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Planetary Solvency

- finding our balance with nature.

*Global Risk Management for
Human Prosperity*

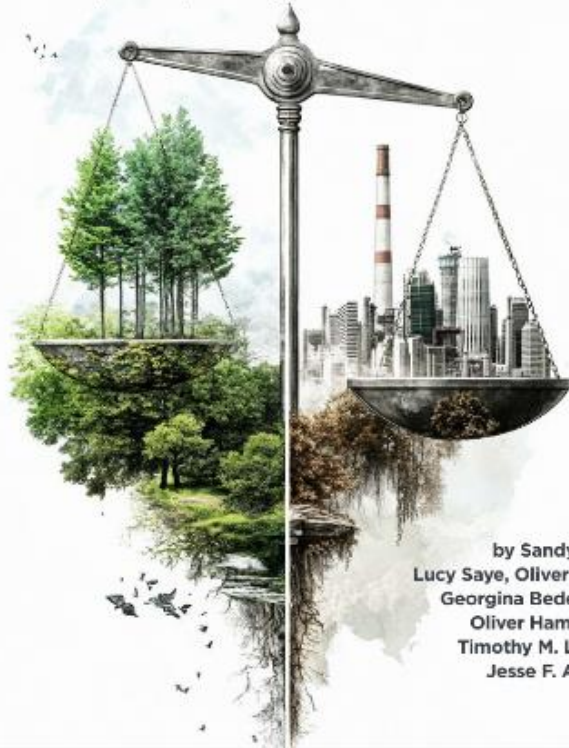


Westminster Energy Forum



Planetary Solvency – finding our balance with nature

Global risk management for
human prosperity



by Sandy Trust,
Lucy Saye, Oliver Bettis,
Georgina Bedenham,
Oliver Hampshire,
Timothy M. Lenton,
Jesse F. Abrams

