

ADB

GCPA Climate Training

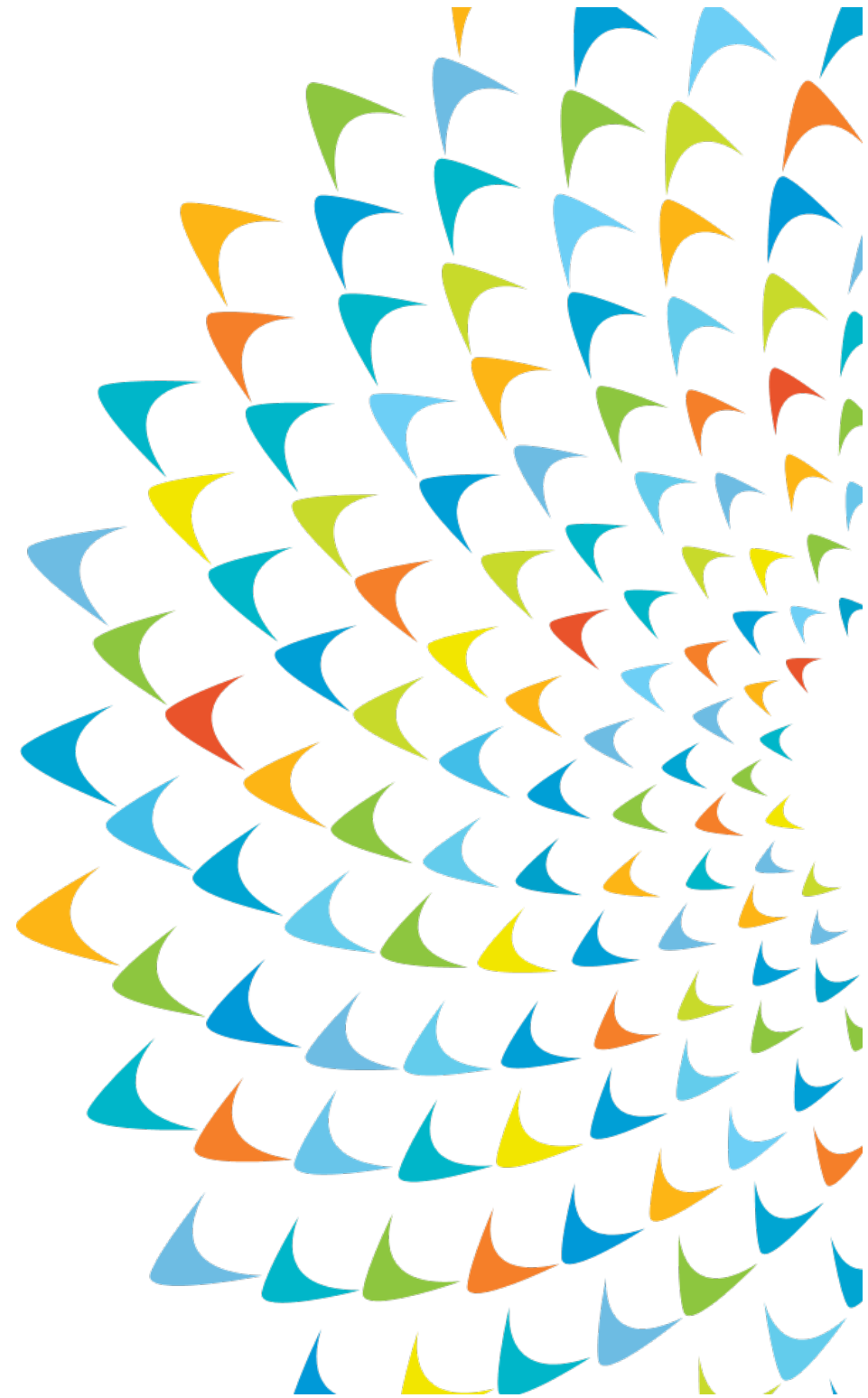
November 2023





Climate change

November 2023



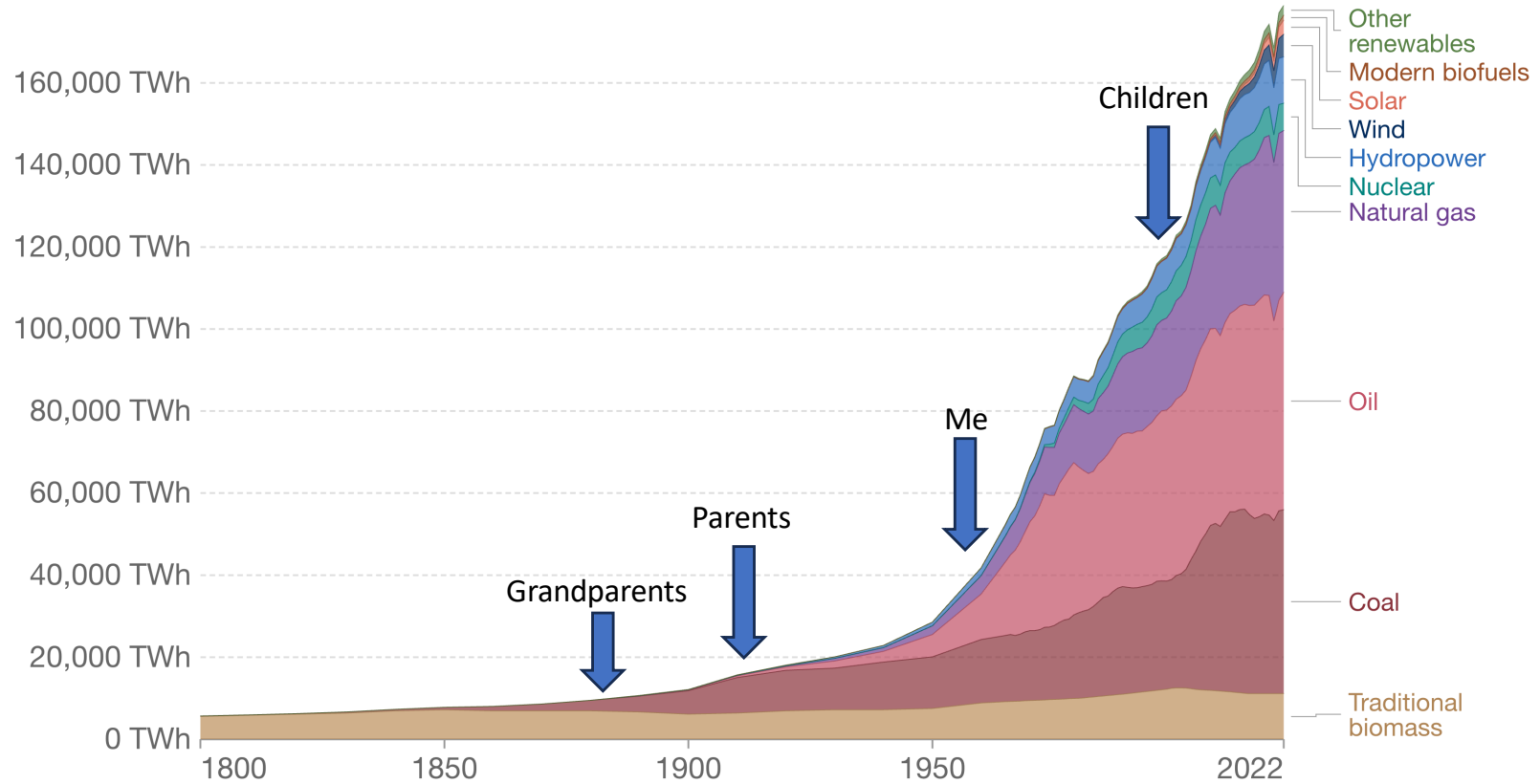


Energy consumption tsunami

Global primary energy consumption by source

Our World
in Data

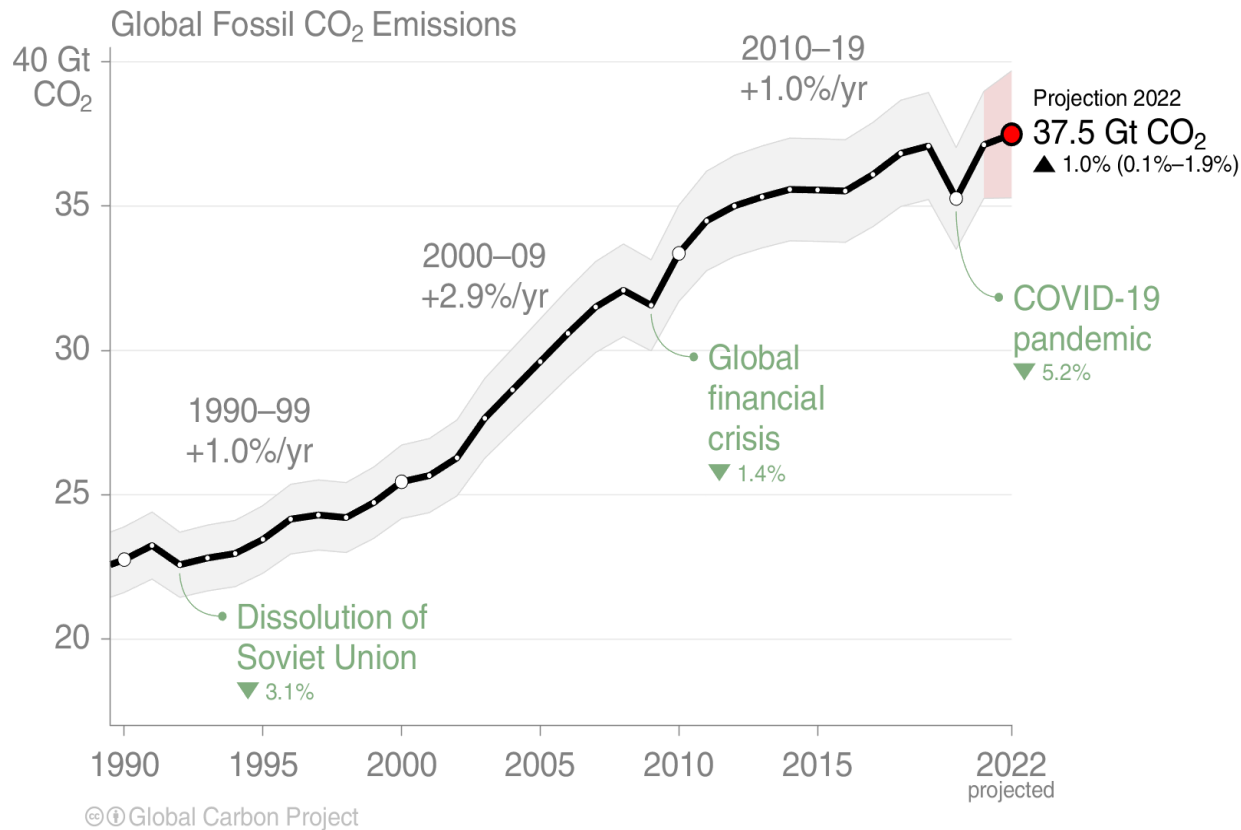
Primary energy is calculated based on the 'substitution method' which takes account of the inefficiencies in fossil fuel production by converting non-fossil energy into the energy inputs required if they had the same conversion losses as fossil fuels.



Source: Energy Institute Statistical Review of World Energy (2023); Vaclav Smil (2017)
OurWorldInData.org/energy • CC BY



Global fossil CO₂ emissions 2022: 36.8 Gt Highest ever



When including cement carbonation, the 2021 and 2022 estimates amount to 36.3 ± 2 GtCO₂ and 36.6 ± 2 GtCO₂ respectively
The 2022 projection is based on preliminary data and modelling.

Source: [Friedlingstein et al 2022](#); [Global Carbon Project 2022](#)





Global GHG emissions and warming scenarios

- Each pathway comes with uncertainty, marked by the shading from low to high emissions under each scenario.
- Warming refers to the expected global temperature rise by 2100, relative to pre-industrial temperatures.



Annual global greenhouse gas emissions
in gigatonnes of carbon dioxide-equivalents

150 Gt

100 Gt

50 Gt

Greenhouse gas emissions
up to the present

0

1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100

No climate policies

4.1 – 4.8 °C

→ expected emissions in a baseline scenario if countries had not implemented climate reduction policies.

Current policies

2.5 – 2.9 °C

→ emissions with current climate policies in place result in warming of 2.5 to 2.9°C by 2100.

Pledges & targets (2.1 °C)

→ emissions if all countries delivered on reduction pledges result in warming of 2.1°C by 2100.

