



Institute
and Faculty
of Actuaries

25 June
2021

Postcards for Actuaries

Is your long-run a sustainable destination?

Climate Risk Virtual Dialogue Series
Singapore Actuarial Society

Nick Spencer
Chair of IFoA Sustainability Board



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CO N T E N T



Clim ate Risks are now

Snapshots of the paths ahead



IFoA Taskforce: planning the next part of the trip

Preparing actuaries for the future



Sustaining your journey

Activities, support and resources led by the IFoA Sustainability Board



Intersections and connected routes

Beyond climate change: making the mission sustainable

Climate risks are coming

Two choices: change or catastrophe

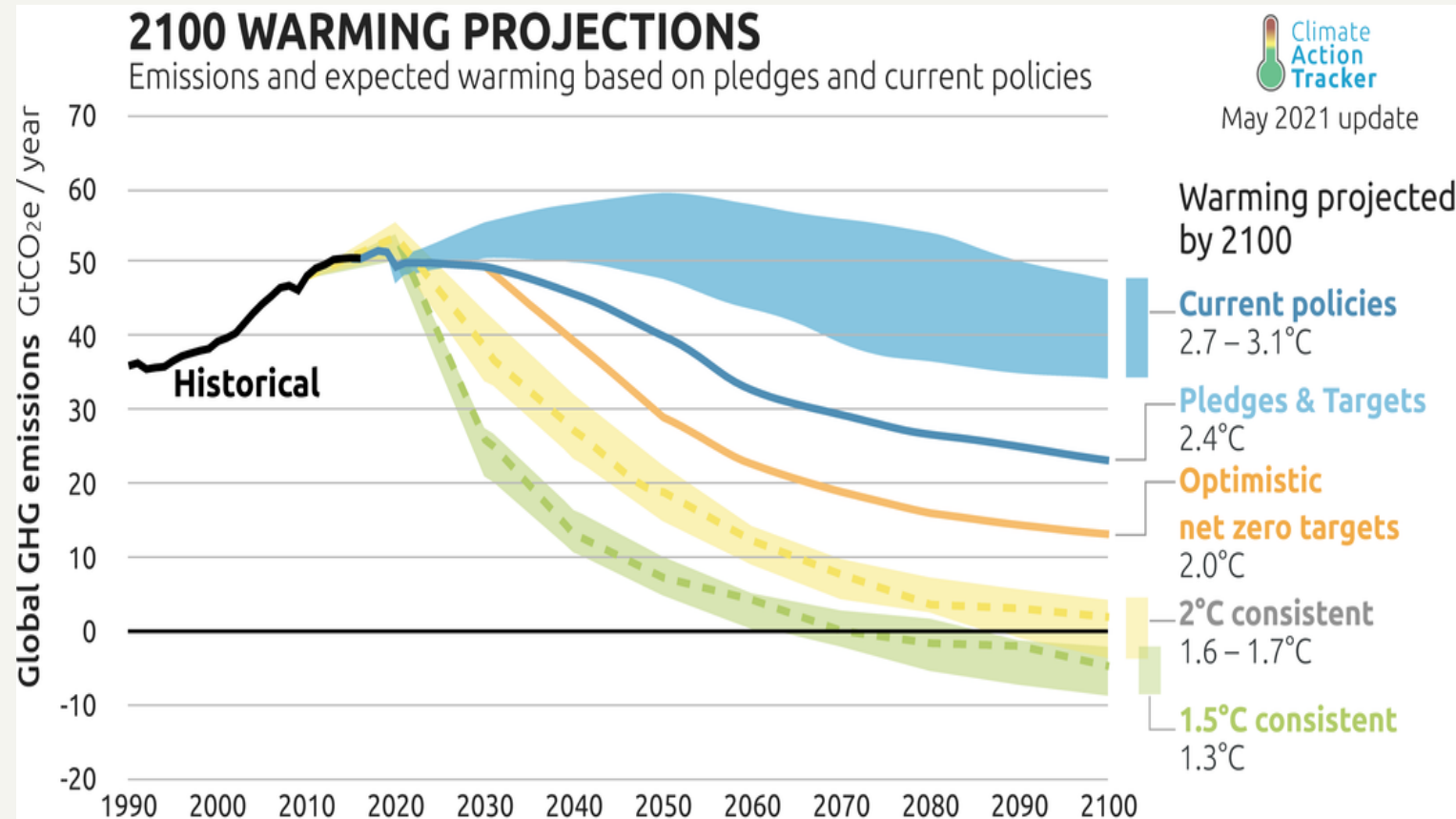


Chart Source: Climate Action Tracker, <https://climateactiontracker.org/global/temperatures/>

1. Throughout this presentation use of "Carbon" or "CO₂" are used as a proxy for greenhouse gas emissions and their CO₂ equivalent impact on climate warming.

