

From Limits to Growth to Earth4All

A new vision of prosperity

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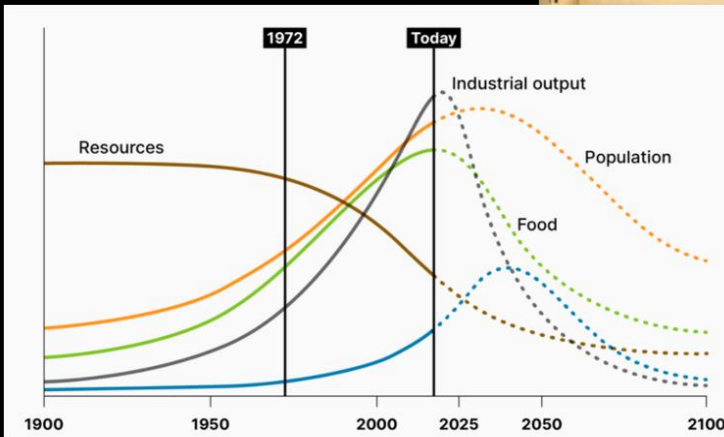
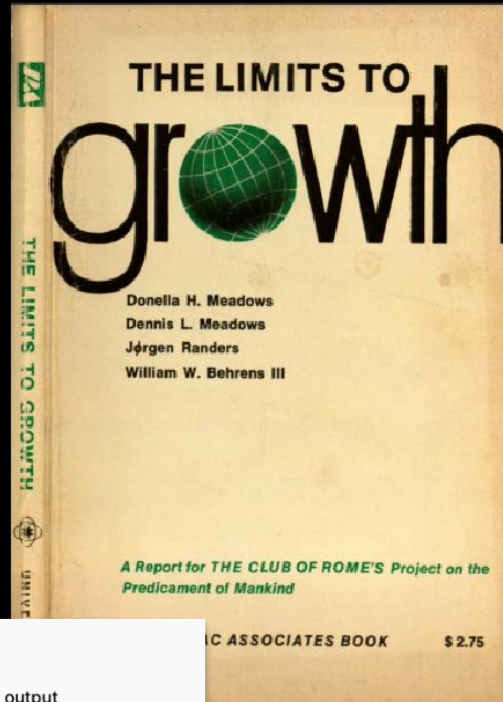
Ambassador, Energy Transition Commission

Commissoner Climate Governance Commission



50 YEARS AGO

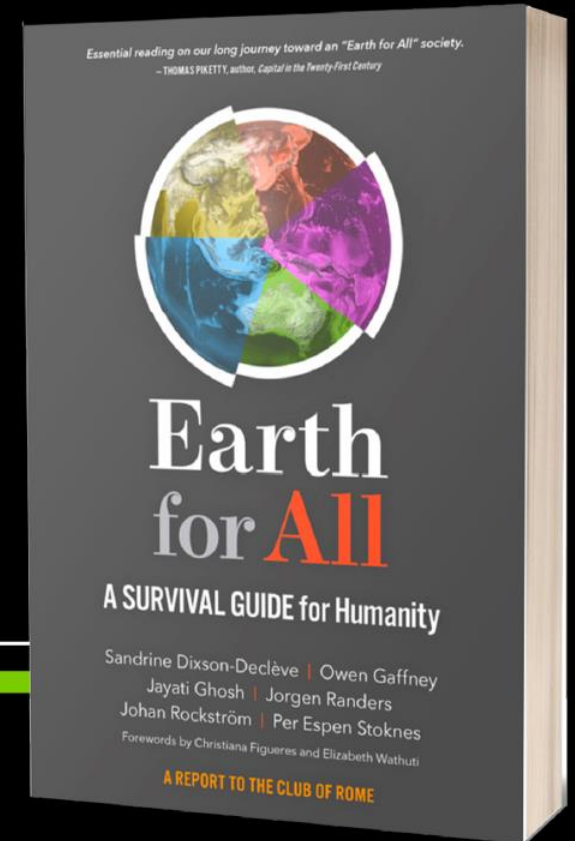
In 1972, *The Limits to Growth* warned that if growth trends continued, we would overshoot Earth's capacity.



TODAY

There is still time to change course.

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



Top 10 Risks

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



2 years

1	Cost of living crisis
2	Natural disasters and extreme weather events
3	Geoeconomic confrontation
4	Failure to mitigate climate change
5	Erosion of social cohesion and societal polarization
6	Large-scale environmental damage incidents
7	Failure of climate-change adaption
8	Widespread cybercrime and cyber insecurity
9	Natural resource crises
10	Large-scale involuntary migration

