



Society of Actuaries in Ireland

Climate Change: An Actuarial Perspective

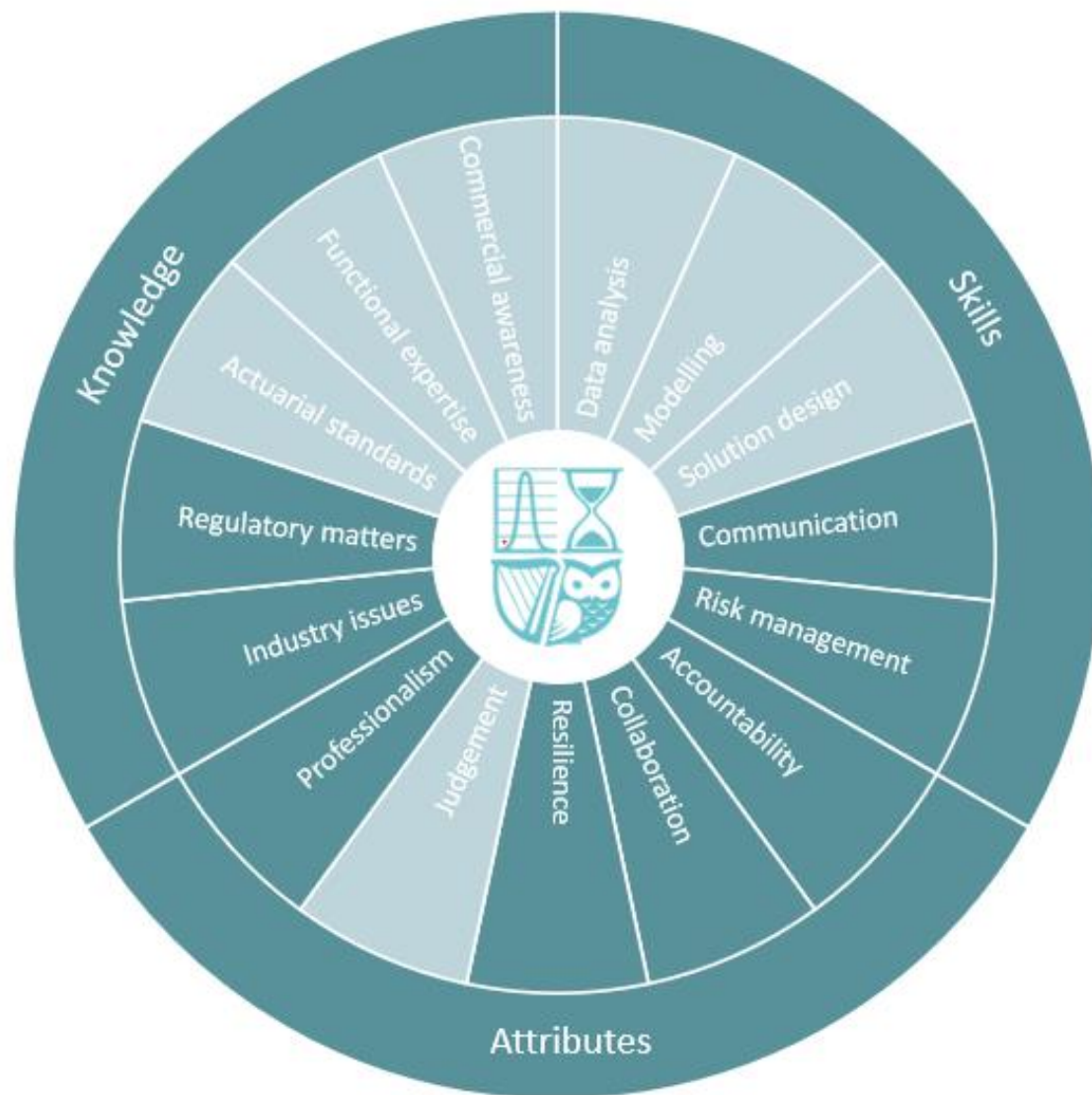
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27 September 2022

Disclaimer

The views expressed in this presentation are those of the presenter(s) and not necessarily those of the Society of Actuaries in Ireland or their employers.

Competency Framework Wheel





Agenda

- Introduction to the SAI's Sustainability and Climate Change Steering Group (SCCSG) and the SAI climate change activities
- Professional Bodies Climate Action Charter
- SAI public statement on climate change

SCCSG and the SAI's climate activities

Introduction to the SAI's SCCSG

- Overarching purpose:

“Provide a focal point within the Society for expertise on sustainability and climate change, complementing the Society’s Committees as they each consider actions they should undertake and support they require, and ensuring any gaps are identified and addressed.”


- Aim to Address:

1. How the Society should respond as an organisation to sustainability and climate change, including managing reputational risk, providing an independent voice and managing its own environmental impacts.
2. How to ensure that all actuaries are equipped with the appropriate skills, attributes and knowledge to account for sustainability and climate change within their work.