2. E.g. Schroder Climate Progress dashboard, 3.6°C of warming

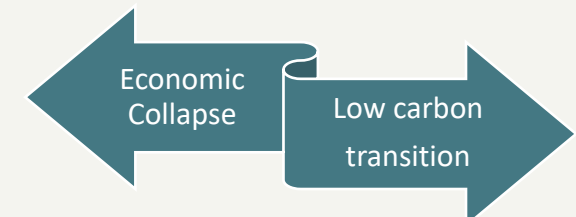
<https://www.schroders.com/en/uk/pensions/insights/climate-progress-dashboard/>

- CO₂ concentrations¹ are at record levels and still rising
- Different estimators offer a range of temperature projections but 3 – 4°C by 2100 and rising often quoted based on current efforts²
- A 4°C rise is almost certainly inconsistent with our modern global economy

"In any case, we have no choice: a 2°C world might be insurable, a 4°C world certainly would not be."

Henri de Castries, CEO AXA 2015

The Paris Agreement exists as there are two choices



Climate GDP impacts are material in a failed transition

IFoA/Ortec Finance paper on financial assumptions, June 2020

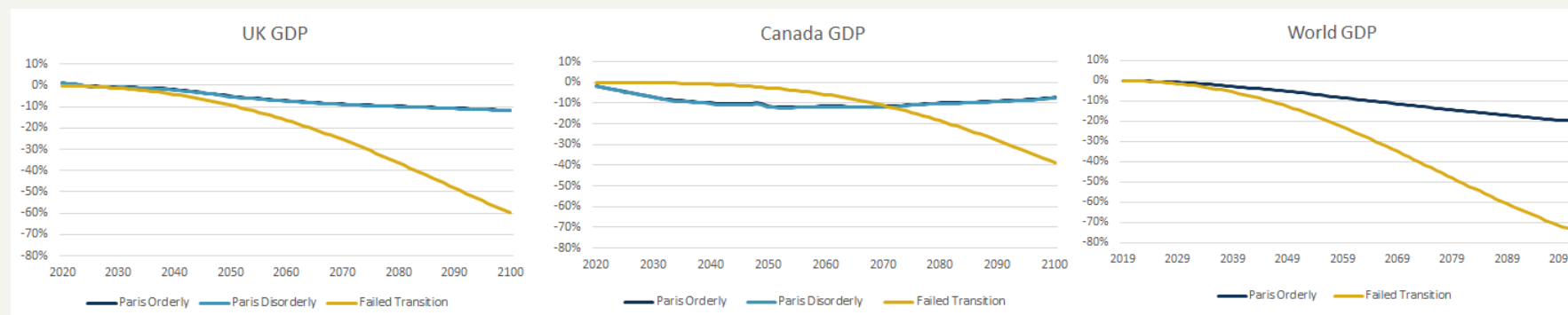


Figure 4: Climate-adjusted GDP growth across regions and climate pathways (cumulative difference to climate-uninformed baseline pathway)

Source: [“Climate change considerations for actuarial financial assumptions and the role of scenario analysis”](#), June 2020 (Ortec Finance)

