

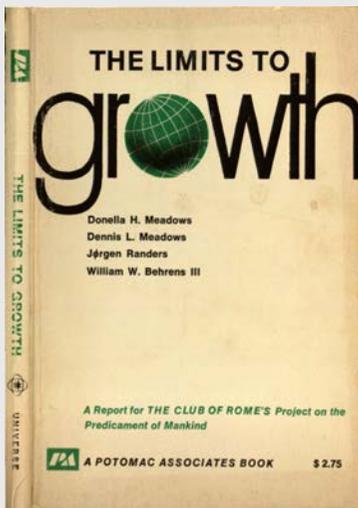
Defence vs Climate Change National Security vs Human Security Conflict vs Co-operation

What World do we want?

**STEP Inc
Turrumurra
4th November 2023**

**Ian Dunlop
The Club of Rome
Australian Security Leaders Climate Group
Breakthrough National Centre for Climate Restoration, Australia**





The “Limits to Growth”

50 years ago

A report to the Club of Rome on the Predicament of
Mankind

2nd March 1972

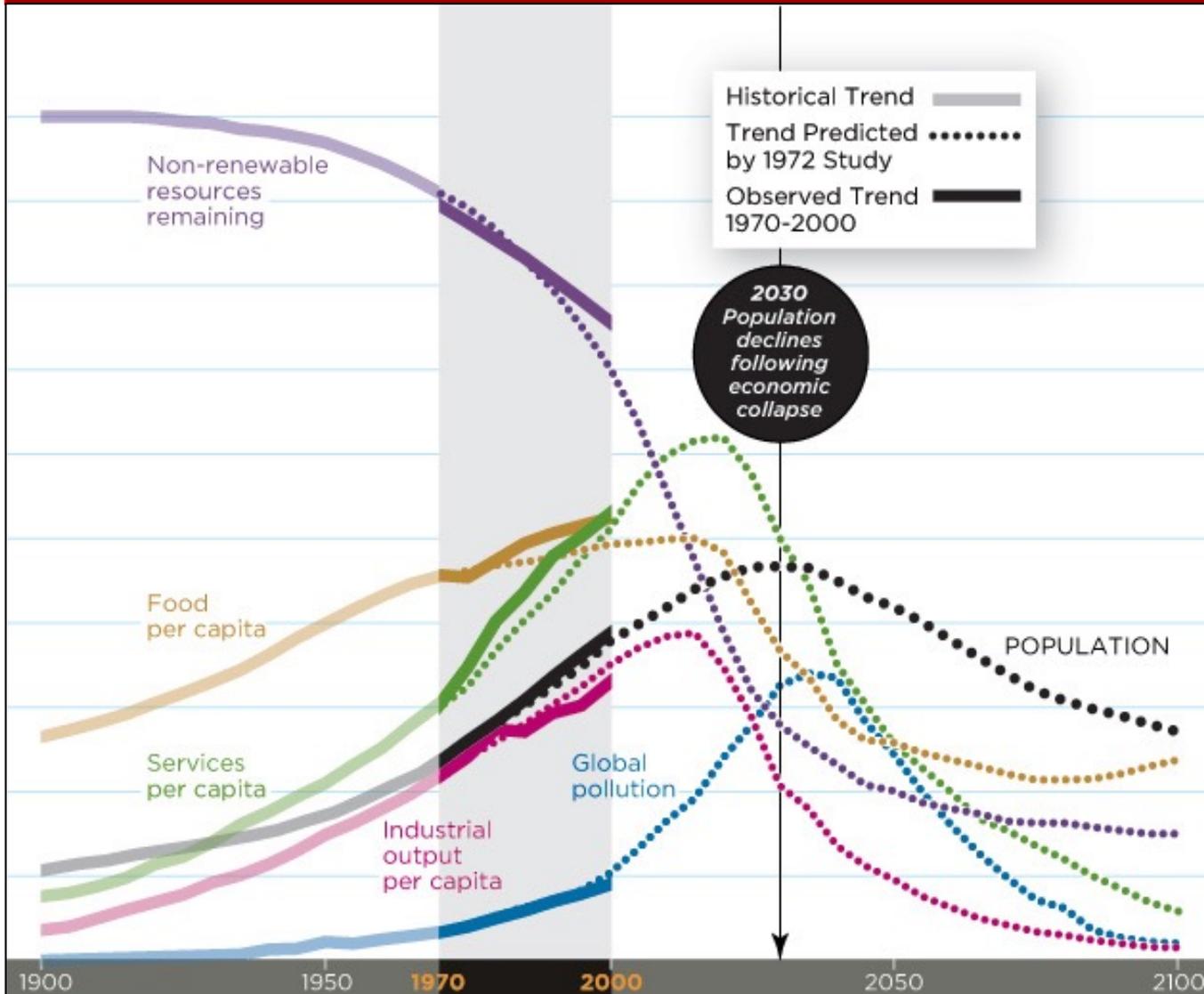
Key Messages

1. If the present growth trends in world population, industrialisation, pollution, food production and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime in the next one hundred years. The most probable result will be a rather sudden and uncontrolled decline in both population and industrial capacity.
2. It is possible to alter these growth trends and to establish a condition of ecological and economic stability that is sustainable far into the future. The state of global equilibrium could be designed so that the basic material needs of each person on Earth are satisfied and each person has an equal opportunity to realise his individual human potential.
3. If the world’s people decide to strive for this second outcome rather than the first, the sooner they begin working to attain it, the greater will be their chances of success.
4. As a limit is approached, societies will initially spend a great deal of time discussing it whilst expansion continued, thus leading to overshoot before collapse.

The Global Problematique

“Limits to Growth”

Standard run



Exponential growth in both Population & Consumption within a finite system

Our civilization only works if it grows, but that growth is now destroying the resources that maintain the civilization.

How do we resolve the dilemma ?

