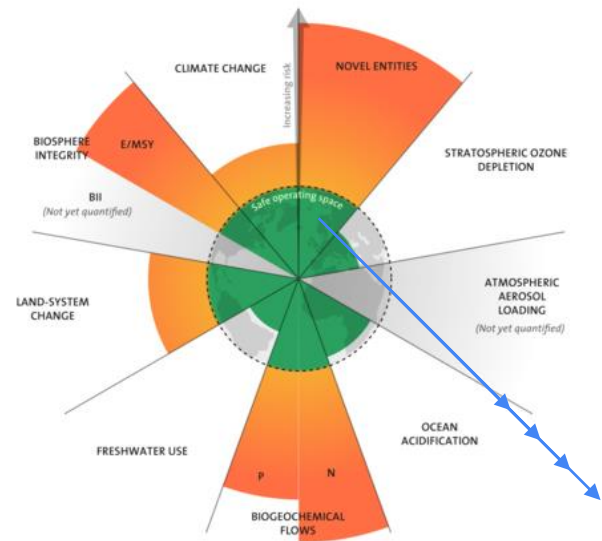




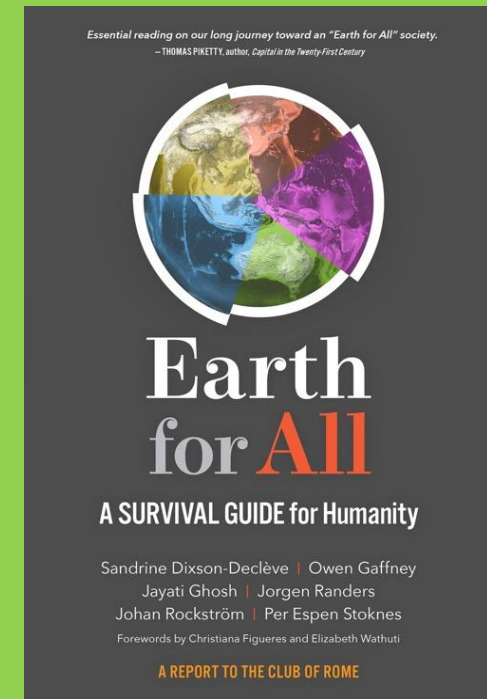
1972



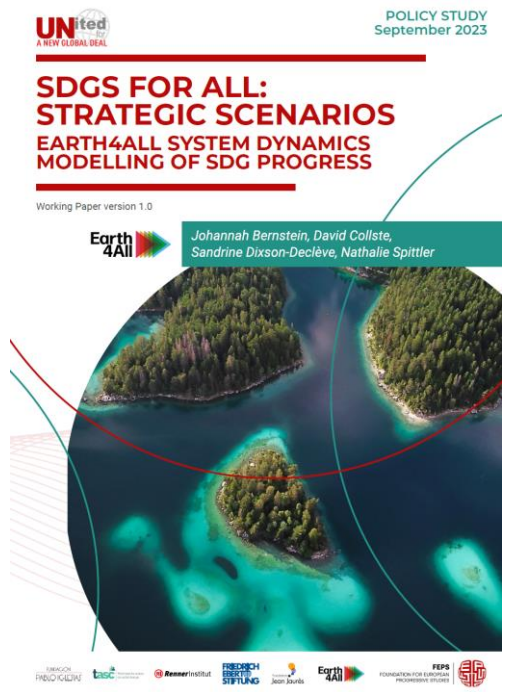
2009



2022



2023





SDG 1: Poverty

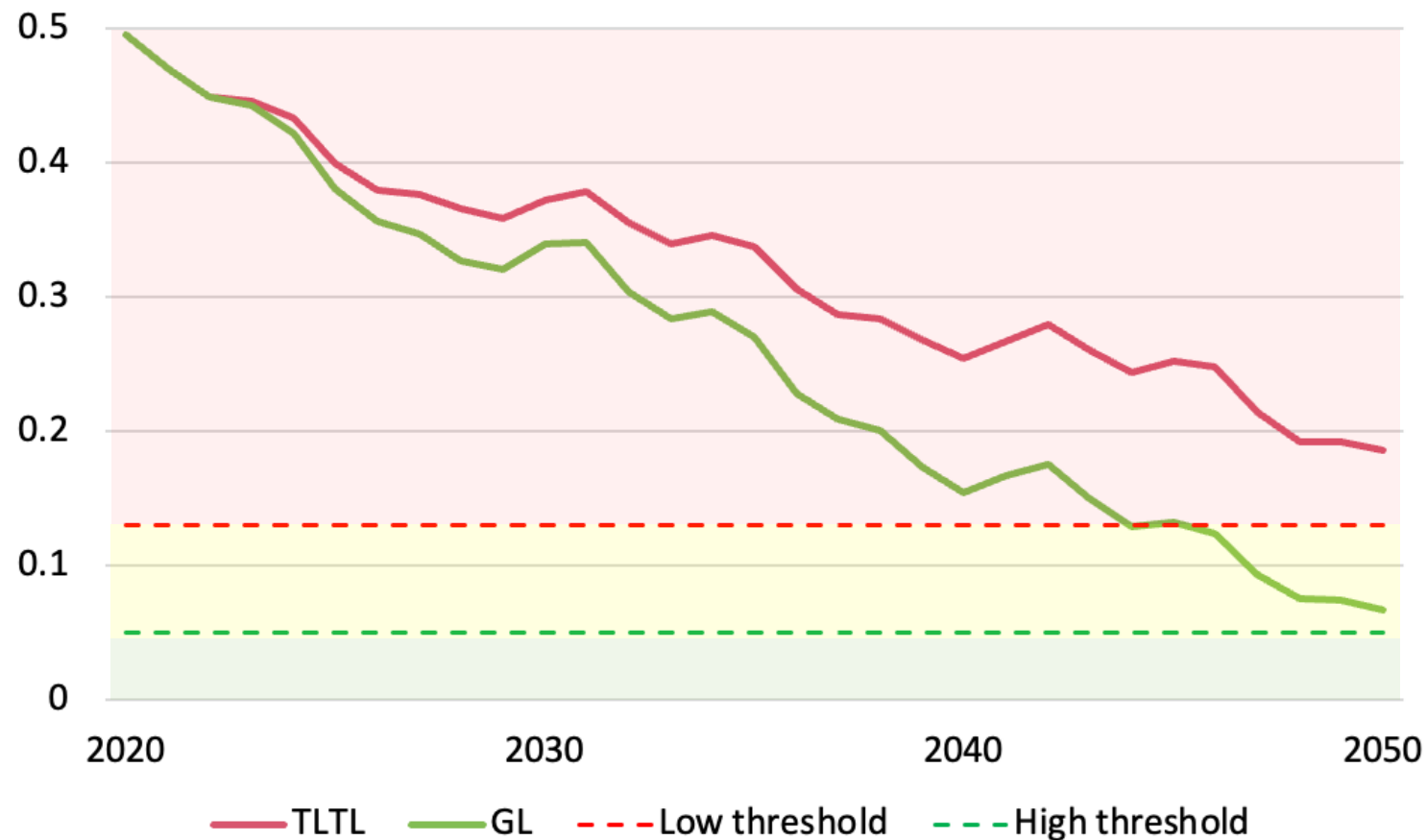
Too Little Too Late

Poverty reduces slower than past trends due to increased inequality. Still around 20 % in 2050.

Giant Leap

Poverty declines steeply to only 7 % by 2050. 1 billion fewer poor than in Too Little Too Late!