- Work in conjunction with the relevant Committees to achieve these aims

- Group reports directly to Council

Areas of focus – sub-groups



Education
and
Guidance

External
Engagement

Member
Engagement

Research

SAI Green
Goals

Focus on Learning

- Events
- Blog series
- Newsletter articles
- Skillnet Ireland, Sustainable Finance
Skillnet Steering Group
- Funding for IFOA sustainability course

Sustainability and Climate Change Blog

Climate Change Cross-Practice Sustainability

Welcome to the sustainability and climate change blog. This blog was created by the Society's Sustainability and Climate Change Steering Group to raise awareness of climate change topics and sustainability more widely. The blog intends to cover a wide range of subjects, both from an Irish perspective and internationally.

If you have any feedback or you are interested in information about contributing to the blog, please email info@actuaries.ie.

ERM Blog - Climate Change Focus Article

The linked article was published in June on the ERM Blog

Climate Change in the ORSA

Robert Fitzgerald

Date Published: June 2022

This blog is intended to be of most use to members who have not yet included any climate scenarios in their ORSA. However, it should be readily accessible to all risk professionals and may provoke some further thoughts for those further along with their ORSA considerations.

[Click here to view more](#)

Blog#5

UN Sustainable Development Goals - the global agenda to transform the planet by 2030 - by Barry Murphy

Date published: November 2021

Sustainable Development Goals, or SDGs for short, are a framework of 17 global goals which all United Nations members adopted as a blueprint to achieve a better and more sustainable future.

The SDGs were introduced in 2015 by a United Nations General Assembly resolution called the "2030 Agenda" and are intended to be achieved by the year 2030. The aim of the SDGs is to enable prosperity for future generations by overcoming global challenges such as poverty, injustice, and damage to the planet. All of the 17 goals are integrated and actions in one dimension can influence the outcomes in others. The 17 goals are a call to action to governments, companies, and people to work together to make this world peaceful, prosperous, and balanced for everyone.

[Click here to read more](#)

Blog#4

My Green Investment Journey - by Neil O'Reilly

Date published: October 2021

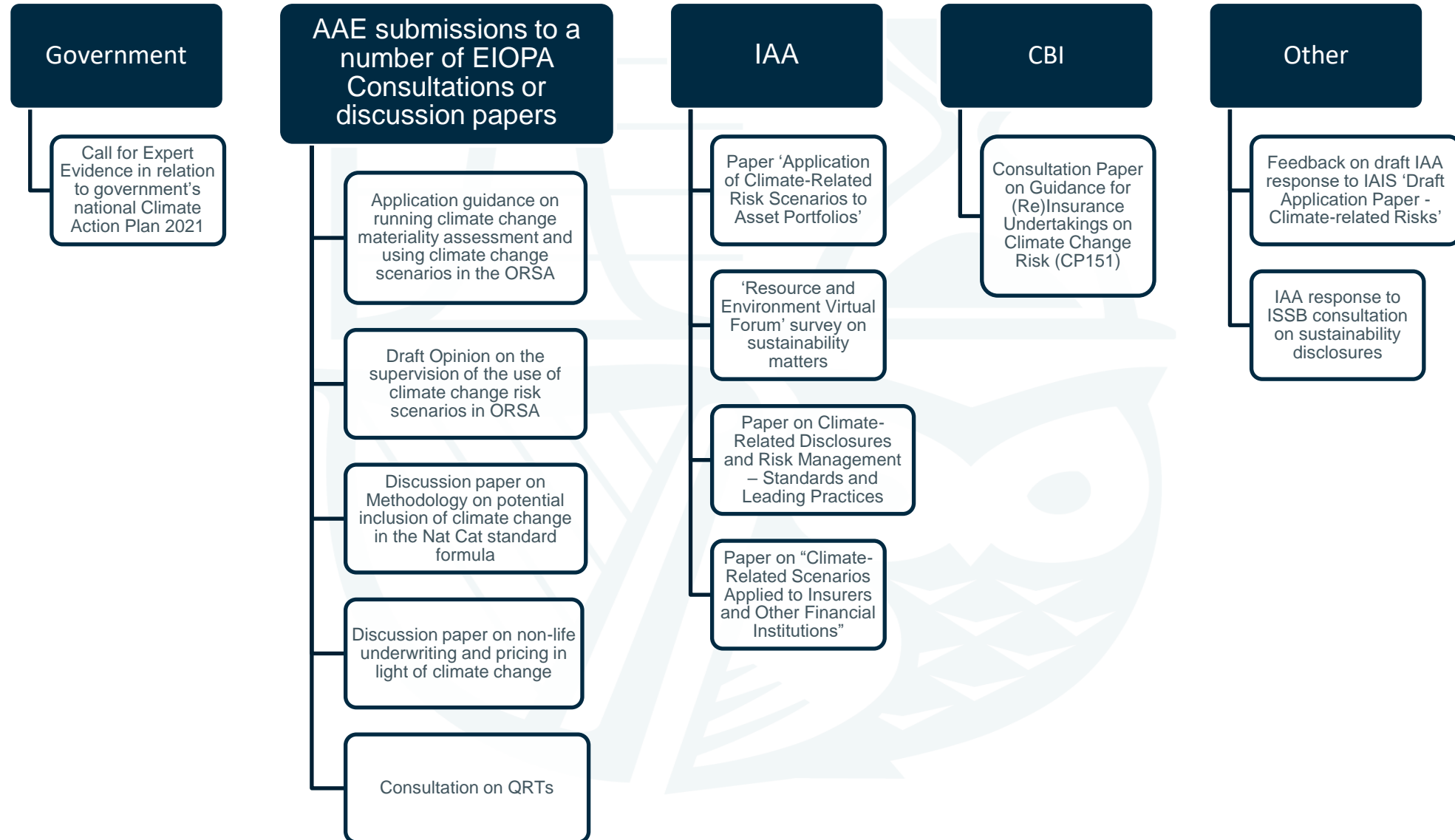
Responsible investing has been around for a long time. However, I have seen it move into the mainstream in my role as an Investment Consultant for Invesco Limited. This blog is about my experience witnessing the transition at an industry level, and the opportunity this created for me to develop my own responsible investment skills.