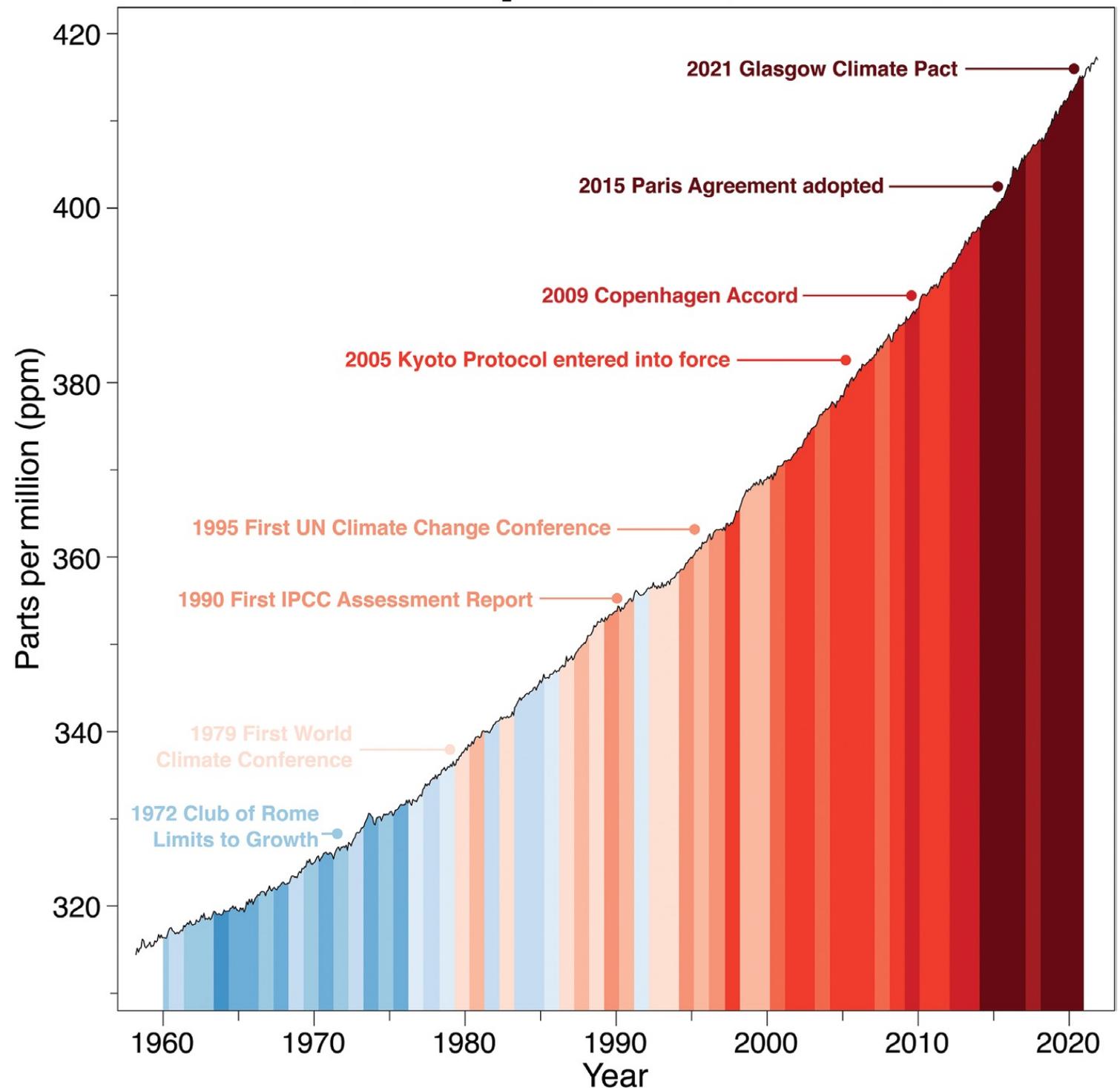
Climate Change

History & Politics

A short history of the successes and failures of the international climate change negotiation
Maslin et al, UCL, July 2023

Paris Agreement:
Limit global average temperature increase to well below 2°C relative to pre-industrial levels, and try to limit increase to 1.5°C

Trends in atmospheric CO₂ vs. global temperature change



Emissions continue to rise in line with worst case scenarios.

After three decades, precisely nothing has been achieved on the key priority of global emission reduction.

Much discussion.

Nobody acted.

Heading for overshoot of Paris Agreement.

Now, an astonishing, but not unexpected acceleration of climate impact.

Factors which previously masked implications – climate inertia particularly ocean warming, and aerosols - are being removed.

Entering a new era of non-linear climate change

Risk & Uncertainty

- **Risk is quantifiable**
 - Historic experience, modelling, actuarial assessment etc
 - the known knowns (*within limits!*)
- **Uncertainty is not quantifiable**
 - Insufficient scientific or technical knowledge
 - the known unknowns