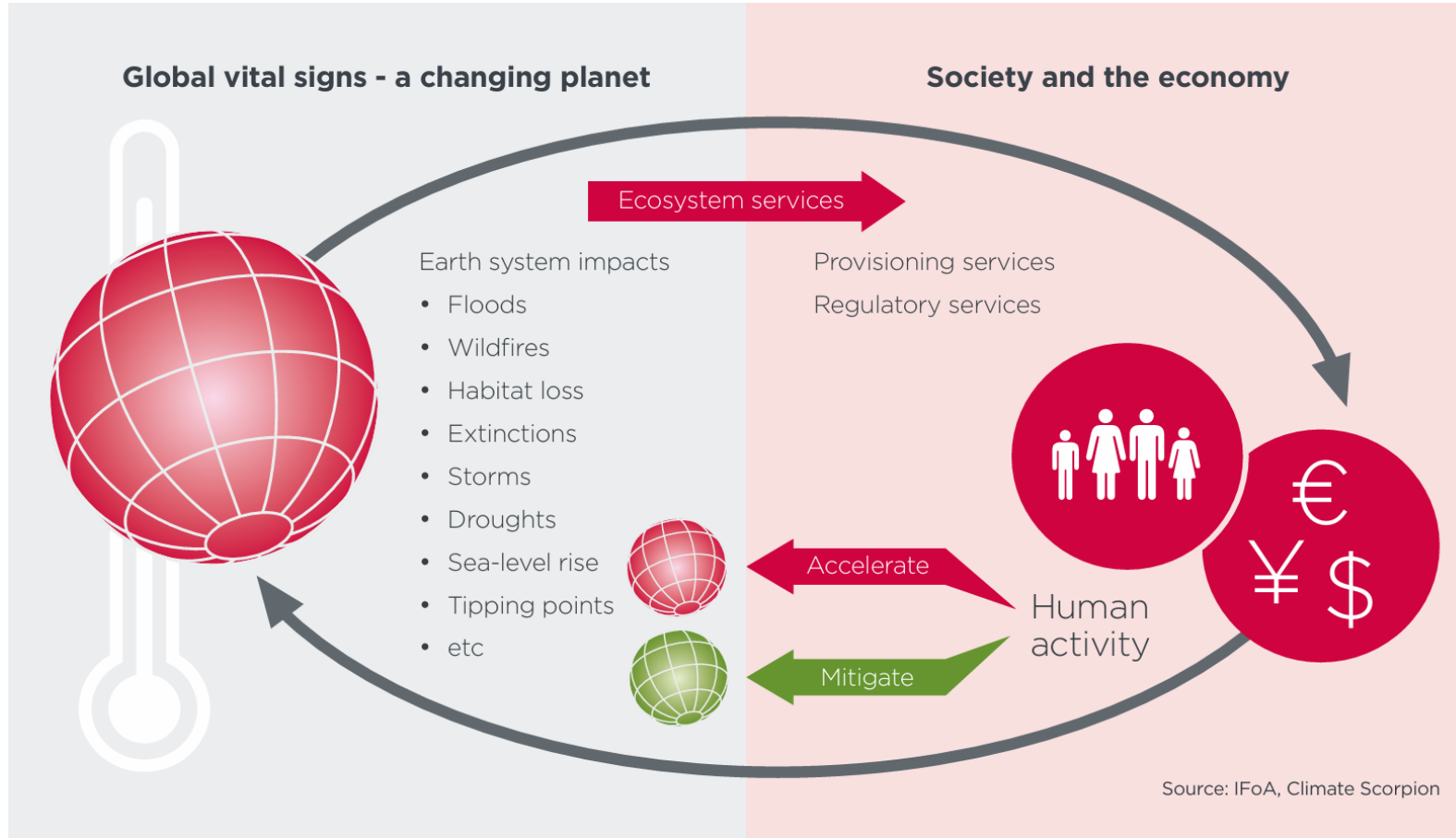


**Global risk management is currently
failing and blind to systemic risk**



Professor Tim Lenton

We are part of the Earth system, which we depend on



- **We fundamentally depend on the Earth system**
- **Ecosystem services are not substitutable and must be protected**
- **We need to recognise this and manage our activity to be within planetary boundaries**
- **Urgent policy response required to maintain Planetary Solvency**