[Click here to read more](#)

Blog#3

The KPMG Greenhouse Gas Reporting Framework

Focus on Consultations



Focus on SAI Green Goals

- Green Goals establishment
- Exploration of move towards operational net zero
- Professional Bodies Climate Action Charter – more later

Actuarial perspective

- Increasing regulatory activity – EIOPA, CBI, other national regulators
- Climate change impacts all areas of an organisation:
 - Impact on assets, liabilities, operations, business model, customers
 - Both physical and transition risks
 - Opportunities e.g. green investment opportunities, supporting transition
- **Recent AAE talk: Sustainability and the Role of the Actuary - A Professionalism Perspective**

Professional Bodies Climate Action Charter



Less than a decade to act to avoid worst impacts of crisis

- Must reduce global carbon emissions by 45% by 2030 and reach net-zero by 2050
- Professionals have a duty to protect the public interest and step up, with a sense of urgency, to help secure a sustainable future
- Professional bodies must provide strong leadership. Many have already responded with a high level of ambition through the UN-backed Race to Zero campaign and its partner initiatives like the Pledge to Net Zero.



Charter aims to leverage greater collective ambition through interdisciplinary coordination

- Today's workforce is critical. We will collaborate to develop a holistic approach to learning and a common language of sustainability.
- Pathways to net zero require transformation of infrastructures governed by multiple professions. To protect the public interest, we must demonstrate up-to-date and evidence-led guidance on interdisciplinary issues.
- Effective climate action often requires policy support or interdisciplinary cooperation. We must develop a unified voice and join ours with the voices of counterparts in other professions and countries.



In light of these opportunities for action, we pledge to:

1. Chart the path to sustainability for our members, by:

- Developing Climate Action Plans setting out how we will support and enable our members to achieving practice in line with the Paris Agreement and UN Sustainable Development Goals,
- Reporting on our participation and progress towards Action Plan targets publicly each year,
- Sharing resources to ensure the Action Plans are based in current, holistic expertise;



In light of these opportunities for action, we pledge to:

- 1. Chart the path to sustainability for our members**
- 2. Speak with a unified voice to and with professional bodies, government and the public, by:**
 - Creating a professional bodies forum for interdisciplinary learning, cooperation and action,
 - Championing the role and representation of professionals in climate action to government,
 - Growing our voice by inviting our international counterpart bodies to join us;



In light of these opportunities for action, we pledge to:

- 1. Chart the path to sustainability for our members**
- 2. Speak with a unified voice to and with professional bodies, government and the public**
- 3. Empower and inspire our members to drive sustainable growth, by:**
 - Surveying our members to understand their sustainability resource and training needs,
 - Jointly providing a set of common CPD tools and principles, smoothing the development of CPD resources, for each profession, that account for interdisciplinary sustainability issues,
 - Making plans and taking rapid action to reduce our emissions in line with 1.5 °C of warming.

SAI public statement on climate
change



Key messages

- Climate change will have **major impacts on society**
- Both **mitigation and adaptation** needed
- The Society supports climate action to achieve an orderly, policy-driven and **just transition**
- Actuaries need to **incorporate climate risks into actuarial advice**
- As **risk professionals, actuaries can contribute** in multiple ways
- We **aim to contribute to the work of Government and other institutions** in responding to climate change



Context

- The world is not on target to meet the Paris Agreement goals.
- It is heading towards:
 - +2.4°C with 2030 targets
 - +2.7°C, with current policies.**
- To achieve net zero by 2050, the use of carbon dioxide removal ('CDR') methods is unavoidable.
 - This has yet to be proved feasible at scale.**
- Ireland has an objective of net zero by 2050, with an interim target of 51% reduction in GHG emissions by 2030.