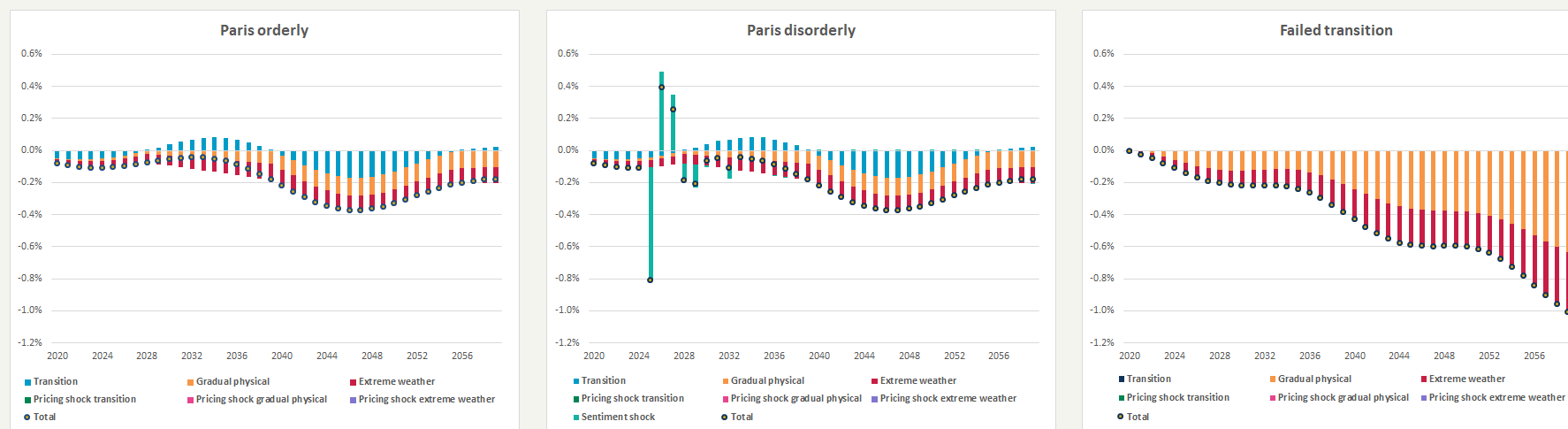
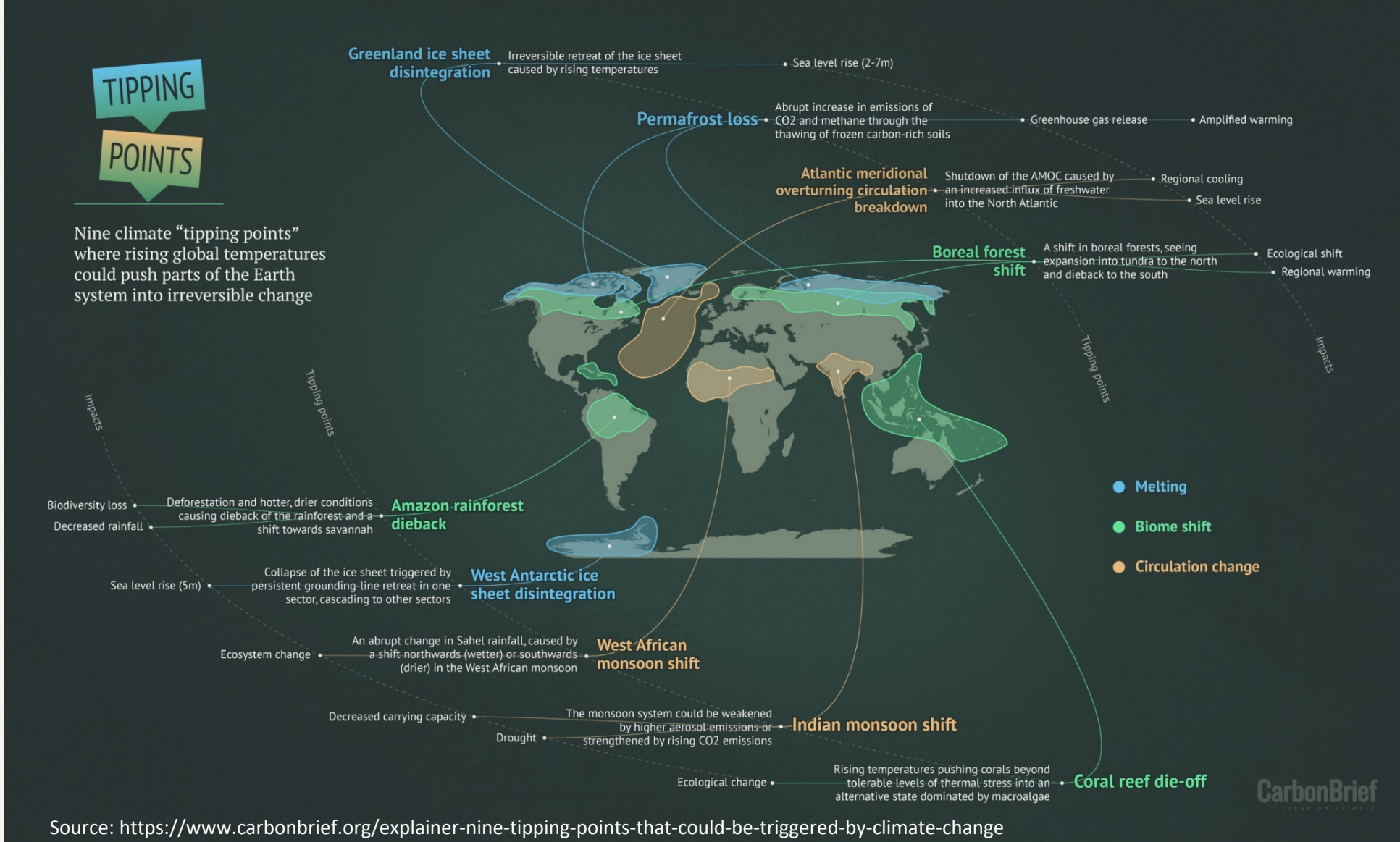