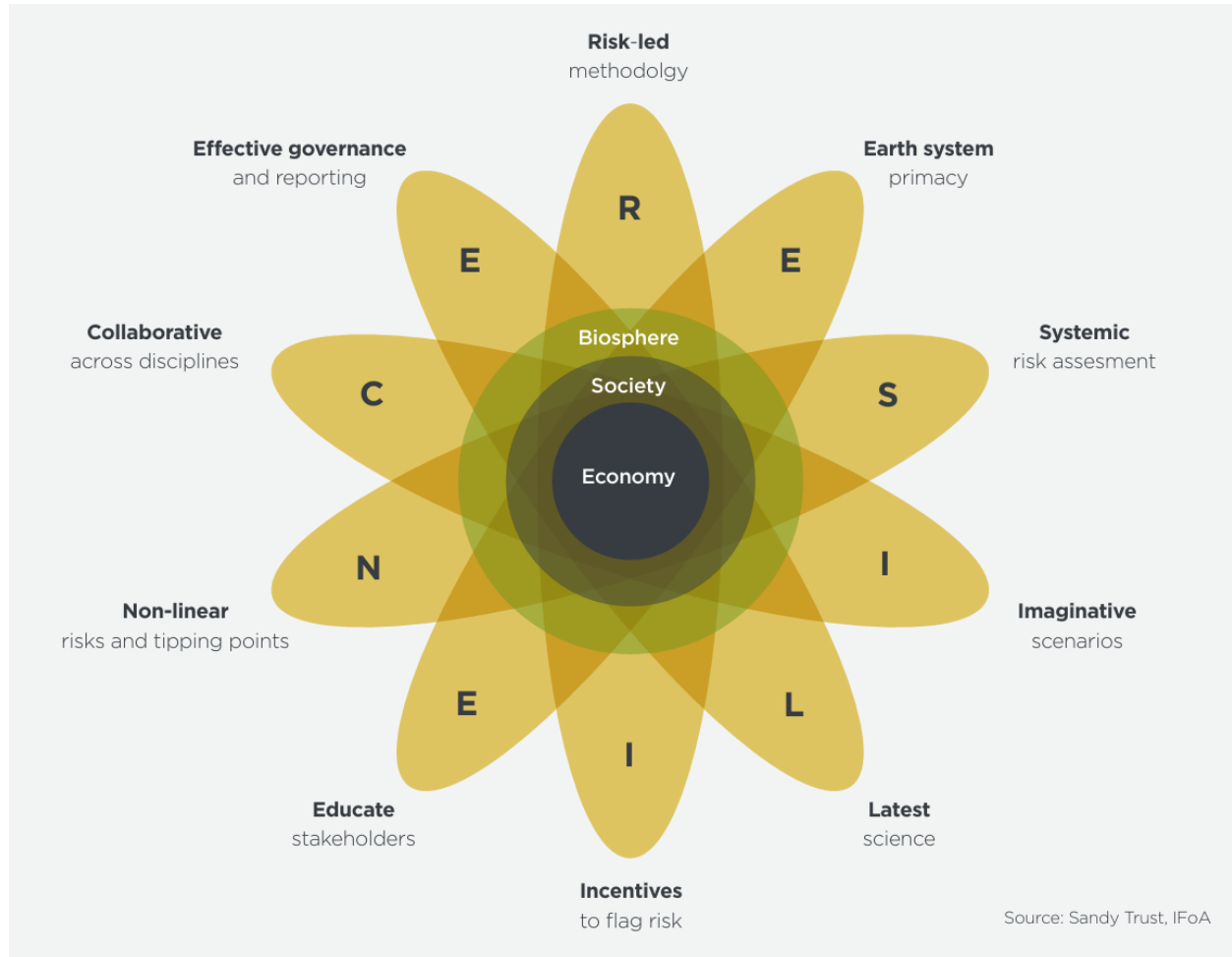
Planetary Solvency is defined as:



***Managing human activity,
to minimise the risk of societal disruption,
from the loss of critical support services from nature.***



The RESILIENCE principles



- The economy requires a society, which rests in the Earth system
- These systems are now deeply interconnected.
- RESILIENCE principles for realistic and effective risk management
 - Assess risks relative to objectives
 - Identify biggest risks and tail events
 - Use best available information
 - Consider interconnections
 - Non-linearity, range of timeframes

Planetary Solvency Risk Appetite



Minimise the risk of significant societal disruption driven by climate and nature risks, including:

- i. Crossing Earth system tipping points and triggering tipping cascades
- ii. Habitat loss and species extinctions
- iii. Breakdown of critical ecosystem services
- iv. Climate change above 1.5°C
- v. Climate and nature driven forced displacement, conflict and mass mortality events
- vi. Derailment risk (society is too distracted by escalating crises to address root causes)

Impact matrix

RATING	Financial Impact	Non-Financial Impact			
	GDP losses	Human mortality	Climate	Nature	Societal
EXTREME	≥50%	≥50% > 4 billion deaths	3C or more by 2050 Multiple climate tipping points triggered, tipping cascade.	Breakdown of several critical ecosystem services and Earth systems. High level of extinction of higher order life on Earth.	Significant socio-political fragmentation worldwide and/or state failure with rapid, enduring, and significant loss of capital, and systems identity. Frequent large scale mortality events.
CATASTROPHIC	≥25%	≥25% >2 billion deaths	2C or more by 2050 High number of climate tipping points triggered, partial tipping cascade.	Breakdown of some critical ecosystem services and Earth systems. Major extinction events in multiple geographies. Ocean circulation severely impacted.	Severe socio-political fragmentation in many regions, low lying regions lost. Heat and water stress drive involuntary mass migration of billions. Catastrophic mortality events from disease, nutrition, thirst and conflict.