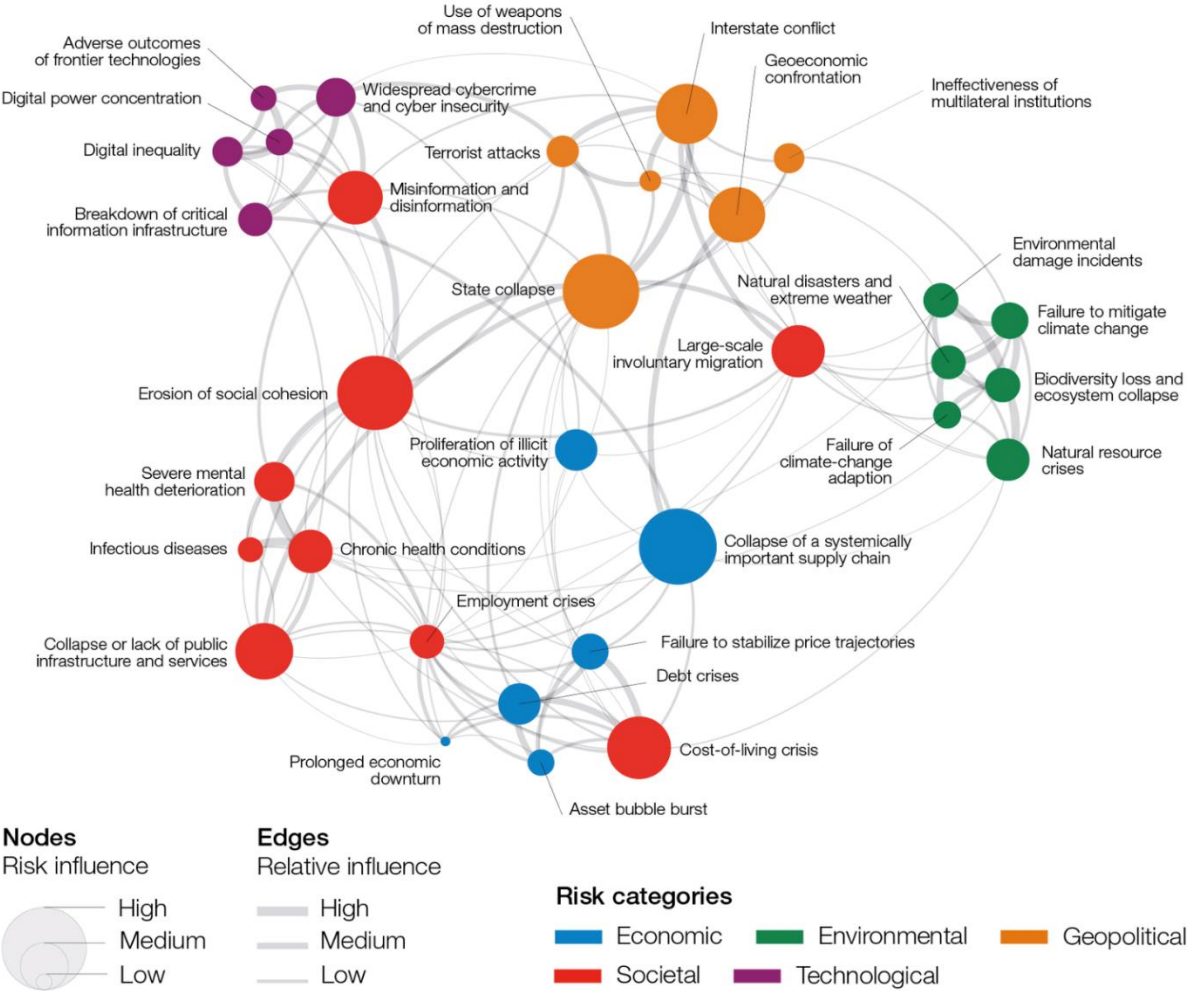
10 years

1	Failure to mitigate climate change
2	Failure of climate-change adaption
3	Natural disasters and extreme weather events
4	Biodiversity loss and ecosystem collapse
5	Large-scale involuntary migration
6	Natural resource crises
7	Erosion of social cohesion and societal polarization
8	Widespread cybercrime and cyber insecurity
9	Geoeconomic confrontation
10	Large-scale environmental damage incidents

Risk categories
Economic Environmental Geopolitical Societal Technological

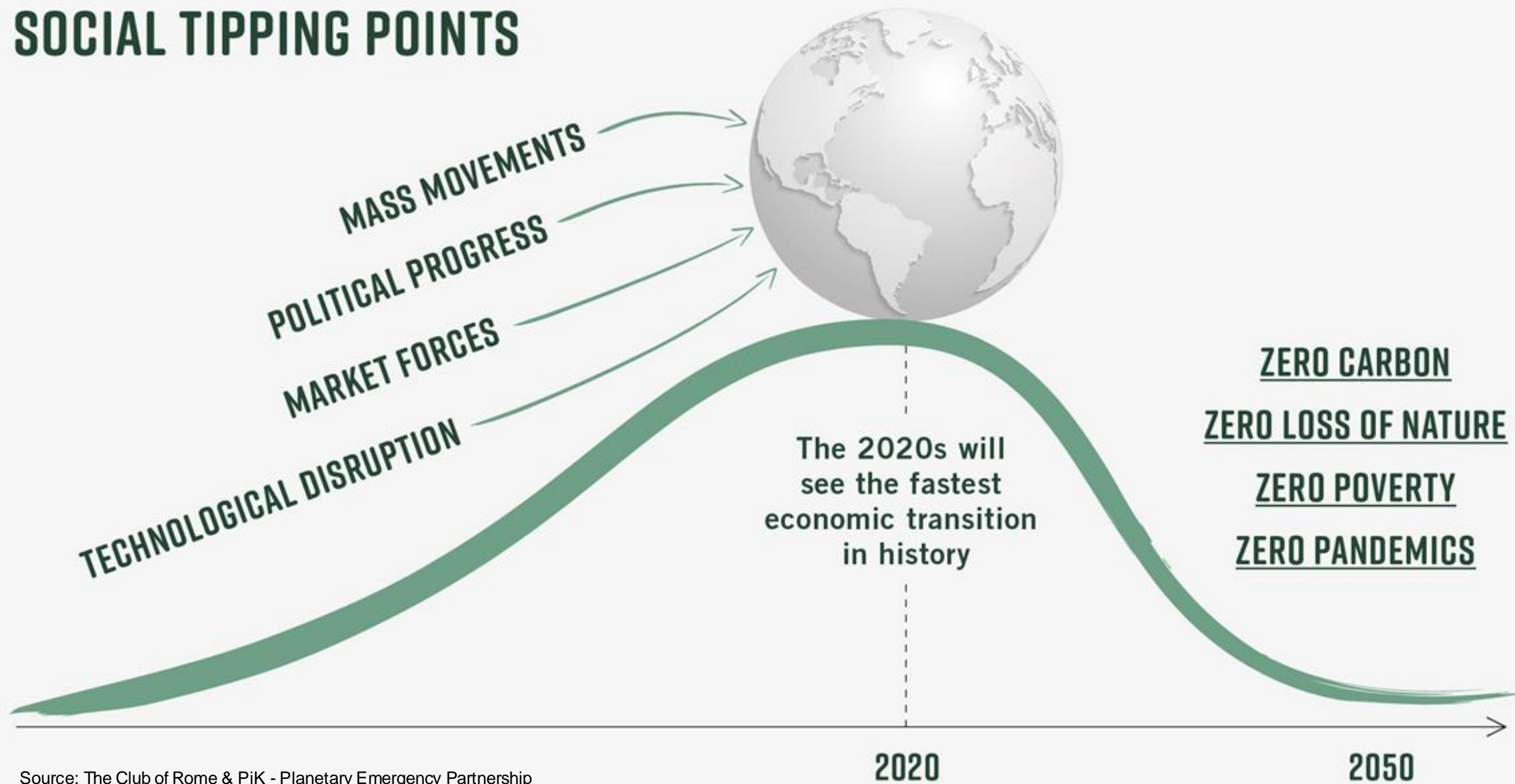
Source: World Economic Forum, Global Risks Perception Survey 2022-2023