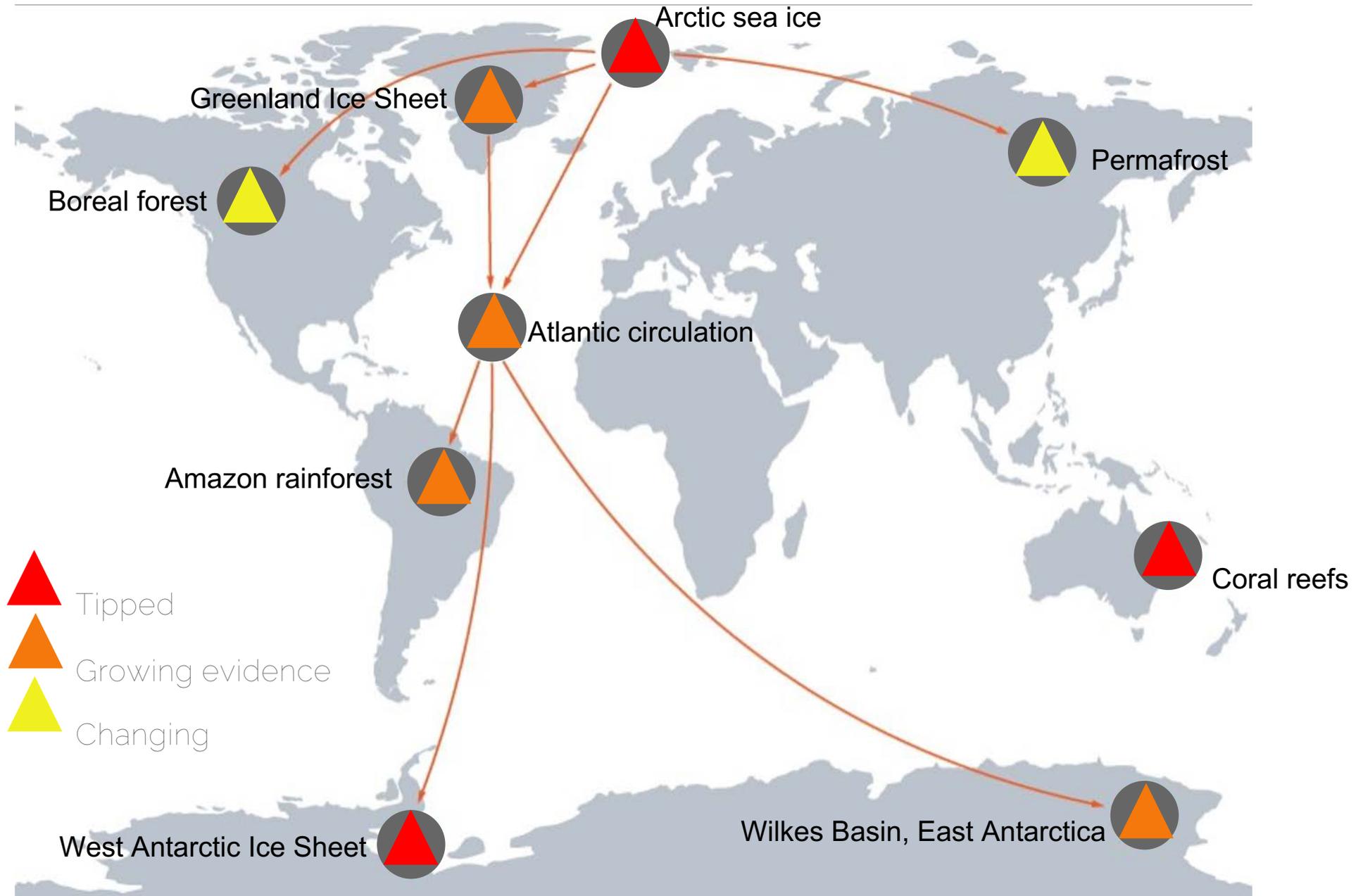
Science - Risk

- **1.5°C global temperature rise will occur before 2030, irrespective of actions taken in the interim.**
- **2°C is likely prior to 2050, even with actions better than the current Paris Agreement commitments, 3°C in the early-to-mid second half of the century on current emissions trajectory, with 5°C possible before 2100.**
- **Even substantial emission reductions will have no significant impact on the warming trend over the next 20-25 years, due to the offsetting effect of aerosols.**
- **The current 1.2°C of warming is already dangerous; 2°C would be extremely dangerous; 3°C catastrophic; and 4°C unliveable for most people. Cannot adapt to +3°C. Climate impacts in Australia will be higher than global averages**

Science - Uncertainties

- **“Hothouse Earth”, non-linear, irreversible, self-sustaining warming may be triggered by tipping points between 1.5–2°C.**
- **If the reaction time to prevent tipping is longer than the intervention time left before it occurs, we have lost control.**
- **We may have already lost that ability in some cases.**
- **There are concerns that five tipping points may have already triggered or be close to it:**
 - **West Antarctic, Arctic, Greenland, Amazon, Coral Reefs**

The Big Uncertainties - Climate Tipping Points



Policy Implications - 1

- **A government's first priority should be the security and prosperity of the people. Climate change is the greatest threat to that secure future. The threat is immediate, not years ahead, necessitating emergency action.**
- **A net zero emissions (NZE) by 2050 target is totally inadequate. Zero Emissions (ZE) must be achieved as close to 2030 as soon as possible**
- **Climate inertia has meant impact of increased atmospheric carbon has taken years to manifest itself. Now beginning to see result. Cannot avoid escalating impacts due to past emissions.**
- **In addition to emission reduction, atmospheric carbon must be reduced from 420ppm CO₂ toward a more stable 350ppm. Technology to do that is in its infancy, hence greater risk.**
- **Will have to resort to geoengineering to cool parts of the planet before other measures take effect**