LIKELIHOOD	POSSIBLE	LIKELY	HIGHLY LIKELY
The likelihood of the risk occurring over a certain timeframe	40-60%	60-90%	≥90%



PLANETARY SOLVENCY DASHBOARD BETA*



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PLANETARY SOLVENCY RISK DESCRIPTION & COMMENTARY

1. Climate Change ▾

2. Nature >

3. Society >

4. Economy >

There is a risk that climate change is **not mitigated, leading to further global temperature increases and increasingly severe climate impacts, which overwhelm societies ability to adapt.**

Risk position **AMBER**

Impact **Severe** in 2024 with increase in \$billion+ loss events and 10k+ mortality events globally. Ongoing increase of emissions and GHG levels, with warming implications. Transition is accelerating.

Risk trajectory **RED**

Tipping points increase risk exponentially past 1.5C. Emissions and GHG levels imply >2C by 2050. Highly likely **Catastrophic** warming levels experienced pre 2050 with **Extreme** warming Possible to Likely. Policy support required to radically accelerate transition, reduce emissions and leverage natural solutions.

1990

1995

2000

2005

2010

2015

2020

2025

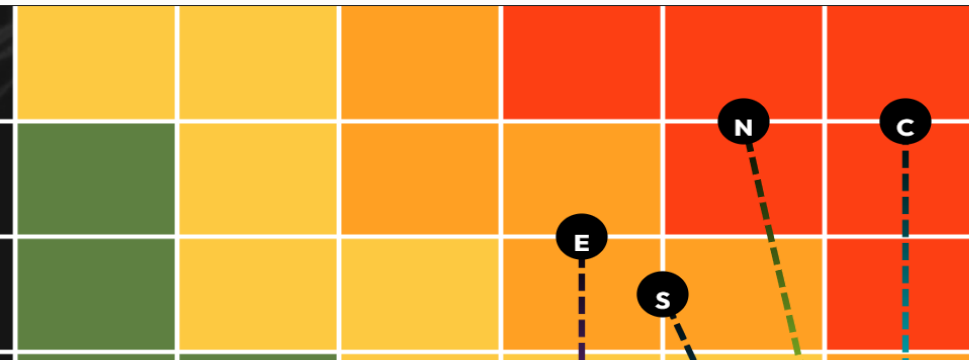
Planetary Solvency Risk position and trajectory

There has been a significant increase in 2025 risk position, with overall position now outside risk appetite. Global climate impacts **Severe**. Nature impacts anticipated **Severe** imminently. Increasing societal fragmentation with active conflicts, heightened geo-political tension and severe stresses on vulnerable states. Economic losses and Mortality still **Limited**.