Global risks landscape: an interconnections map



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

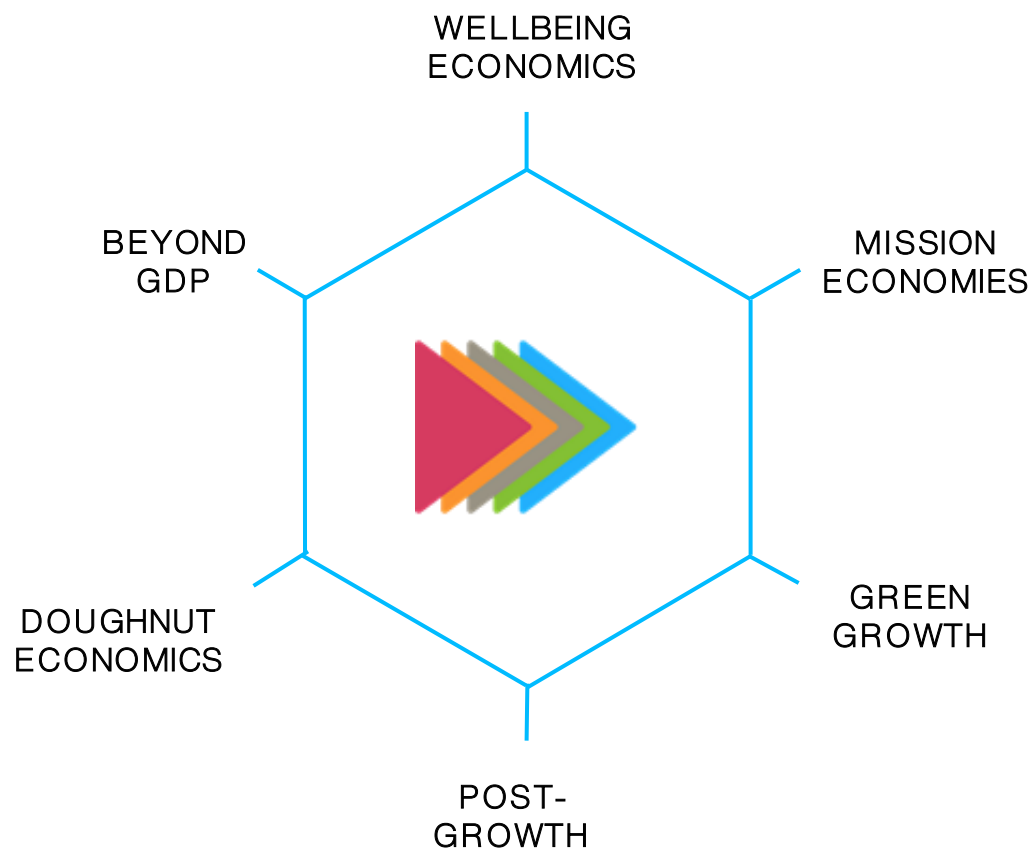
SOCIAL TIPPING POINTS



Source: The Club of Rome & PiK - Planetary Emergency Partnership

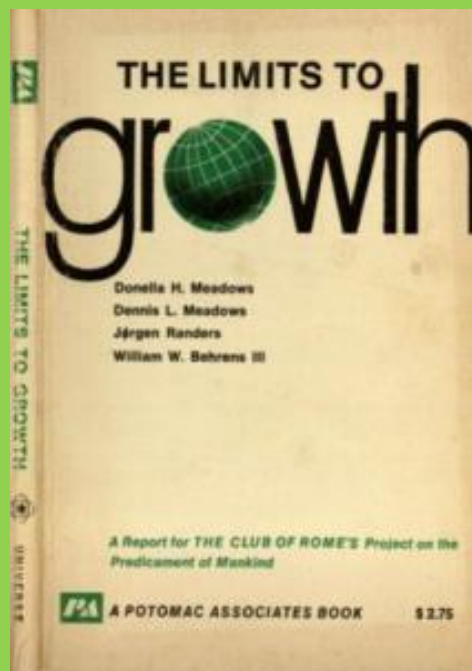


Transformational economics for the 21st century

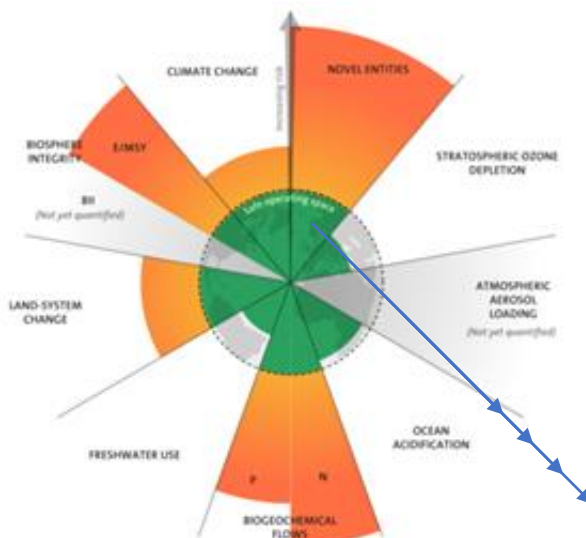


- ▶ Shift from an Extractive GDP based economy
- ▶ Account for social and environmental risk in financial and economic decision-making
- ▶ Expand our perspective of public goods and socialise the rewards of environmental and social commons
- ▶ Correct the inequity between high and low-income countries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