Figure 15: Percentage difference in the level of UK GDP explained by the various climate risk drivers (difference to climate-uninformed baseline pathway)

Nine climate “tipping points”

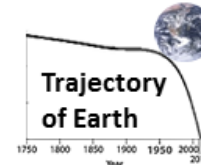


Climate is not our only challenge

'Projected future climate change and other human-induced pressures are virtually certain to be unprecedented compared with the past several millennia'.

(IPCC 2007 AR4 WG2 Impacts 4.1 Key issues)

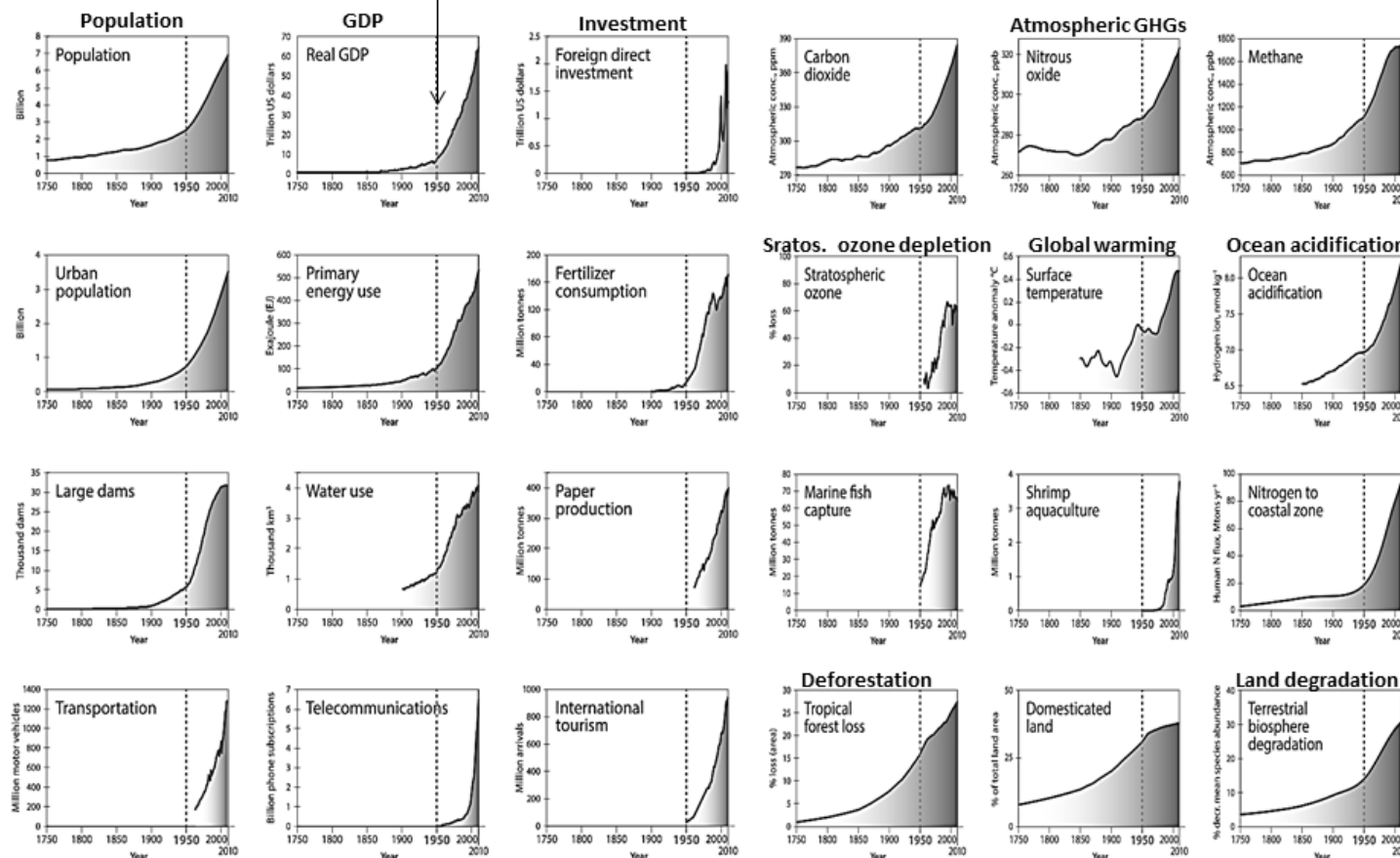
Graphs from W. Steffen June 2015



Socio-economic trends

1950

Earth system trends



Graphs from W. Steffen June 2015 The trajectory of the Anthropocene

Peter Carter Climate Emergency Institute

Source

<http://www.igbp.net/globalchange/greatacceleration.4.1b8ae20512db692f2a680001630.html>