2°C pathways

1.5°C pathways

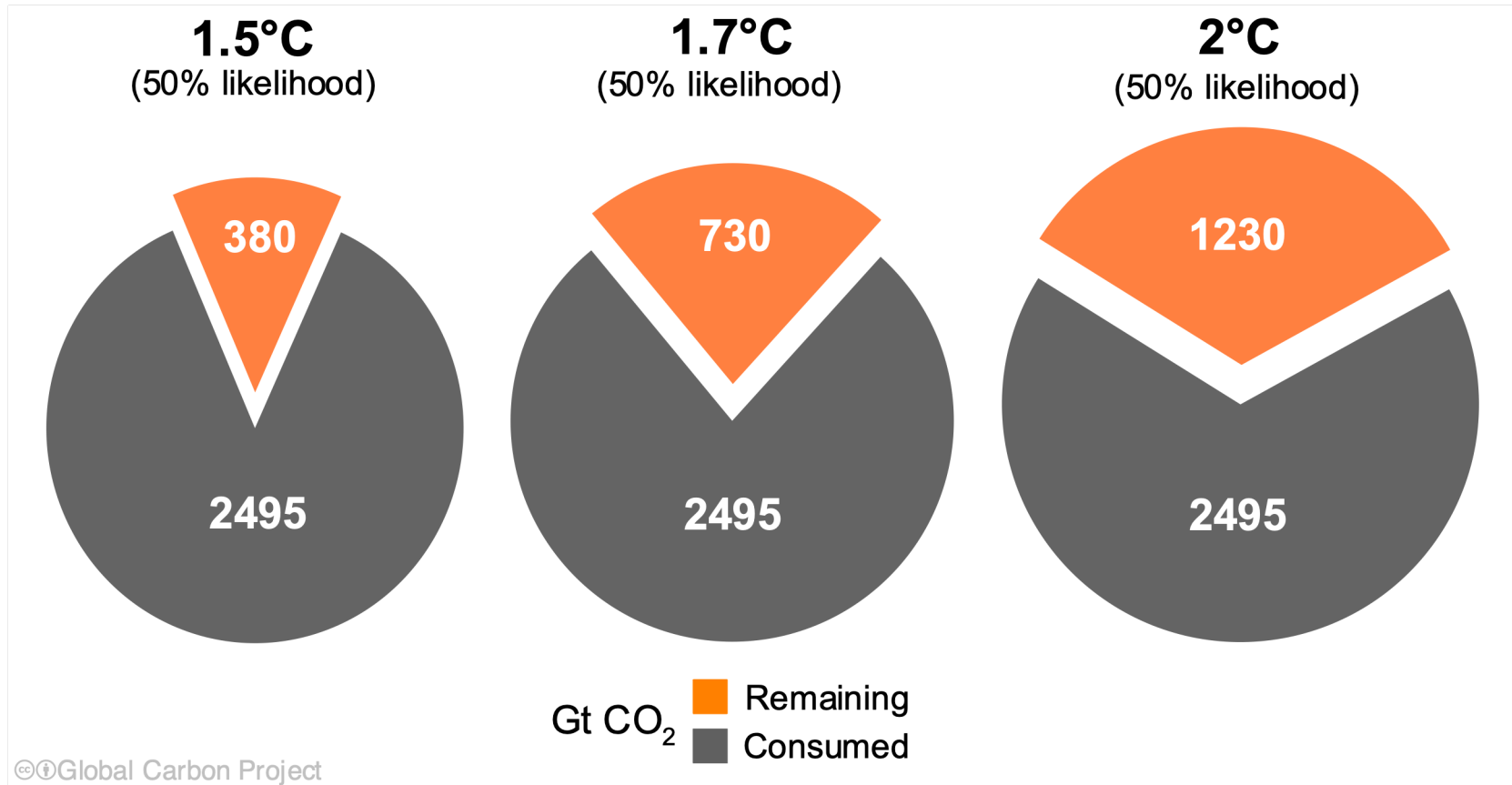
Data source: Climate Action Tracker (based on national policies and pledges as of November 2021).
[OurWorldinData.org](https://www.ourworldindata.org) – Research and data to make progress against the world's largest problems.