Policy Implications - 2

- **Carbon emissions must be reduced as fast as possible by cutting fossil fuel use, particularly methane emissions. Other initiatives, sequestration, offsets etc are important but will not deliver in limited time required.**
- **Immediate priority must be to prevent matters becoming far worse by expanding fossil fuel use – coal, oil or gas.**
- **Emergency action means acting early rather than later, otherwise mitigation becomes secondary to adaptation as incumbencies focus on symptoms rather than causes – leading to “death spiral” toward societal collapse, as we are seeing.**
- **Precautionary action is essential to ensure irreversible tipping points do not become locked-in.**

What is the worst that might happen? What must we do to avoid it?

This is the strategic context within which a realistic climate risk assessment, domestic or external, must be framed

Actions Required

Climate change is a much bigger threat than the pandemic or China.

It must be made the highest priority of politics, economics and society, based upon the best available science.

It is not just one more item on the political agenda, but an existential threat to our society.

- 1. Assess the real risks & uncertainties with brutal honesty.**
- 2. Accept that climate disruption requires emergency mobilisation, akin to wartime.**
- 3. Act fast for net zero emissions by 2030.**
- 4. Stop all fossil fuel expansion, rapidly reduce fossil fuel use**
- 5. Build capacity to draw down carbon.**
- 6. Research geoengineering possibilities.**

We have technology and solutions which now offer enormous social and economic benefits.

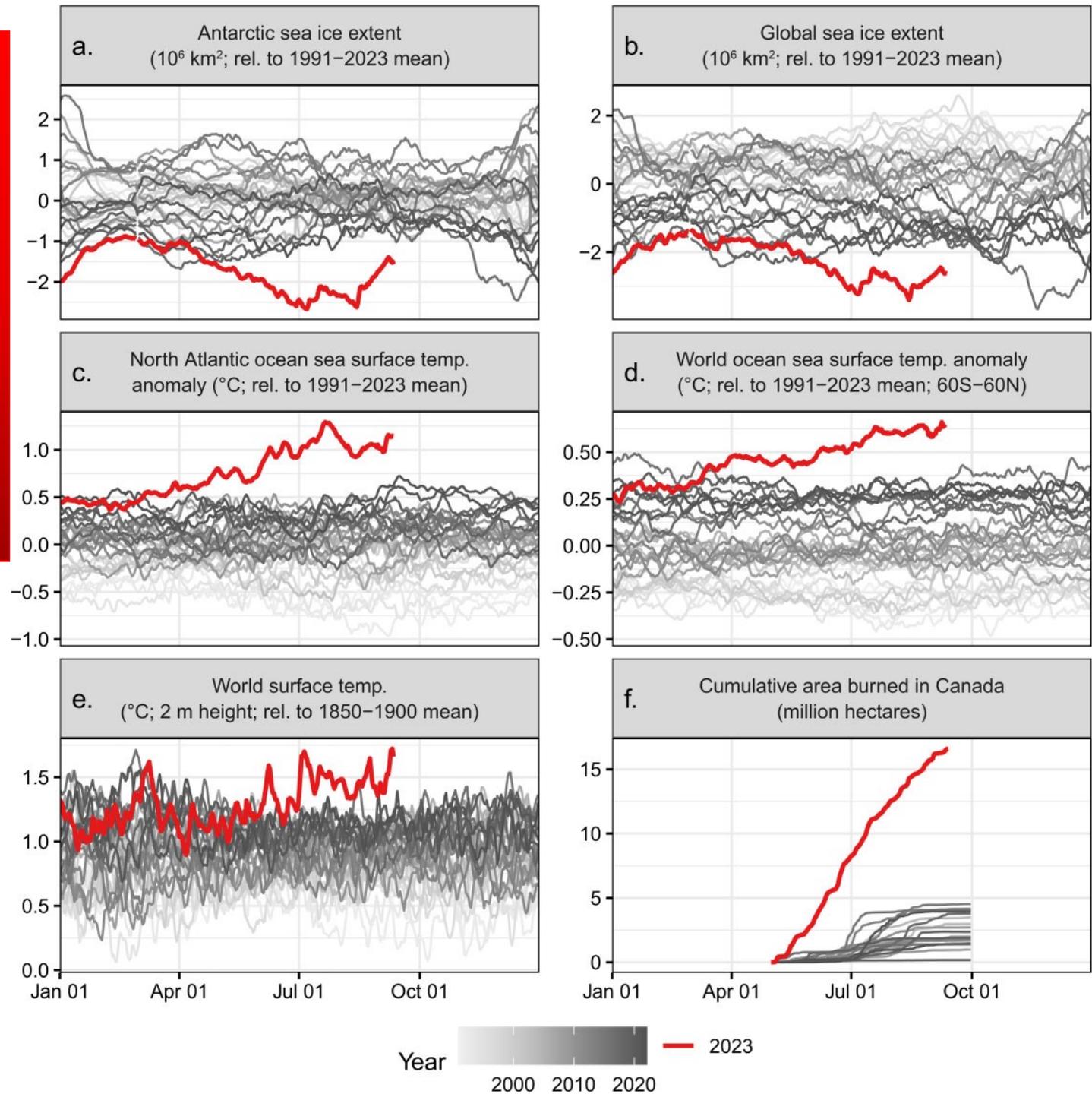
But only if we stop climate denial, and act to implement them - fast.