See also

<https://theconversation.com/blue-acceleration-our-dash-for-ocean-resources-mirrors-what-weve-already-done-to-the-land-130264>



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IFoA Taskforce

Planning the next part of the trip

IFoA Council created Climate Related Risk Taskforce in September 2019

Objective: “enabling IFoA members to incorporate considerations of climate-related risk into their work, supporting them to take advantage of new opportunities, and considering the IFoA’s operational impact as a membership body”

38 Recommendations

covering governance and five key enablers



Knowledge and
skillsets



Regulation



Research and
thought leadership



Membership
Engagement

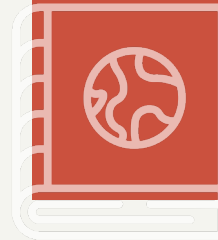


Internal
operations



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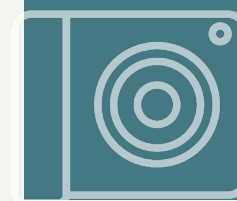
Setting the Destination



01

Climate Policy Statement

“The IFoA supports the aim of the Paris Agreement to limit climate change to an increase of substantially under 2°C from pre-industrial temperatures, and recognises that in order for there to be a reasonable probability of achieving this aim, there must be a transition to a global economy that has no net greenhouse gas emissions (‘net zero’) by 2050.”



02

Green Finance Education Charter

The Green Finance Education Charter (GFEC) acts as a tool for focusing collaboration between government and industry. As a signatory, the IFoA commits to integrate green finance and sustainability into their core curricula, new qualifications and their members’ continued professional development.



03

IFoA Sustainability Board

Mission is to create meaningful engagement by all IFoA actuaries, their clients and wider stakeholders in understanding, and then in addressing, the risks and uncertainties for economic and financial systems arising from climate change and other sustainability issues. The Board seeks to be a centre of expertise and leadership for the IFoA in climate change and other sustainability issues and aims to help identify, educate and raise awareness of the need for such issues to be addressed.



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Climate Change: Knowledge & Skillsets



Knowledge and
skillsets

- Climate Change Curated Library¹
- Practical Guides² (GI, Life, Pensions...)
- Updated Associate & Fellowship syllabuses
- Sustainability Certificate

Climate Change Curated Library



The Paris Agreement

What is the Paris Agreement's central aim and what are the Task Force on Climate-related Financial Disclosures recommendations? Read more



Related publications

Selected reading and links including the Task Force on Climate-related Financial Disclosures recommendations



Science and risk

The Intergovernmental Panel for Climate Change assesses the science related to climate change. Review each of the highlighted risks



Law, policy & regs

What are the policies and who regulates climate change – find out more



Investment

From ESG Investing to the Net Zero Asset Owner Alliance



Insurance and banking

Insurance and banking approaches to managing the financial risks from Climate Change



1. Curated Climate Guide <https://www.actuaries.org.uk/learn-and-develop/lifelong-learning/sustainability-and-lifelong-learning/climate-change-curated-library>
2. Practical Guides: <https://www.actuaries.org.uk/practice-areas/sustainability/sustainability-practice-area-practical-guides>



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Climate Change: Regulation



Regulation

- Support Joint Forum for Actuarial Regulation (Climate Risk #1 hotspot)¹
- Informal meetings with PRA and other regulators
- Support IFoA regulation board: review Actuarial Code, APS, TAS

JFAR RISK PERSPECTIVE

2019/2020



JOINT FORUM ON ACTUARIAL
REGULATION

1. JFAR Risk Perspective <https://www.frc.org.uk/getattachment/2bddf6ca-7d5d-4f79-9560-ff023142fc76/JFA-Risk-Perspective-Web-2-1.pdf>



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Climate Change: Research & Thought-Leadership



Research and
thought leadership

- Research program including Climate scenario analysis, TCFD, carbon offsets¹,
- Climate Change for Actuaries: An Introduction²
- Public Interest & Thought-Leadership events (e.g. Wicked Problems, Finance in the Public Interest)³
- FinSTIC & Economics MIG⁴
- ‘Beyond’ Climate change: biodiversity, intergenerational fairness⁵