Extreme

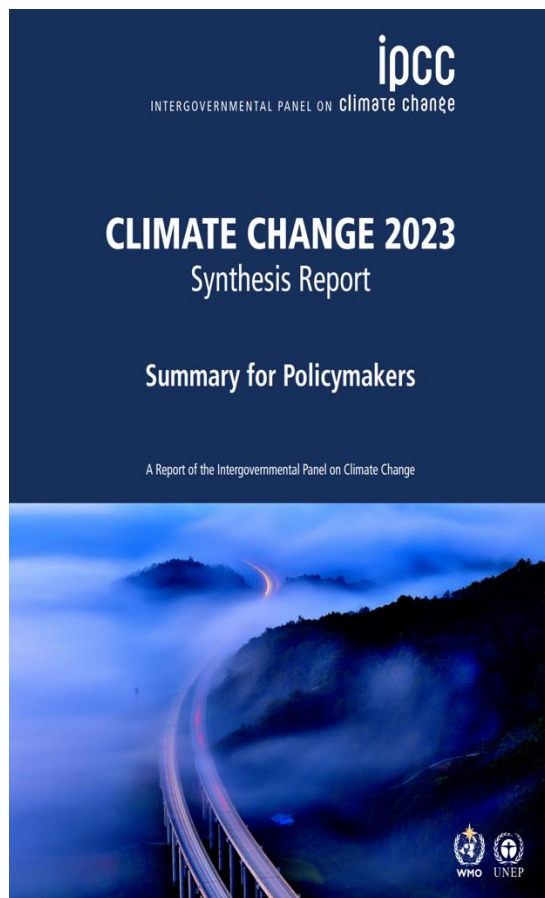
Catastrophic

Decimation



Risk trajectory 2050

IPCC – science led messaging



Summary findings

- Climate change has caused substantial damages, and increasingly irreversible losses (p10).
- Climatic and non-climatic risks will interact, creating compound and cascading risks that are more complex and difficult to manage (p10).
- **Climate change is a threat to human well-being and planetary health.** There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all (p24).

Policy recommendations

- Rapid and far-reaching transitions across all sectors and systems are necessary to achieve deep and sustained emissions reductions and secure a liveable and sustainable future for all. (p28)
- Deep, rapid, and sustained mitigation and accelerated implementation of adaptation actions in this decade would reduce projected losses and damages for humans and ecosystems, and deliver many co-benefits, especially for air quality and health (p28)

Planetary Solvency – risk led messaging

Global risk management for human prosperity January 2025

Planetary Solvency: Risks and Recommendations

There is an increasing risk of Planetary Insolvency unless we act decisively. Without immediate policy action to change course, Catastrophic or Extreme impacts are eminently plausible, which could threaten future prosperity.

Summary risk outlook	Policy recommendations
<p>Increasingly severe climate and nature driven impacts are highly likely, including fires, floods, heat and droughts. This is a national security issue as food, water and heat stresses will impact populations. If unchecked then mass mortality, involuntary mass migration events and severe GDP contraction are likely.</p> <p>Planetary Solvency defines Catastrophic impacts as:</p> <ul style="list-style-type: none">• Economic contraction, GDP loss of over 25%• Mass human mortality events resulting in over 2 billion deaths• Warming of 2°C or more, triggering high number of climate tipping points• Breakdown of some critical ecosystem services and Earth Systems.• Major Extinction Events in multiple geographies.• Ocean circulation severely impacted.• Severe socio-political fragmentation in many regions, low lying regions lost.• Heat and water stress driving mass migration of billions.• Catastrophic mortality events from disease, nutrition, thirst and conflict.	<p>It will be overwhelmingly positive economically to avoid Planetary Insolvency. An urgent policy response is required as our current market led approach to mitigating climate and nature risks is not delivering.</p> <p>This should include:</p> <ol style="list-style-type: none">1. Implementing annual Planetary Solvency risk assessments, leveraging the RESILIENCE principles, reporting to the UN Security Council.2. Creating a function with responsibility for producing Planetary Solvency assessments, housed in an appropriate body such as the IMF or OECD.3. Considering the need for systemic risk officers at supra-national, national and sub-national levels to enhance systemic risk management capability.4. Rapidly implementing policy recommendations to reduce risk such as National Transition Plans, Nature Positive Pathways and alternative economic models.5. Developing appropriate tracking of delivery of solutions to mitigate risk, including oversight of progress, clear accountability and near-term

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Planetary Solvency – finding our balance with nature

Summary risk outlook

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- This is a national security issue as food, water and heat stresses will impact populations.
- If unchecked then mass mortality, involuntary mass migration events and severe GDP contraction are likely.

Policy recommendations

- It will be overwhelmingly positive economically to avoid Planetary Insolvency.
- An urgent policy response is required as our current market led approach to mitigating climate and nature risks is not delivering.



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Questions?



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