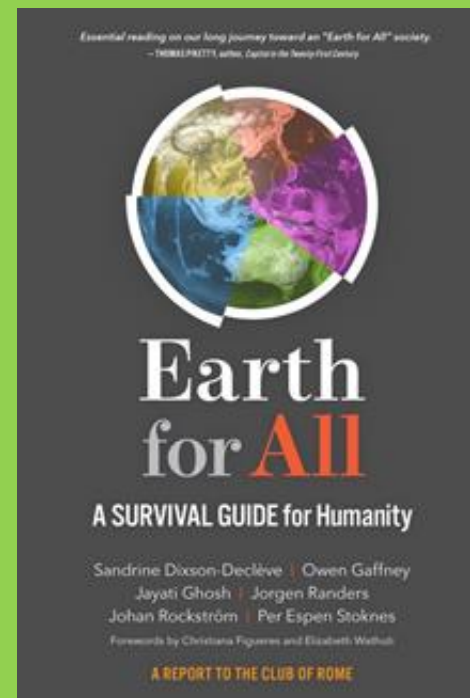
1972



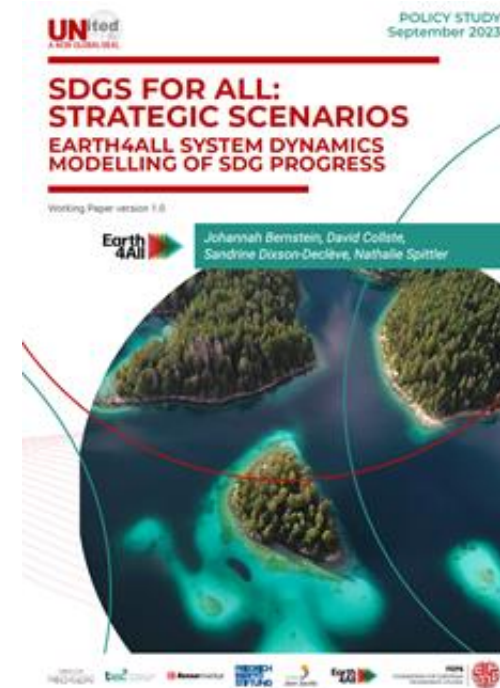
2009



2022

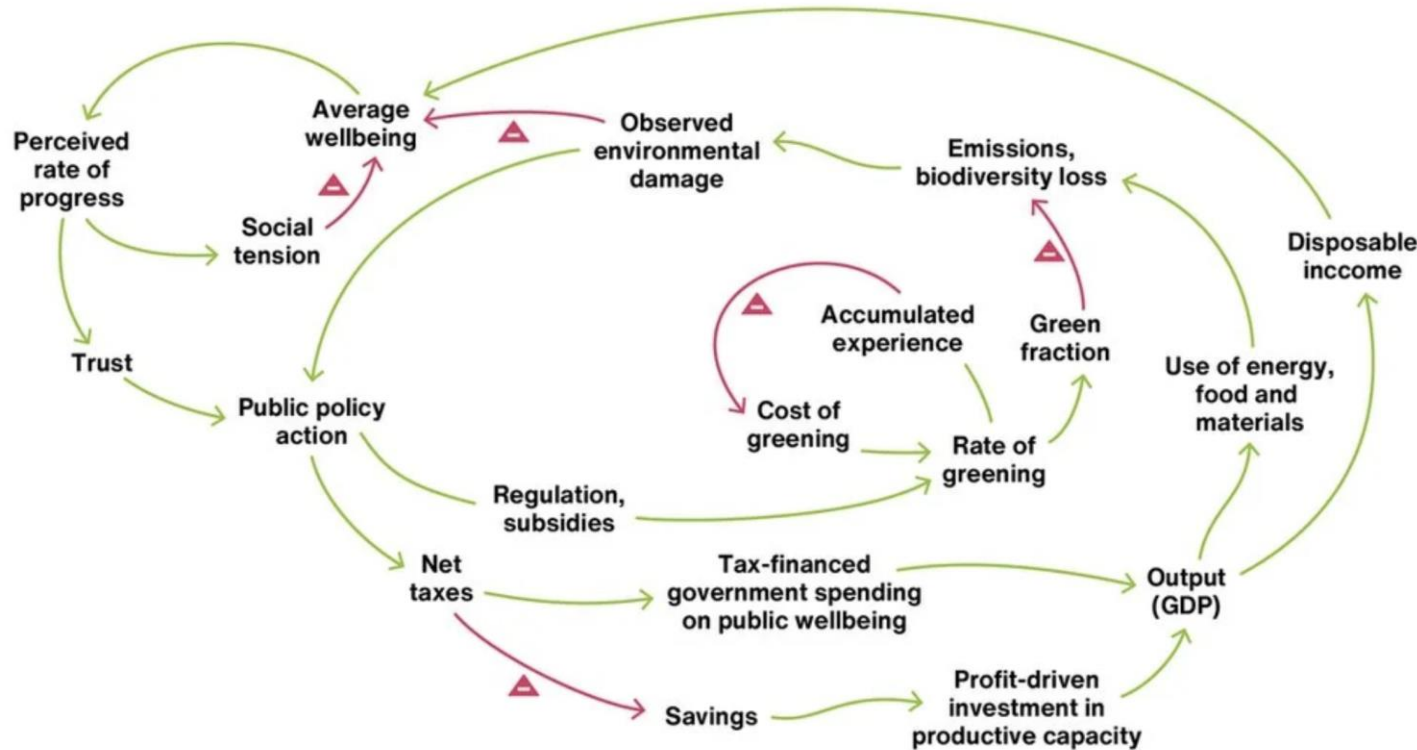


2023

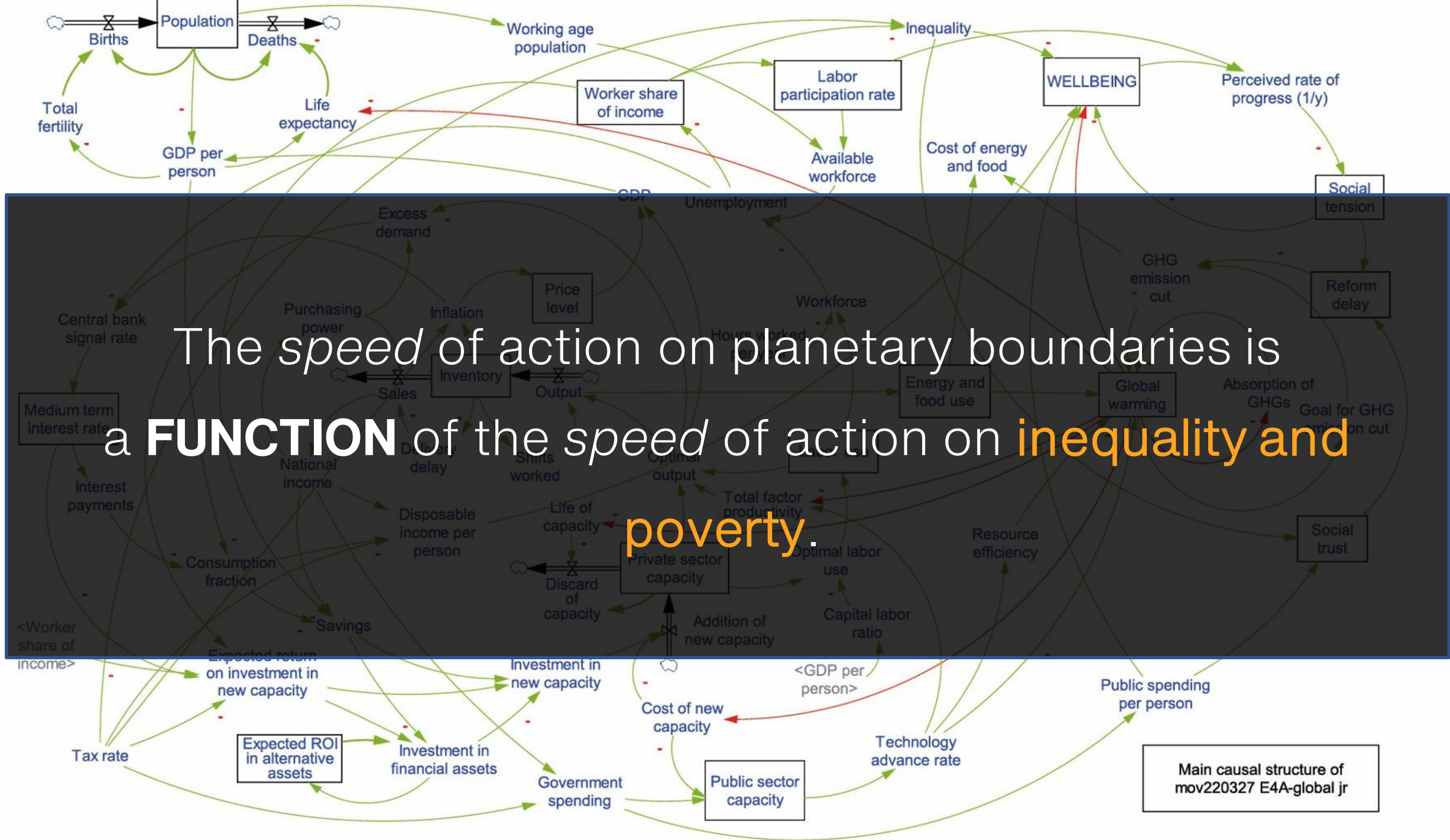


The Earth4All Model

The Earth4All system dynamic model uses scenarios to show how different policies are likely to affect human wellbeing, societies and ecosystems in the short and long-term.



Simplified version of over 700 variables triangulated in the global model and over 2000 in the regional models.