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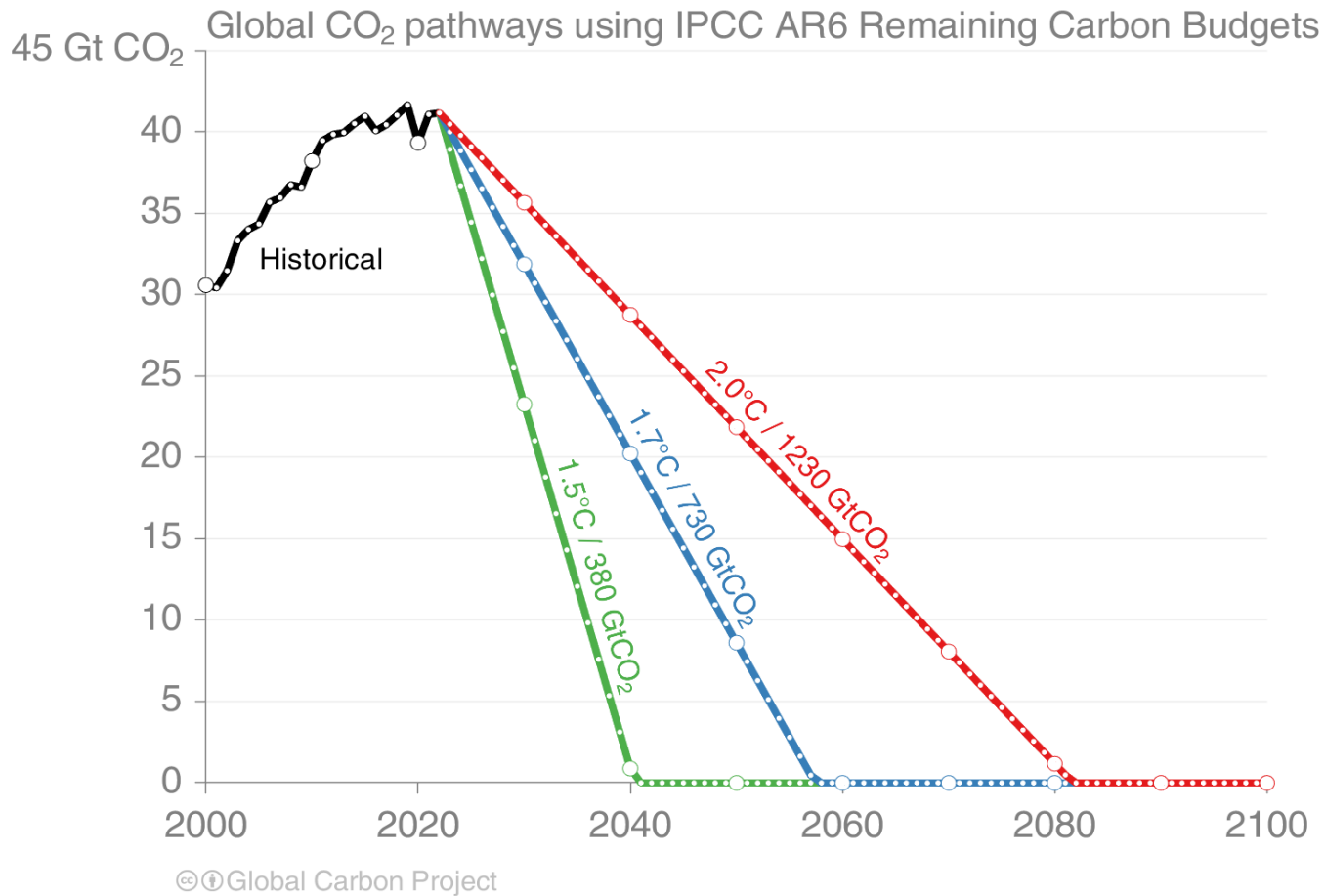
Remaining carbon budget



The remaining carbon budgets are updated from IPCC AR6 WG1 Chapter 5 by removing additional historical emissions since 1 January 2020. Quantities are subject to additional uncertainties e.g., future mitigation choices of non-CO₂ emissions
Source: [IPCC AR6 WG1](#); [Friedlingstein et al 2022](#); [Global Carbon Budget 2022](#)