Aspects of Mobilisation

- 1. Accept Climate Change as our greatest security threat**
- 2. Assess its risks & uncertainties – yet to be done officially in Australia**
- 3. Recognise an orderly transition is no longer possible**
- 4. Discontinuity will be the new normal**
- 5. Cascading compound events are likely**
- 6. Systemic change across society – not incremental tweaking of the status quo**
- 7. Fundamental reform to economic system – particularly role of the State & inequality**
- 8. Precautionary action: “What is the worse thing than could feasibly occur, and what do we have to do to prevent it?”**

2023 Climate Anomalies

Entering uncharted territory !



Australia's Climate & Security Risk Assessment 2022

Advocated by Australian Security Leaders Climate Group and adopted as ALP policy in 2021.

- **Commissioned by the Albanese government in June 2022.**
- **Delivered by Office of National Intelligence in November 2022 (as input to Defence Security Review - DSR).**
- **Regional focus, not domestic risks.**
- **Cursory treatment in DSR.**
- **Government has refused to release a declassified version of ONI report or talk about main findings.**
- **Parliamentarians have not been briefed.**

Implications of unnecessary secrecy

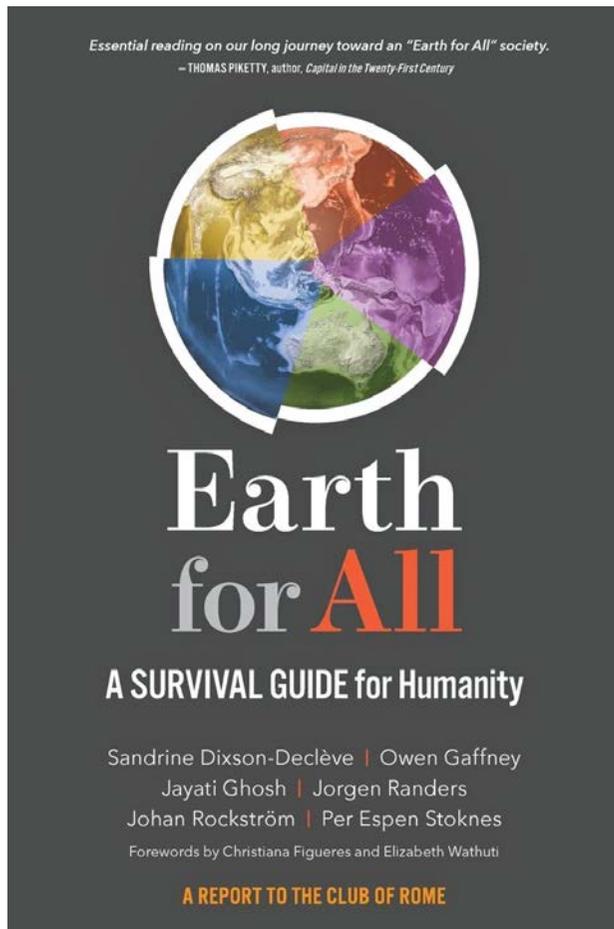
**The ASLCG emphasis is on
HUMAN SECURITY
rather than “national” security,
that is putting people at the centre of the
conversation, and the duty of
government to “protect the people”.**