Current climate plans and policies will not achieve this target.

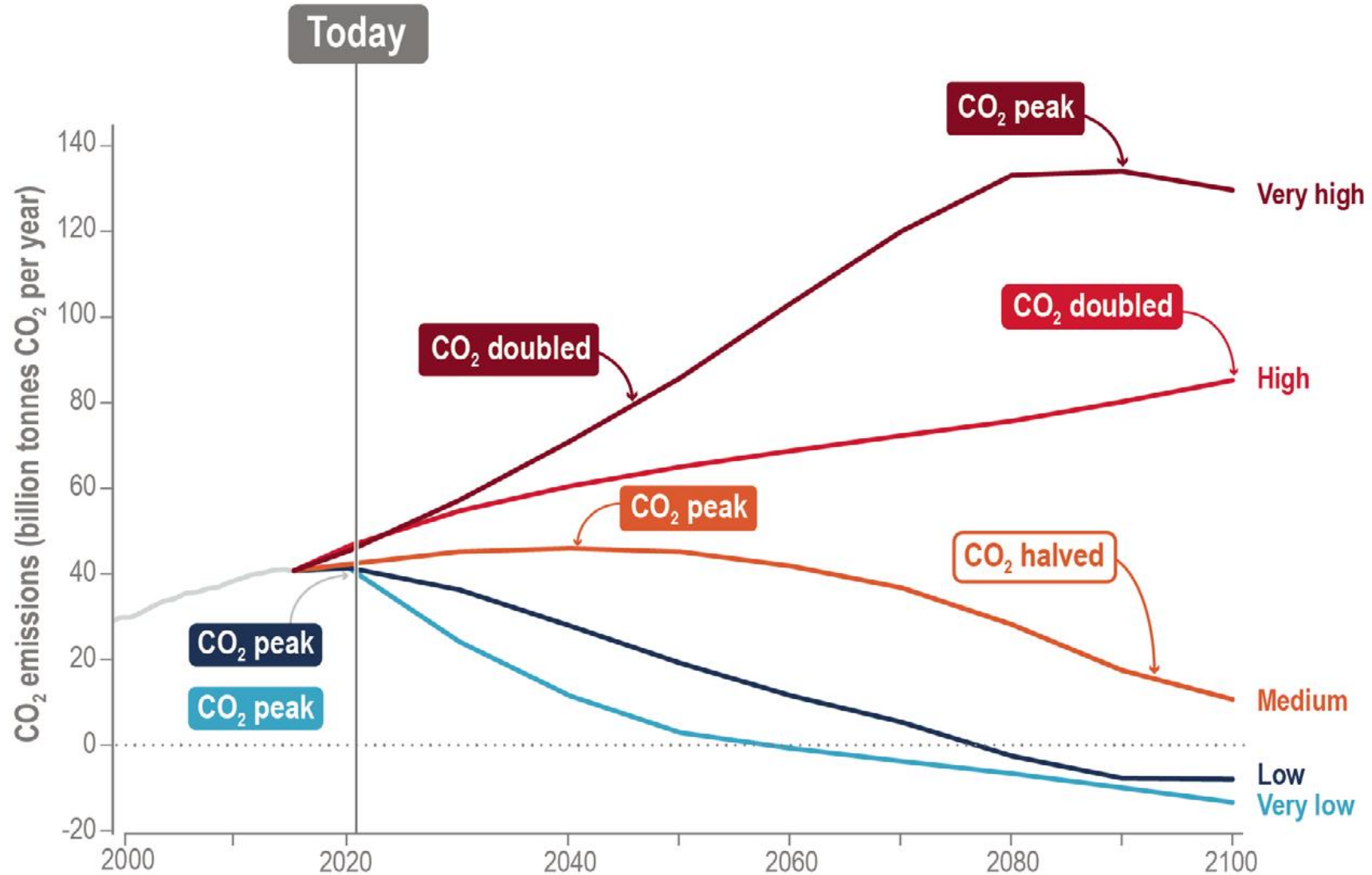


The impact of climate change

- Extreme weather events
- Water and food insecurity
- Approx 1 billion people are projected to be at risk from coastal-specific climate hazards in the mid-term
- Increase in the % of global population exposed to deadly heat stress from today's 30% to 48 - 76% by 2100
- Some of the climate change already set in motion—such as continued sea level rise—is irreversible over hundreds to thousands of years