Remaining carbon budget

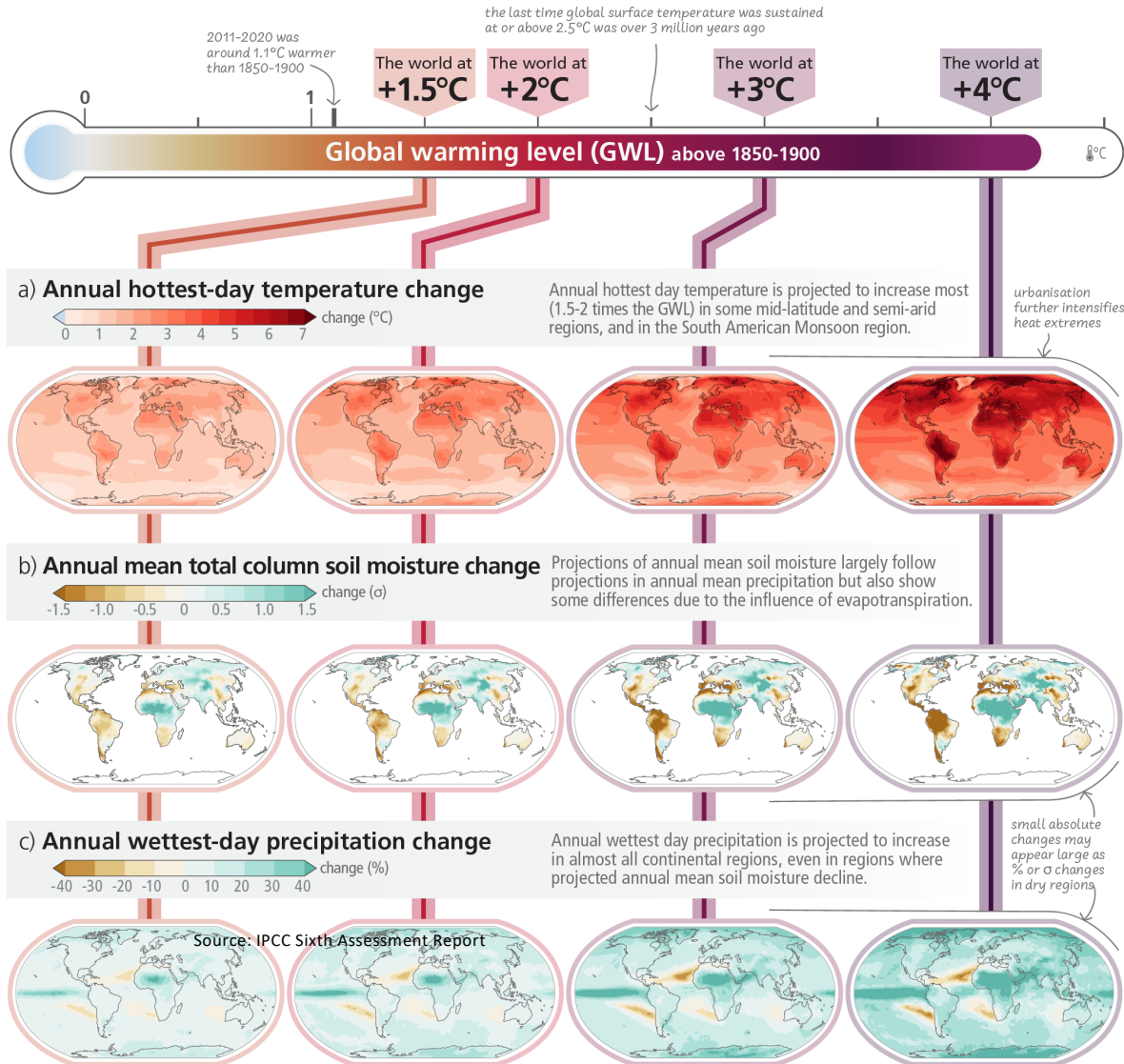


Source: [Friedlingstein et al 2022](#); [Global Carbon Project 2022](#)



Regional changes and extremes

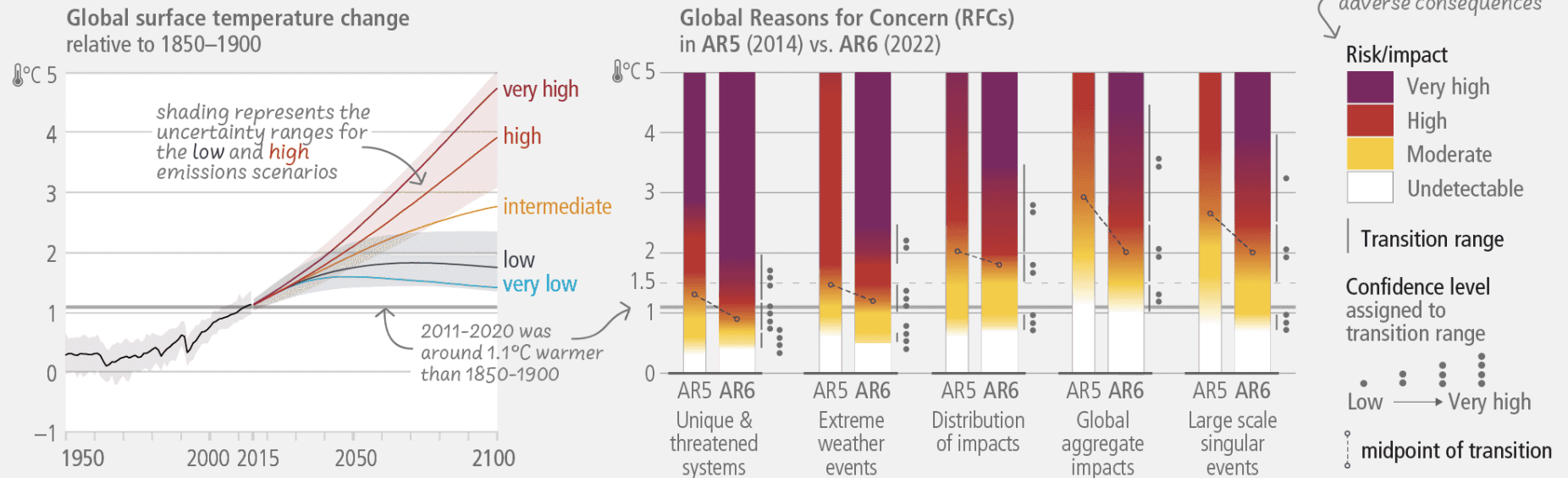
With every increment of global warming, regional changes in mean climate and extremes become more widespread and pronounced