**If there is not a broad, public
understanding of the risks, there is
neither the social licence nor the state
capacity to respond to them in a manner
that will “protect the people” from
climate breakdown.**

Too hot to handle?



**So 50 years after *The Limits to Growth*:
Earth for All (September 2022)**



www.earth4all.life

The fundamental question today:

Given the current state of the World, and the potential existential threats humanity faces, is it possible for everyone on Earth to prosper within planetary boundaries?

E4A focuses on systemic change to achieve global well-being.

Two Scenarios:

“Too Little Too Late”

“Giant Leap”



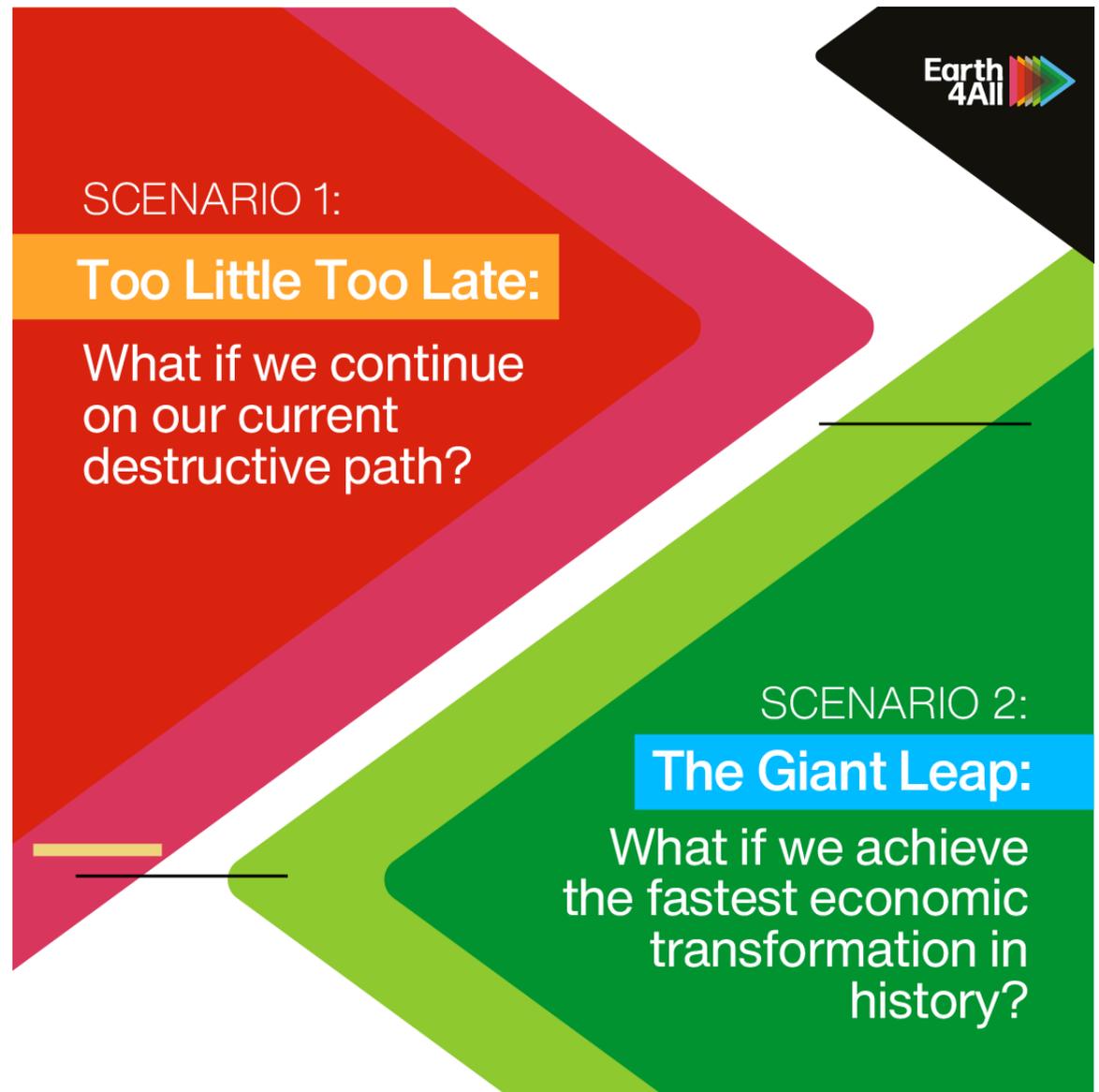
One future, one choice,
two scenarios.