1. [Climate scenario analysis - An illustration of potential long-term economic & financial market impacts](https://www.iema.net/knowledge/policy-horizon/corporate-sustainability/climate-related-financial-disclosures), [Climate Scenario Analysis for Pension Schemes](https://www.iema.net/knowledge/policy-horizon/corporate-sustainability/climate-related-financial-disclosures), <https://www.iema.net/knowledge/policy-horizon/corporate-sustainability/climate-related-financial-disclosures>
2. <https://www.actuaries.org.uk/system/files/field/document/Climate-change-report-29072020.pdf>
3. <https://www.actuaries.org.uk/learn-and-develop/events-calendar/thought-leadership-speaker-series>
4. <https://finstic.org.uk/>
5. <http://blog.actuaries.org.uk/blog/biodiversity-risk-natural-capital-and-actuarial-practice> , <https://www.actuaries.org.uk/news-and-insights/public-affairs-and-policy/intergenerational-fairness>



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Climate scenario analysis

An illustration of potential long-term
economic & financial market impacts

By Luca Bongiomo, Andrew Claringbold, Lisa Eichler
Claire Jones, Bert Kramer, Louise Pryor and Nick
Spencer

A collaborative project between an IFoA Resource
and Environment Working Party and Ortec Finance

Presented at the online Sessional Meeting of the
Institute & Faculty of Actuaries on

1 June 2020



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Climate Change: Member Engagement



Membership Engagement

- IFoA Practice Board engagement plans
- Events¹
 - Sessional meetings, regional, climate hotspot webinar, public interest
- Weekly Newsletter²
 - LinkedIn Group
- Sustainability Volunteer Group³
 - Film Club, Book Club
- The Actuary articles, IFoA blog, podcasts⁴ etc

1. <https://www.actuaries.org.uk/learn-and-develop/conference-paper-archive/2020>
2. Sign up to the [Newsletter](#) and the [LinkedIn group](#)
3. [Sustainability Volunteer Group](#)
4. Eg <https://www.theactuary.com/2021/03/03/march-2021-digital-issue>, <https://blog.actuaries.org.uk/blog/bringing-sustainability-forefront-covid-19-recovery>, <https://www.actuaries.org.uk/practice-areas/sustainability/sustainable-development-goals-sdg-podcasts>

Invitation: Our Planet: Too Big To Fail



"The biggest risk is inaction, inaction today."

Mark Carney, UN Special Envoy for Climate Action and Finance as featured in the film