Risks are increasing with every increment of warming (IPCC 6th Assessment Report)

a) High risks are now assessed to occur at lower global warming levels

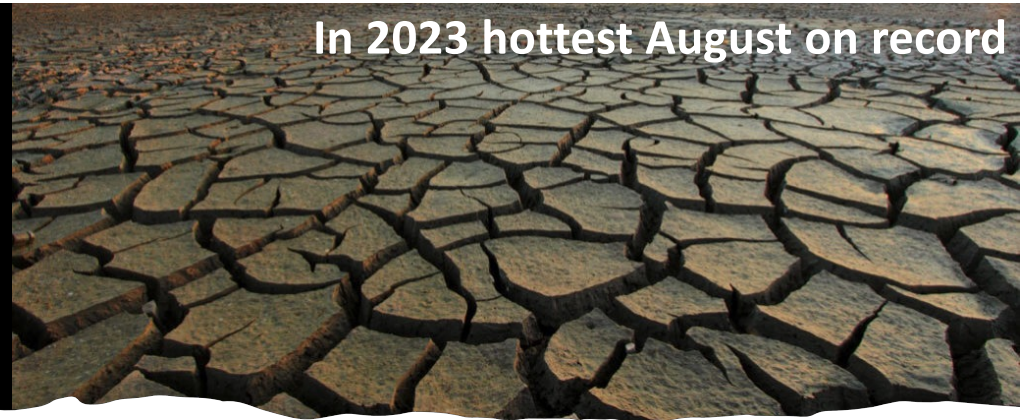


“Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020. Global greenhouse gas emissions have continued to increase, with unequal historical and ongoing contributions arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production across regions, between and within countries, and among individuals (high confidence).”

In 2022 more than 50 million people were directly affected by climate disasters



In 2023 hottest August on record



It's already happening

In 2022 more than US\$ 36 billion in economic damages



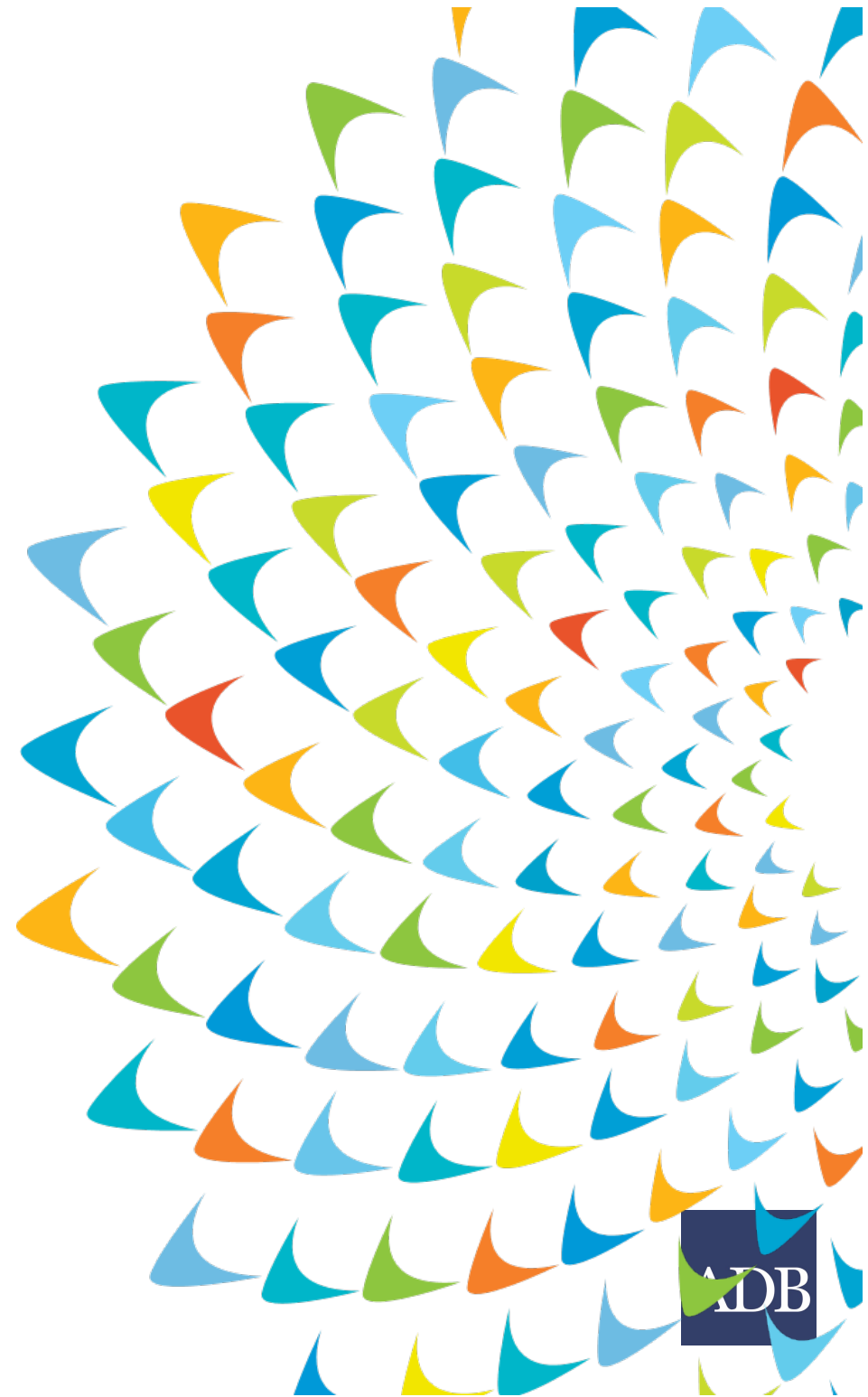
In 2022 more than 5,000 people lost their lives