Fraction of population living below 6.85 \$/p/day (1)





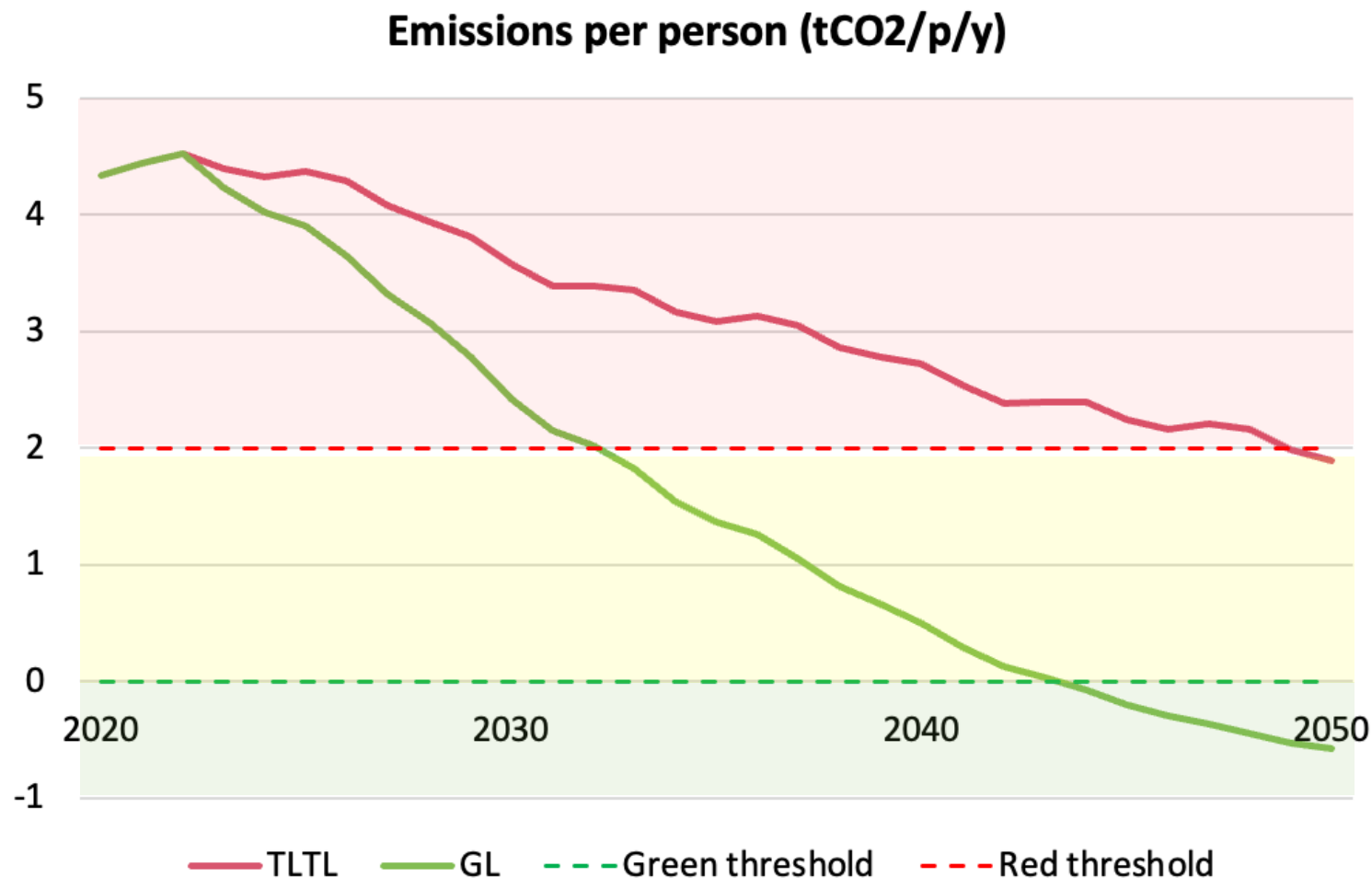
SDG 11: Sustainable cities and communities

Too Little Too Late

Emissions slowly trend downwards. But too slow to prevent devastating risks.

Giant Leap

Emissions dramatically reduced to negative levels in the 2040s.