Emissions pathways



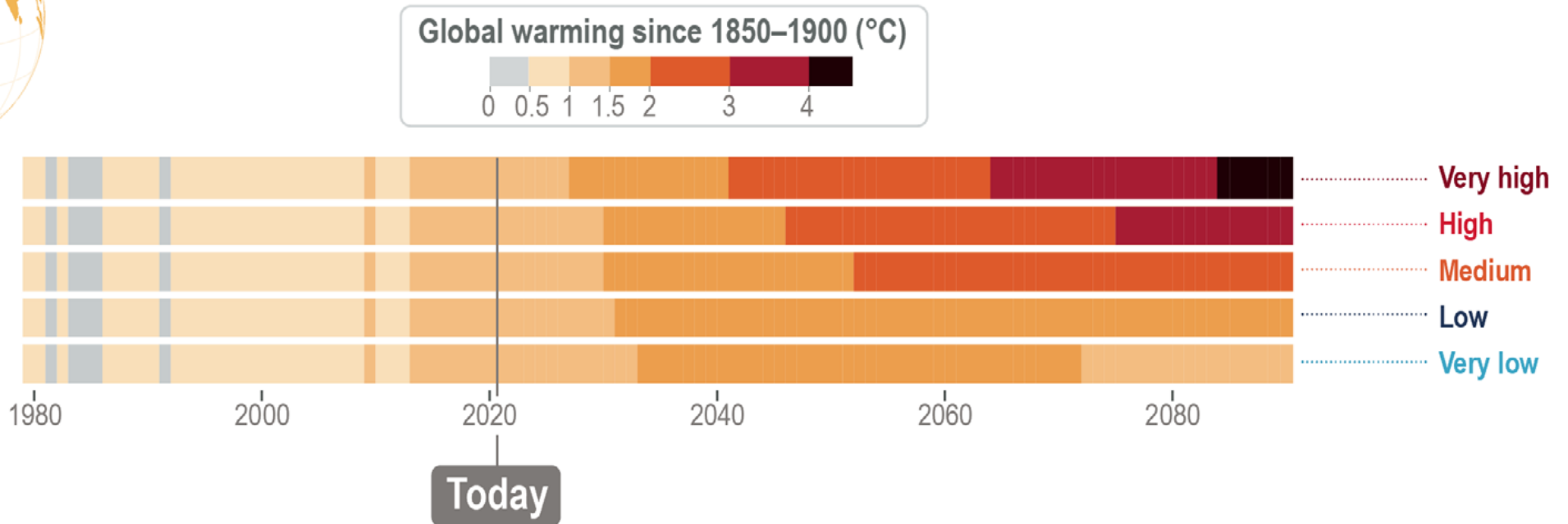


Crossing 1.5°C global warming is close



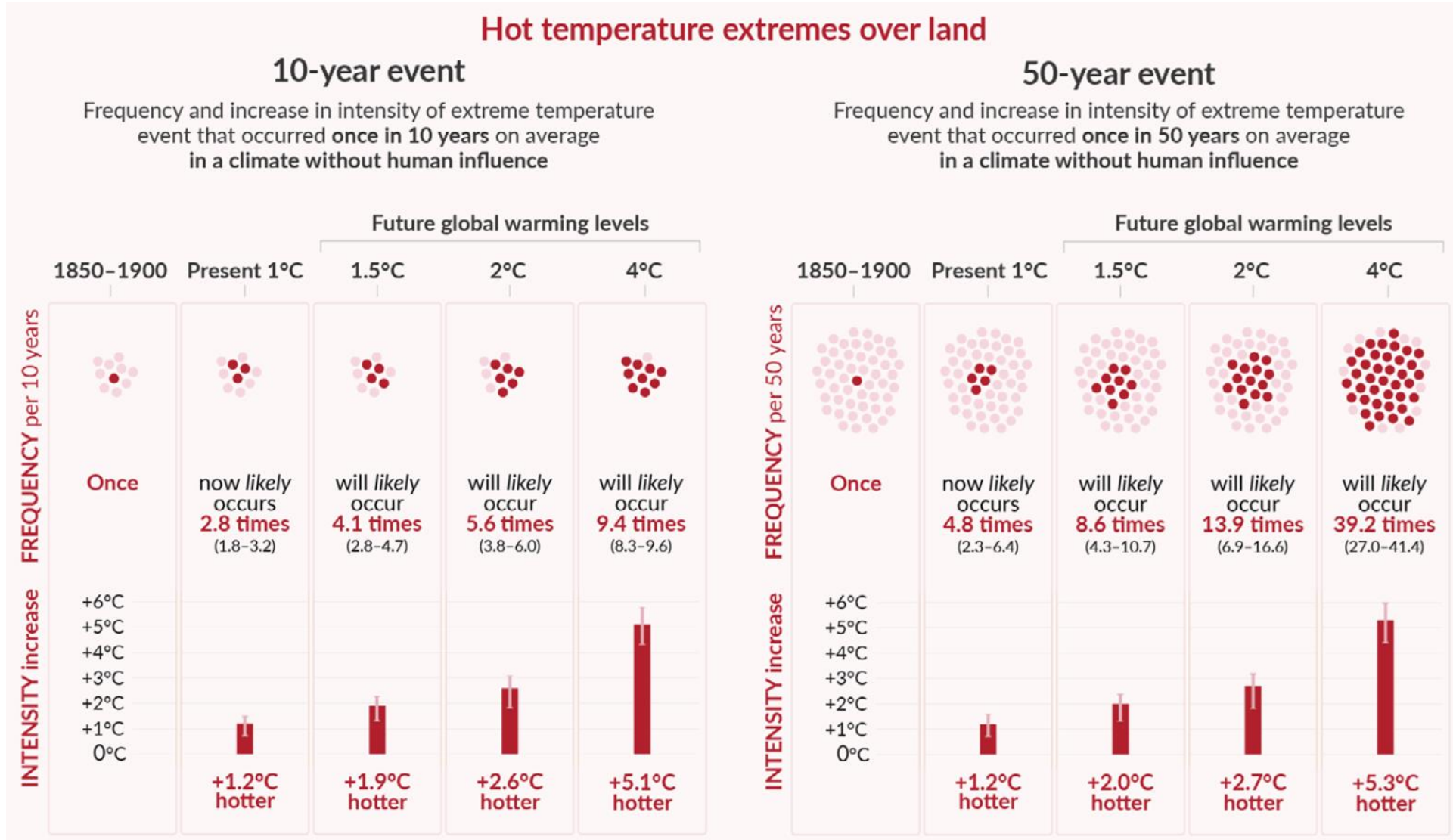
Effect on surface temperature

For temperature to stabilize, CO₂ emissions need to reach net zero.



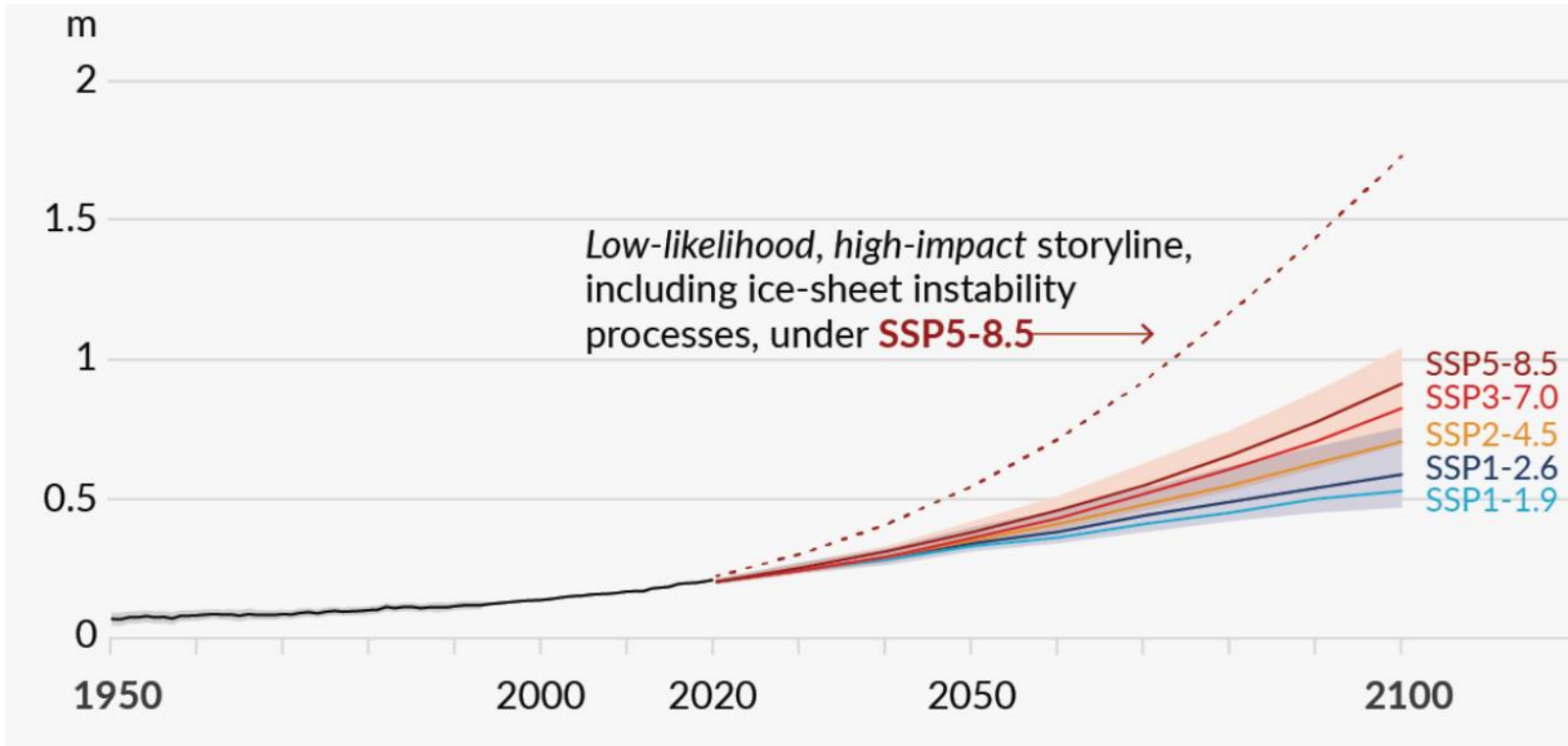


Extreme heat events becoming more likely





Average sea level rise of 15-30 cm by 2050



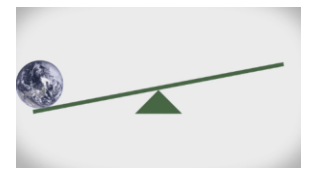
Abrupt responses and tipping points, cannot be ruled out. Low-likelihood outcomes should be considered as part of risk assessment processes