Benefits of TCFD reporting

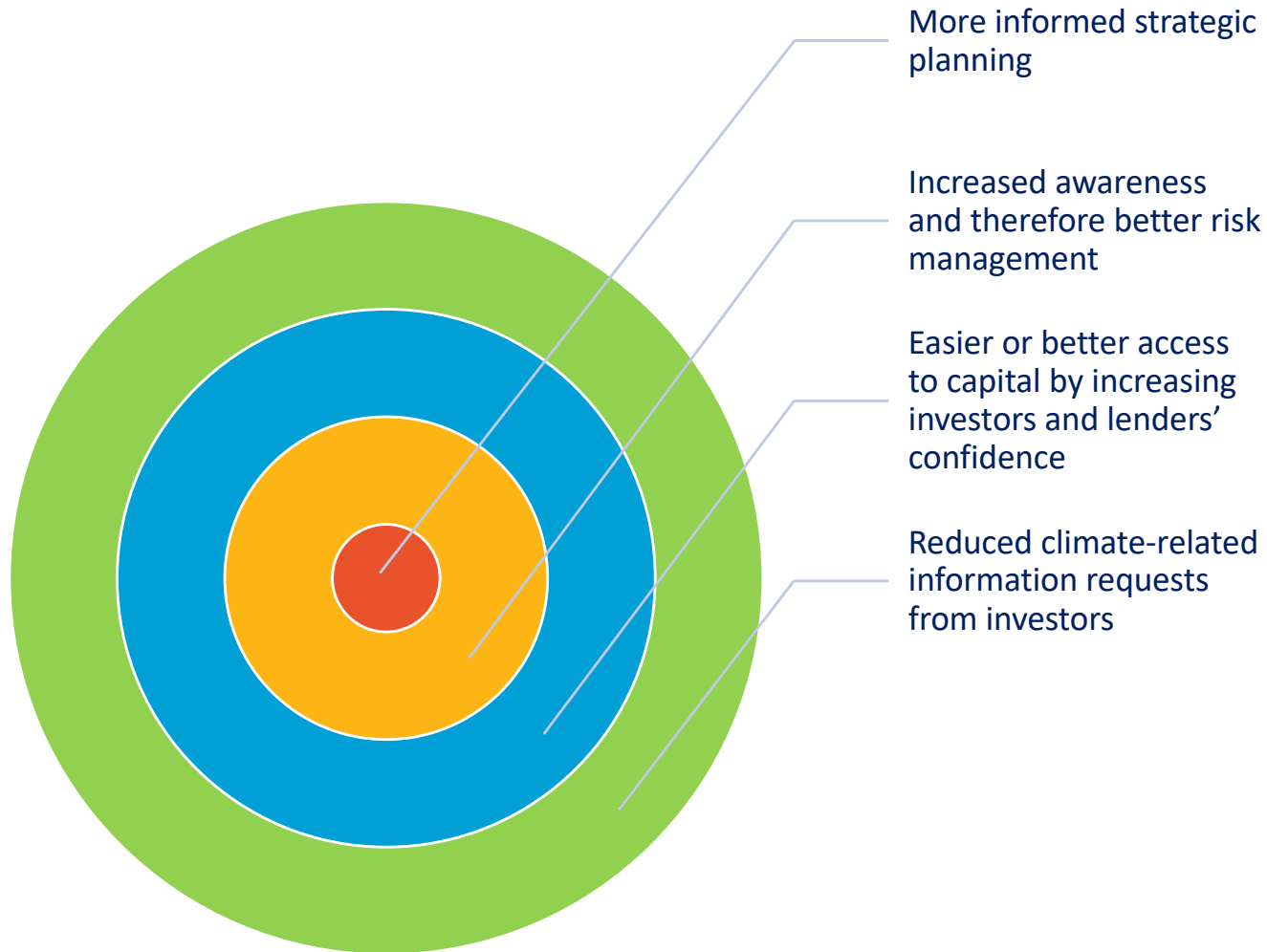
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Benefits of TCFD reporting

Companies reporting on TCFD recommended disclosures have experienced the following:



Source; TCFD survey results conducted by Accounting For Sustainability