The Earth4All model



- 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:

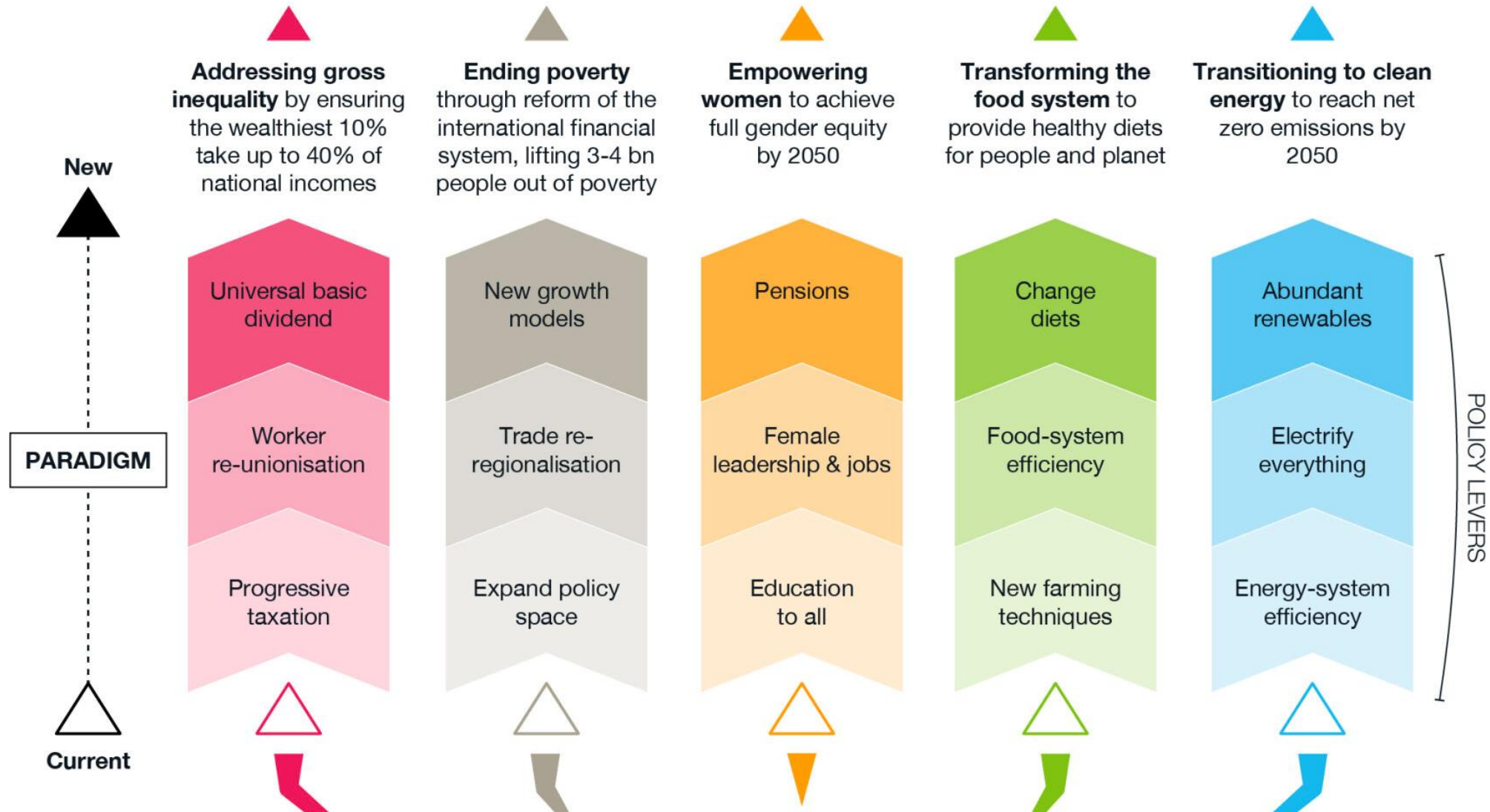
What if we continue
on our current
destructive path?

SCENARIO 2:

The Giant Leap:

What if we achieve
the fastest economic
transformation in
history?

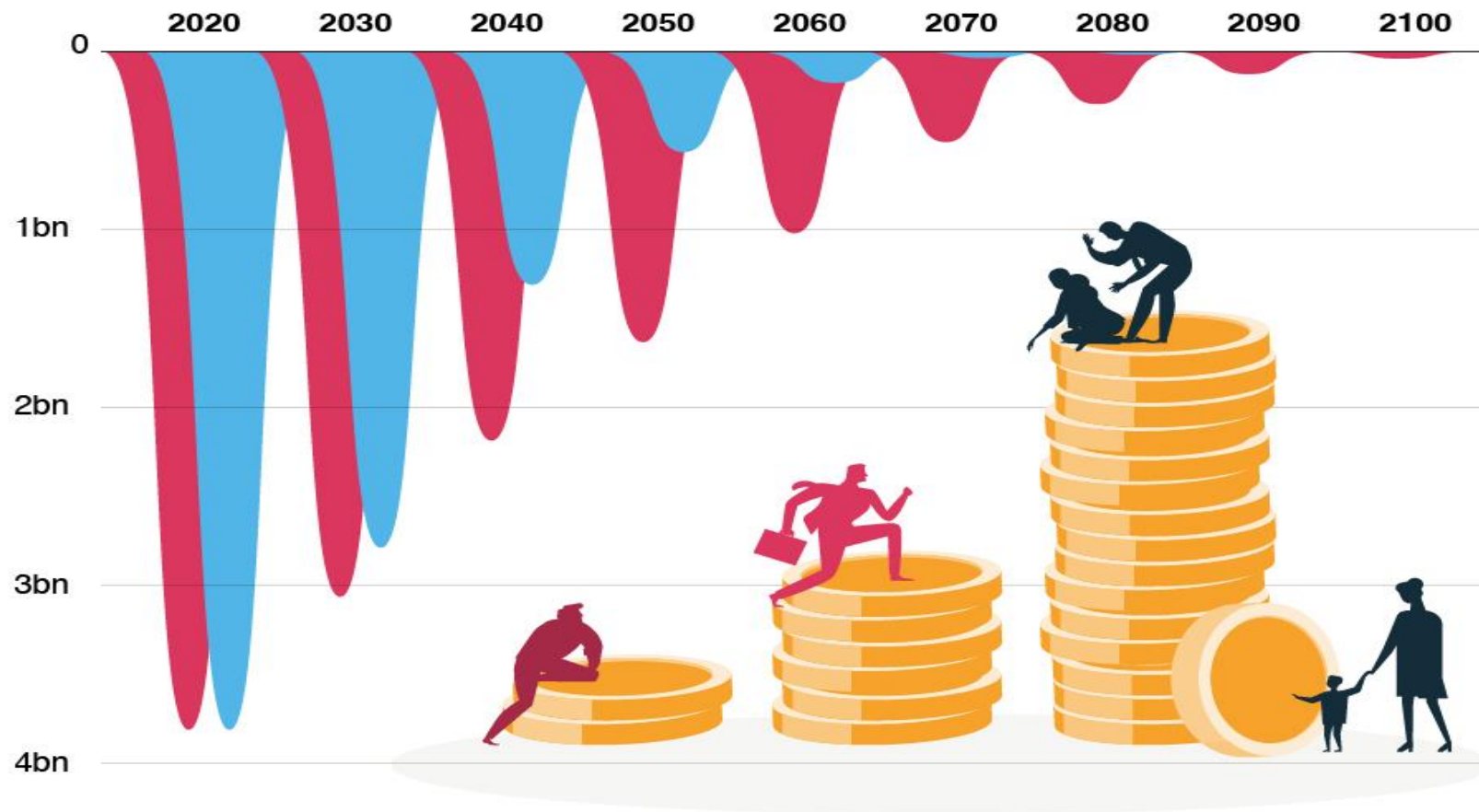
15 Policy Actions



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

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

Earth4All inequality index

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

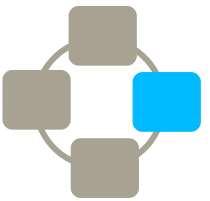


Footnote: The Earth4All inequality index measures the relative size of workers' incomes in relation to the incomes of capital owners in the Earth4All model.