Convened by:

- The Club of Rome
- The Potsdam Institute for Climate Impact Research
- The Stockholm Resilience Centre
- The Norwegian Business School

Acknowledgments to:

- Jorgen Randers, Professor Emeritus, Norwegian Business School & Co-author "The Limits to Growth"
- The Earth4All team





Economics for the future



Bold new economic ideas are gaining traction.

Through the **Transformational Economics Commission**, Earth4All has gathered leading thinkers to advise on the economic ideas that show the most promise to unite societies and bring **long-term prosperity to the majority**.

The 5 Turnarounds in *Earth for All*

1. Poverty

More plan and less market in economic development

2. Inequality

Transfers from the few rich to the many poor

3. Empowerment

Education, health, contraception, and opportunity to all women

4. Food

Regenerative agriculture, higher efficiency, fairer distribution

5. Energy

Shift from fossil fuels to renewables, higher efficiency, CCS

Why is the response so slow?

1. Sensible action is unprofitable

What the world needs is not profitable from the investor perspective using conventional criteria.

Hence the free market will not solve the problem.

2. Threatens existing jobs

The world needs a shift from dirty to green jobs

3. Solution requires a strong and well-funded state action

Rapid implementation of the 5 Turnarounds will require higher taxes and more regulation.

Most voters dislike both

How can governments pay for the Giant Leap?

1. Higher taxes

New taxes must be levied on the rich minority in order to be supported by a political majority.

Poorest 50% take 15% of total earnings – richest 10% take 40-60%

2. More borrowing

But more long-term debt increases interest costs to current taxpayers and shifts the real cost to future generations

3. Printing money

Central banks can provide governments with “fresh” money earmarked for green projects (“green stimulus packages)

SUMMARY

The world has a massive sustainability challenge:

**“The prospect of declining wellbeing in the decades ahead
- caused by global warming and rising inequality –”**

But the problem can be solved.

**Achieving a sustainable world
will require 5 extraordinary turnarounds -
paid for by the 10 % richest
in order to be politically feasible.**

BUT WILL THE MESSAGE STILL BE IGNORED?

That may seem likely given:

- **Humanity's obsession with short-termism**
- **War in Ukraine, US/China tension, Israel/Hamas & re-armament globally**
- **The failure of global leadership demonstrated by the disastrous outcomes of the UNFCCC COP process**

But climate change, and its second and third order effects, now pose an immediate existential threat to all nations, the US, China, Russia, the EU, the Middle East and Australia included.

This is the greatest threat humanity faces, a threat becoming more obvious by the day, requiring co-operation not conflict.

Change remains possible & solutions are there if we choose to take them.

Communities must speak out loudly, bluntly and frequently about the urgency for change.

“Where we are today at just over 500 parts per million of carbon dioxide, methane and NOx gases, we have already passed the tipping point for systemic Arctic and Greenland systems change, we are into a negative carbon budget. There is much discussion about how much carbon budget there is left to burn.

There is none, we have already burned far too much. We need to go into reverse.”

“What we do in the next 3-5 years will determine the future of humanity”.



Sir David King
Former UK Chief Scientist
February / March 2021

breakthroughonline.org.au

climaterealitycheck.net