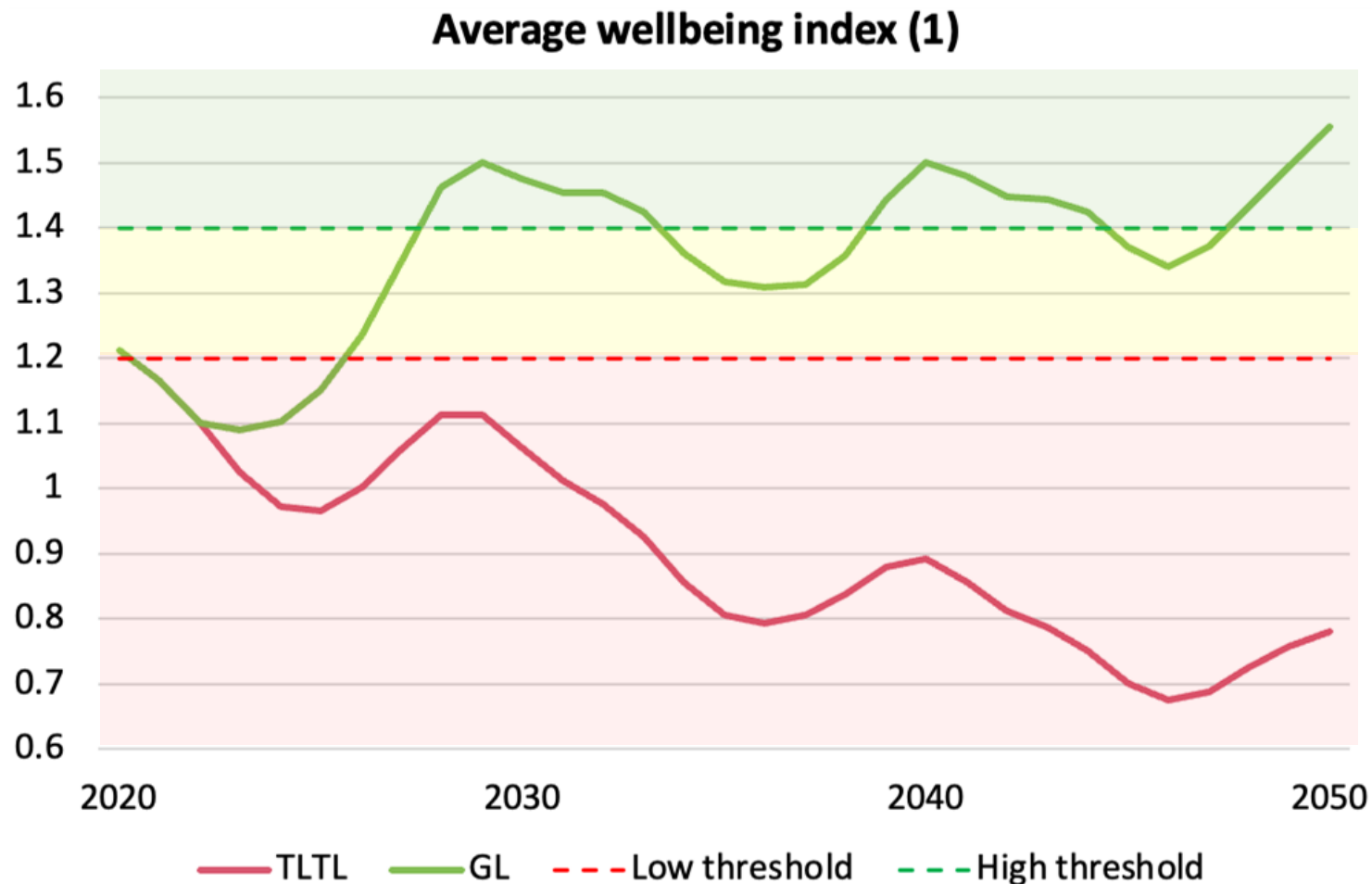
SDG 3: Wellbeing

Too Little Too Late

Wellbeing drops:
increased inequality
and global warming

Giant Leap

Wellbeing increases:
elimination of poverty,
lowered warming and
reduced inequality