By 2100, previously once-per-century extreme sea level events will occur nearly twice every single year, on average (if warming is limited to 2°C)

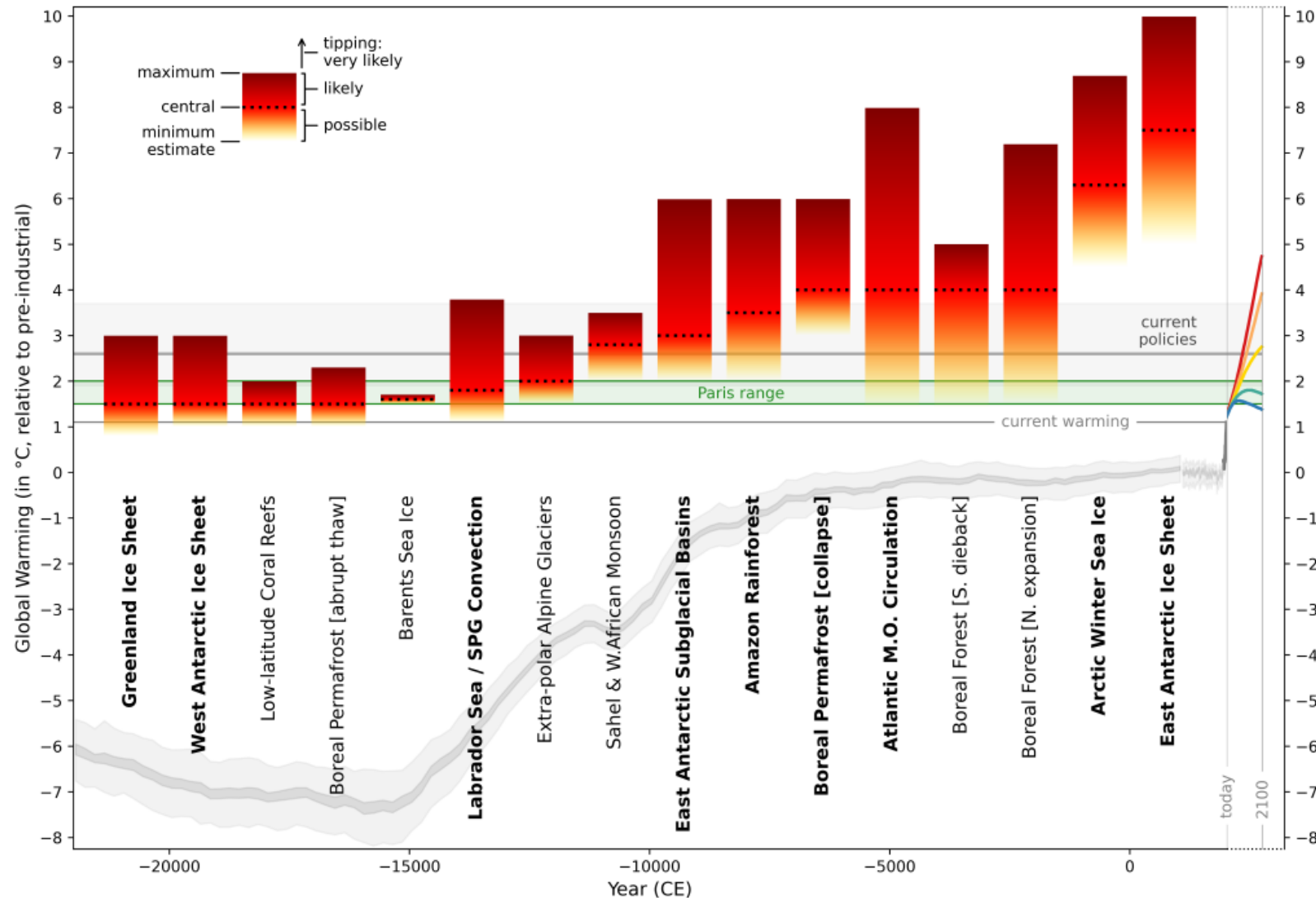




“Tipping points”, *Science*, Sept 2022



climatetippingpoints.info



“The tipping points that become likely within the Paris range of 1.5- <2°C would lock in major impacts... Our estimates suggest then that Earth may have left a ‘safe’ climate state beyond 1°C...the likelihood of passing further tipping points will be determined by how rapidly we cut emissions now....”