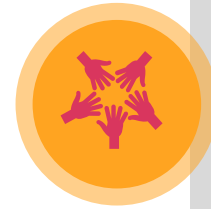
Source: *Earth for All: A Survival Guide for Humanity* (2022)
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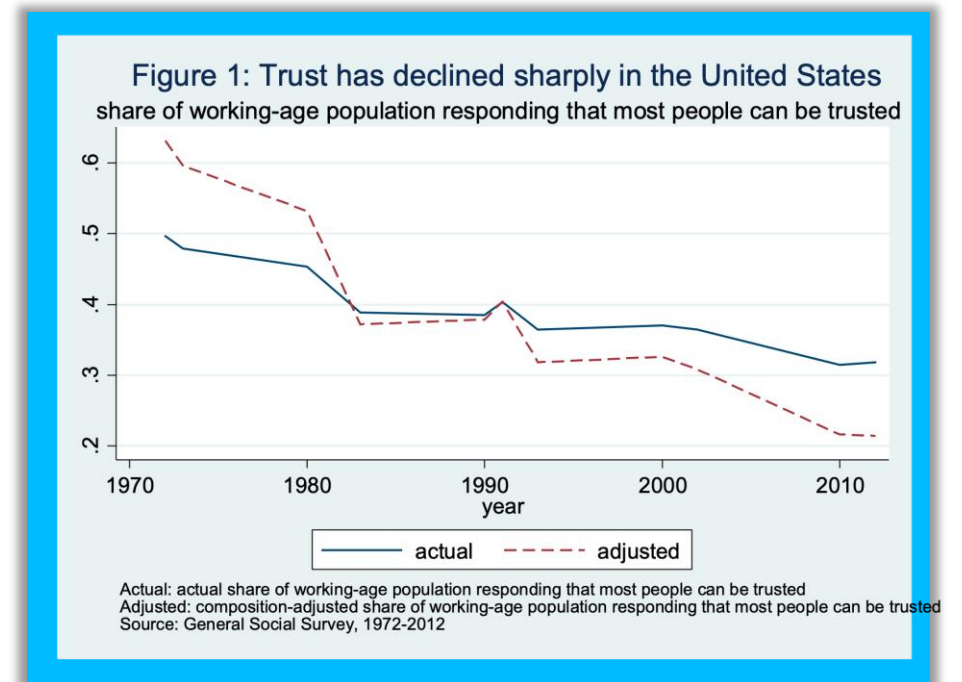
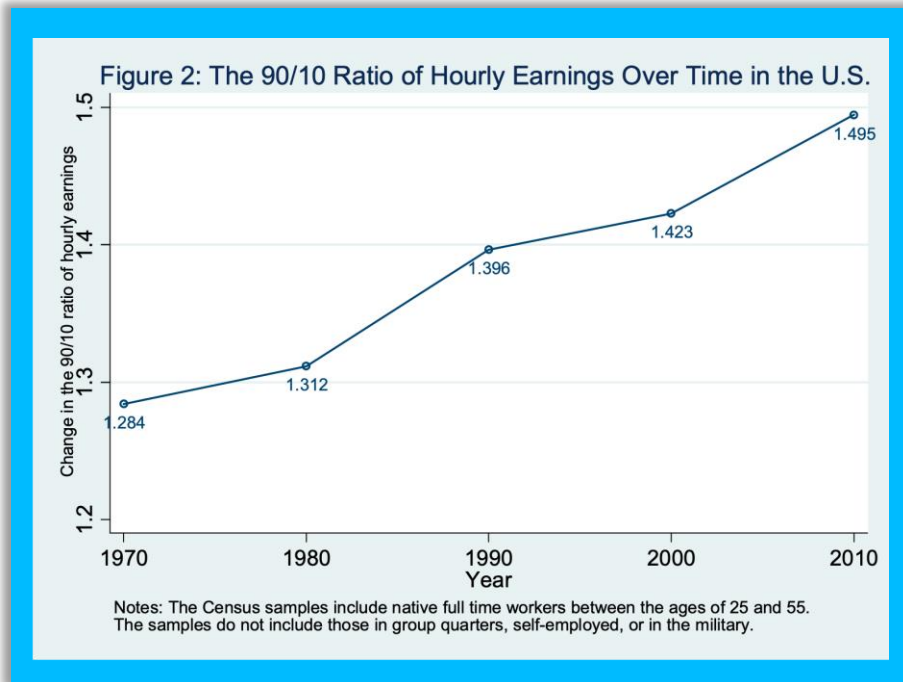
Inequality Reduces Trust



Wage inequality (based on 90/10 ratio) in the US has **increased 14%** between 1970 - 2010 and since 1978 US CEO salaries have increased by 1460%; employee salaries by 18.1% (EPI, 2022)



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



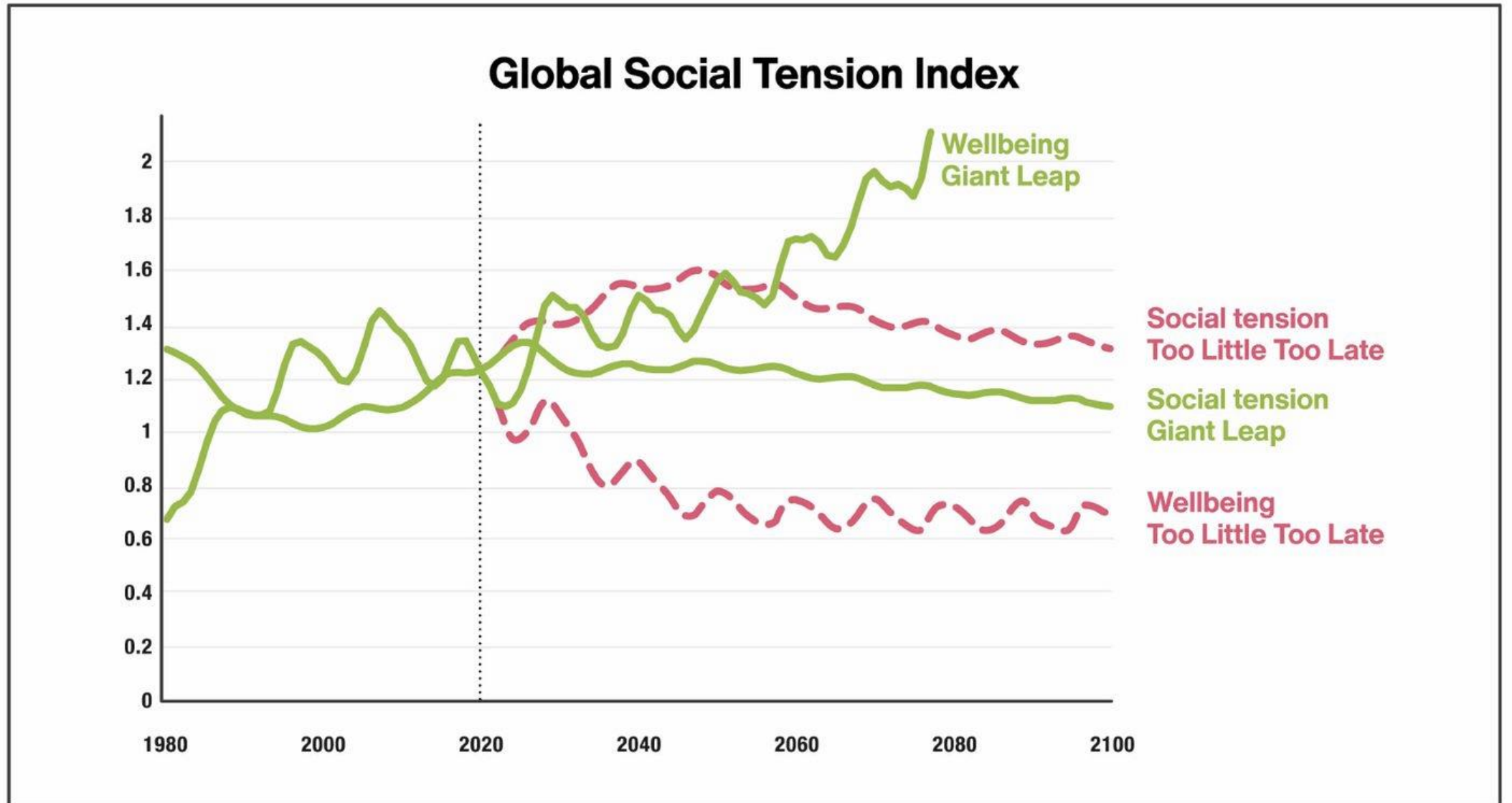
Sources: IMF - Gould, Eric D, and Alexander Hijzen. Growing Apart, Losing Trust? The Impact of Inequality on Social Capital. International Monetary Fund, 2016.