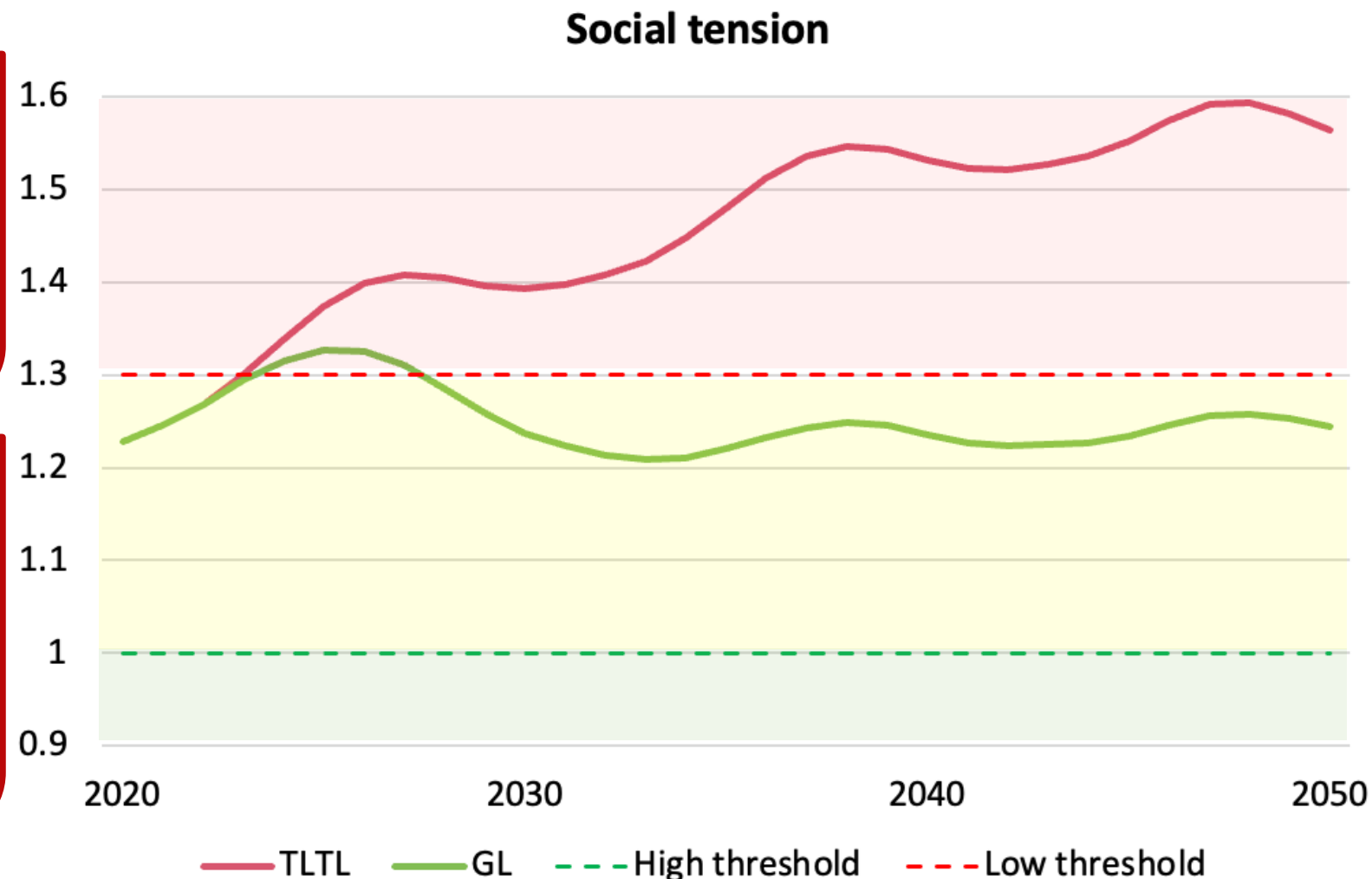
SDG 17: Social tension

Too Little Too Late

Social tension trends upwards, reaching alarming levels well beyond current 1.3.