SAI policy position

- Promote a just transition
- Support public policy development to improve resilience and reduce the vulnerability of Irish communities to climate risks
- Promote well-informed public debate
- Support actuarial contributions to the development of effective responses
- Support members in their understanding of climate risks and opportunities
- Support quantifying and disclosing the financial impacts of climate change to encourage climate action

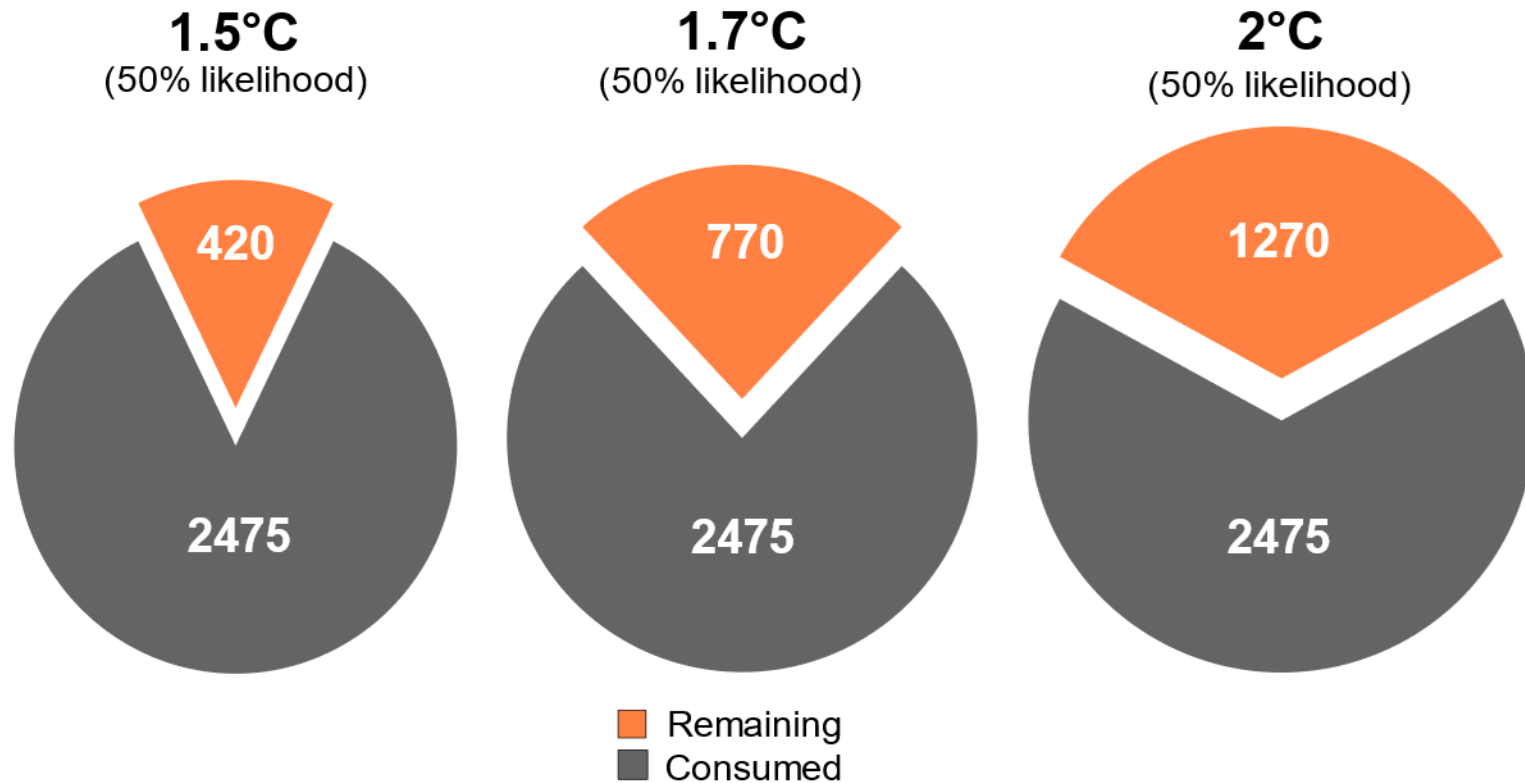


How actuaries can contribute

- Identifying, assessing, managing and disclosing the risks and opportunities arising from climate change.
- Implementing the requirements of updated SII regulation
- Development of risk management frameworks
- Bringing complementary skills to emerging fields in climate change adaptation
- Collaboration with other professionals and stakeholders
- **Advocating for climate action**



Remaining carbon budget



2475 GtCO₂
emitted since
1750

Equivalent to
11, 20 and 32
years from
2022

Quantities are subject to [additional] uncertainties e.g., future mitigation choices of non-CO₂ emissions

Source: IPCC AR6 WG1; [Friedlingstein et al 2021](#); [Global Carbon Budget 2021](#)

Q&A

1972 - 2022