You're invited! *Our Planet: Too Big To Fail*

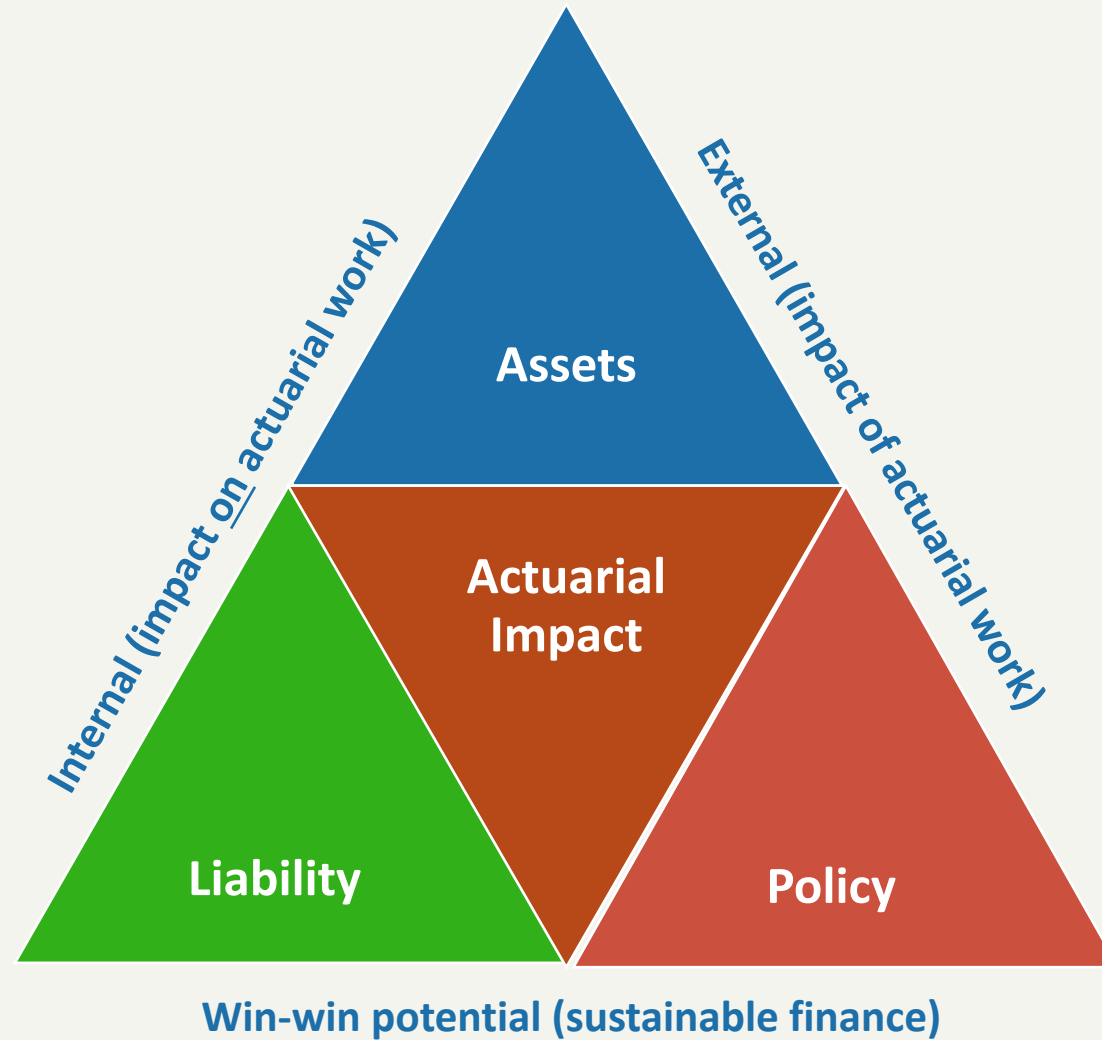
The IFoA's Sustainability Board are proud to host a one-hour panel discussion of the new film inspired by the Our Planet Netflix series. *Our Planet: Too Big To Fail* explores the risks of inaction, the impact of investing-as-usual, and the role the finance sector can play in powering a sustainable future.



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Stopping at climate change
won't stop climate change

Double materiality



Just Transition: beyond greenhouse gases

“Social justice & equity are core aspects of climate-resilient development pathways that aim to limit global warming to 1.5°C as they address challenges and inevitable trade-offs, widen opportunities, and ensure that options, visions, and values are deliberated.”

IPCC's 1.5°C Special Report, Oct 2018

1 in 5 UK jobs could be affected: significant overlap with areas of high deprivation¹

“If the impact of the move to net-zero emissions on employment & cost of living is not addressed & managed, & if those most affected are not engaged in the debate, there is a significant risk that there will be resistance to change, which could lead the transition to stall.”