Giant Leap

The upward trend halts in 2025, and plateaus around current levels, dipping slightly by 2050.



THIS IS A UNIQUE MOMENT IN TIME



THE SHOCK

The global pandemic has forced us to reflect on what really matters.



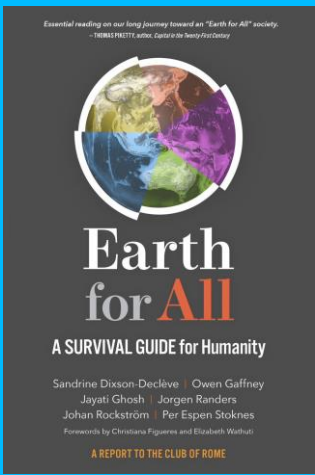
THE URGENCY

We have 6.5 years and counting to avoid the worst impacts of the climate crisis.

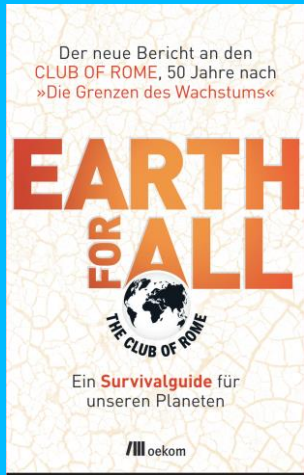


THE WILL

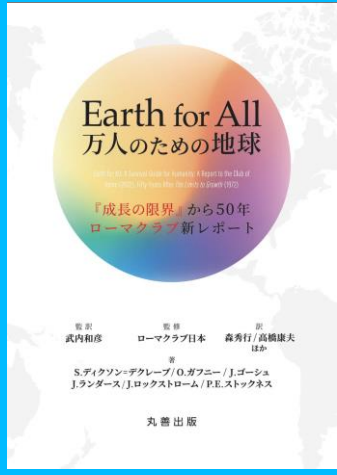
74% of people in G20 countries want transformation towards “wellbeing economies”*



English



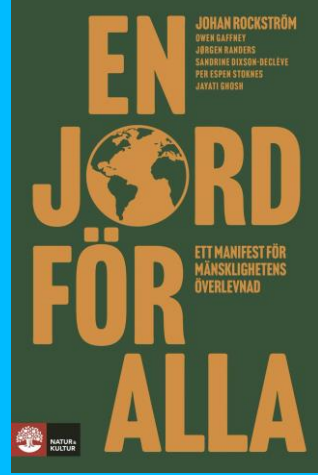
German



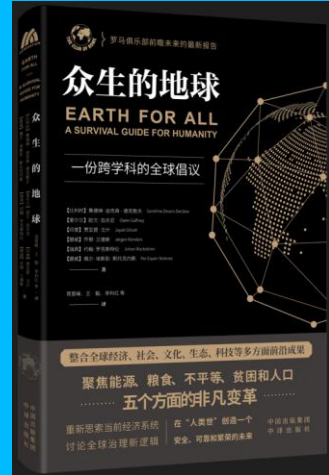
Japanese



Italian



Swedish



Chinese



French,
30.08.2023



Korean,
Summer 2023



Spanish
Q4 2023



Hebrew
Q4 2023



Romanian
Q4 2023



Greek
(confirmed)



“People don't need enormous cars; they need admiration and respect. They don't need a constant stream of new clothes; they need to feel that others consider them to be attractive, and they need excitement and variety and beauty. People don't need electronic entertainment; they need something interesting to occupy their minds and emotions. And so forth. Trying to fill real but nonmaterial needs—for identity, community, self-esteem, challenge, love, joy—with material things is to set up an unquenchable appetite for false solutions to never-satisfied longings. A society that allows itself to admit and articulate its nonmaterial human needs, and to find nonmaterial ways to satisfy them, would require much lower material and energy throughput levels of human fulfillment.”

Donella Meadows



Thank you!