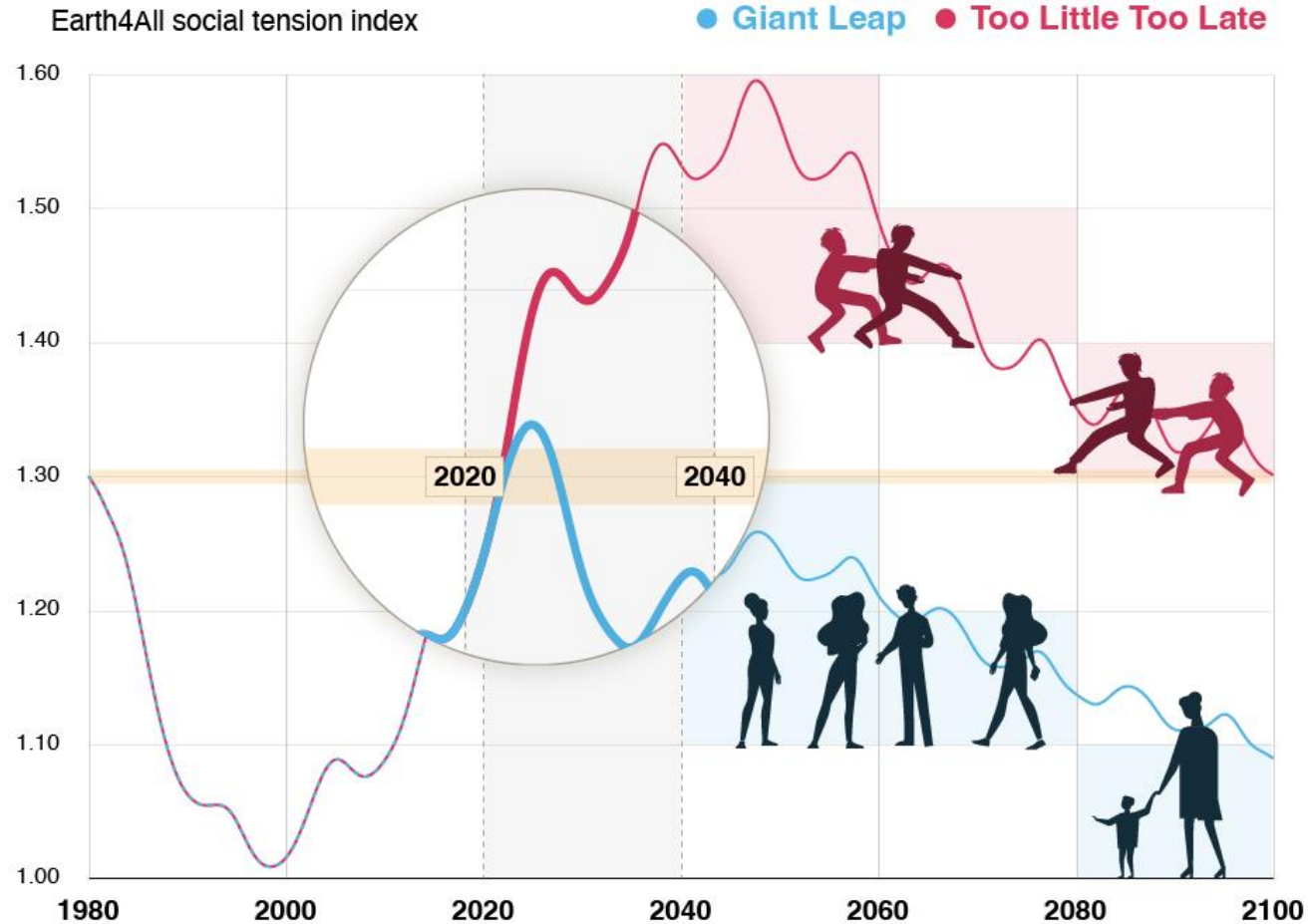
Global wellbeing is declining TODAY

74% of
G20
citizens
want a
well
being
economy*

*Ipsos Mori survey 2020



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



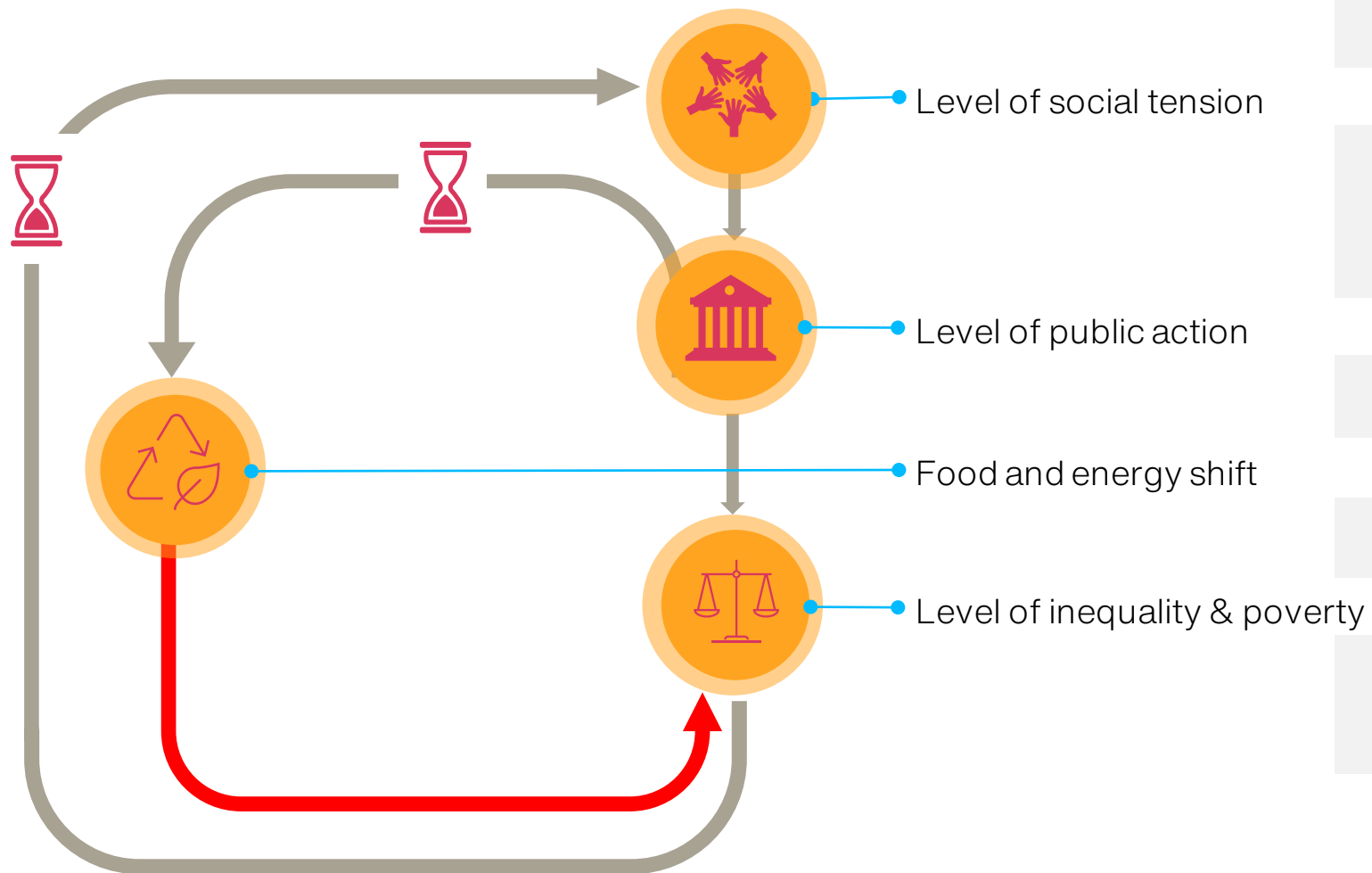
Footnote: The Earth4All social tension index measures the inverse of people's perceived rate of progress, defined as the rate of change in the Earth4All Wellbeing Index.

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



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



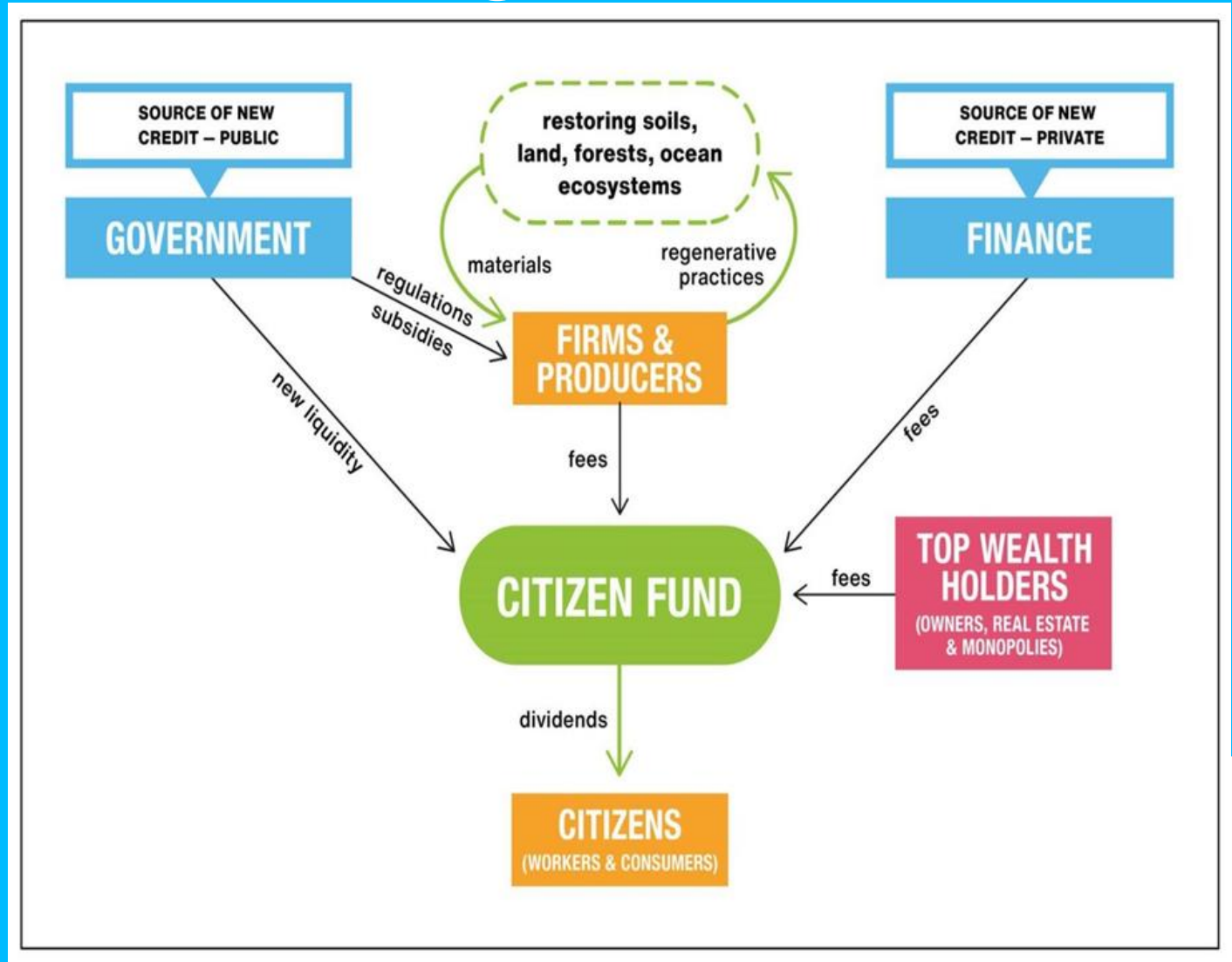
Rentier Capitalism

“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, pg.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.





Key message #12

The next step is
to gather
broad political
support for the
economic
transformation

There is already growing support for action to stop current trends. And emerging initiatives like Wellbeing Alliance, Green Deal, New Deal, Global Deal, Ecological Civilization. The need now is to scale up a major advocacy and public campaign to drive the conversation on economic systems change and open up policy windows.

Earth4All will do its bit.

12



...This is the decisive decade : There is too much bad news for complacency .. There is too much good news for despair! Donella Meadows, Lead author The Limits to Growth