UK Committee on Climate Change, May 2019

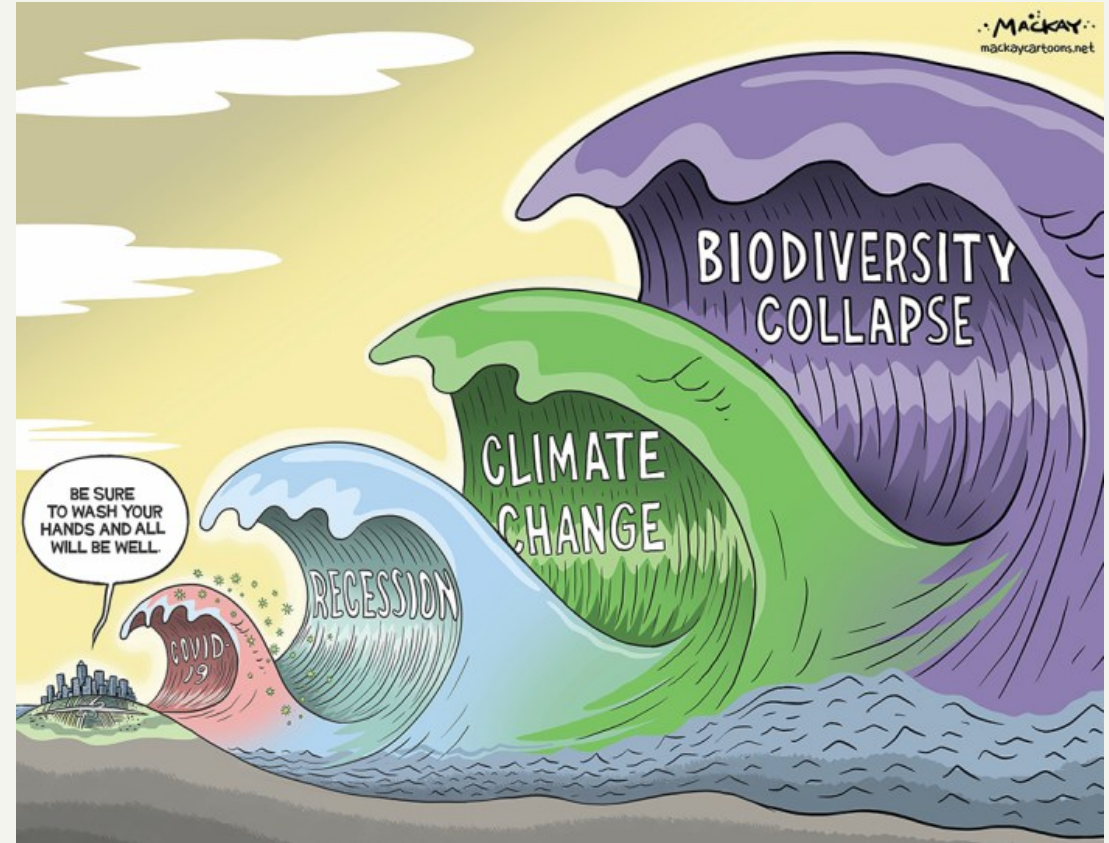


Photo by Kosu Kunii on Unsplash

Source : 1. [Financing inclusive climate action in the UK An investor roadmap for the just transition, October 2019](#)

Biodiversity collapse: the emerging crisis

- EU estimates more than half (€40 tr) of the world economy depends on nature¹
- But what would the economy be without air to breath or food to eat?
- Biodiversity is impacted by, and can impact, climate change



Source :<http://www.edenvigil.org/creation-care-missions-blog/2020/8/19/the-confused-cartoonist-and-the-unemployed-climate-activist>

1. Source:

https://ec.europa.eu/commission/presscorner/api/files/attachment/865555/factsheet-business-case-biodiversity_en.pdf

Two further postcards



Biodiversity

Complex, interdependent, long-term uncertain risk which requires greater pluralism in thinking of tipping points and values.

All aspects actuaries can consider and have existing techniques that can be adapted.



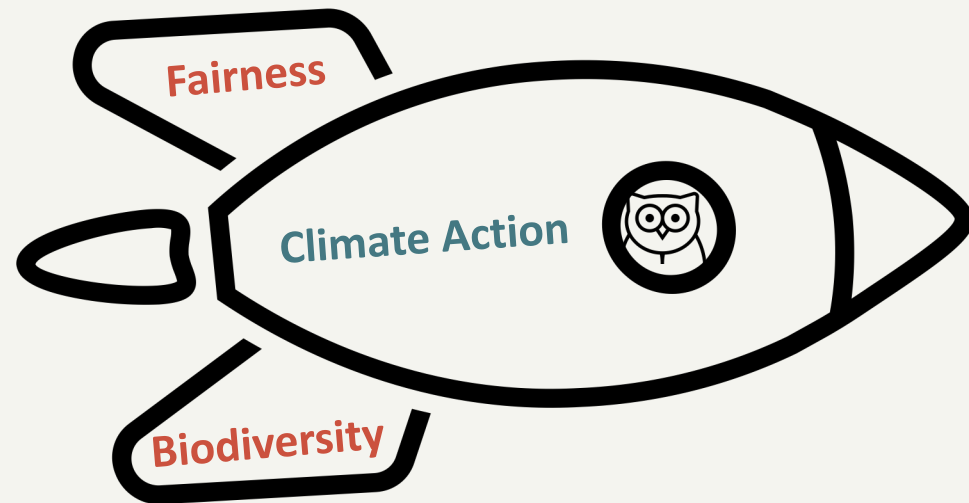
Fairness

Fairness is an actuarial concept. Actuaries can apply this thinking to different cohorts and different reasonable expectations.

Intergenerational fairness and considerations such as risk transfer are firmly in the actuarial domain.

Engaging in the justice and values element generates new vistas for actuarial work and their contribution.

Leading to the actuarial mission: Navigating to a sustainable future



Source : United Nations, <https://www.un.org/sustainabledevelopment/>



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THANK YOU

From : Nick Spencer

Chair of IFoA Sustainability Board

www.actuaries.org.uk/practice-areas/sustainability

If you are keen to get in touch and/or be involved in IFoA's Sustainability research, please contact Caryn Chua at caryn.chua@actuaries.org.uk.