

Climate Change 2022

Main findings of the latest reports by the IPCC

Dr. Andrew Ferrone

Administration of Technical Agricultural Services

Based on slides by the co-chairs of the IPCC

Global Warming of 1.5°C

An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty



WG I
WG II
WG III



The Ocean and Cryosphere in a Changing Climate

This Summary for Policymakers was formally approved at the Second Joint Session of Working Group I and II of the IPCC and accepted by the 56th Session of the IPCC, Privately of Monaco, 24th September 2019

Summary for Policymakers



WG I
WG II



Climate Change and Land

An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems

Summary for Policymakers

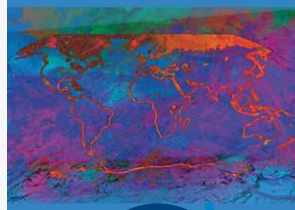


WG I
WG II
WG III



Climate Change 2021 The Physical Science Basis

Summary for Policymakers



WG I



Climate Change 2022 Impacts, Adaptation and Vulnerability

Summary for Policymakers



WG II



Climate Change 2022 Mitigation of Climate Change

Summary for Policymakers



WG III



Synthesis Report

WG I

WG II

WG III



[Credit: NASA]

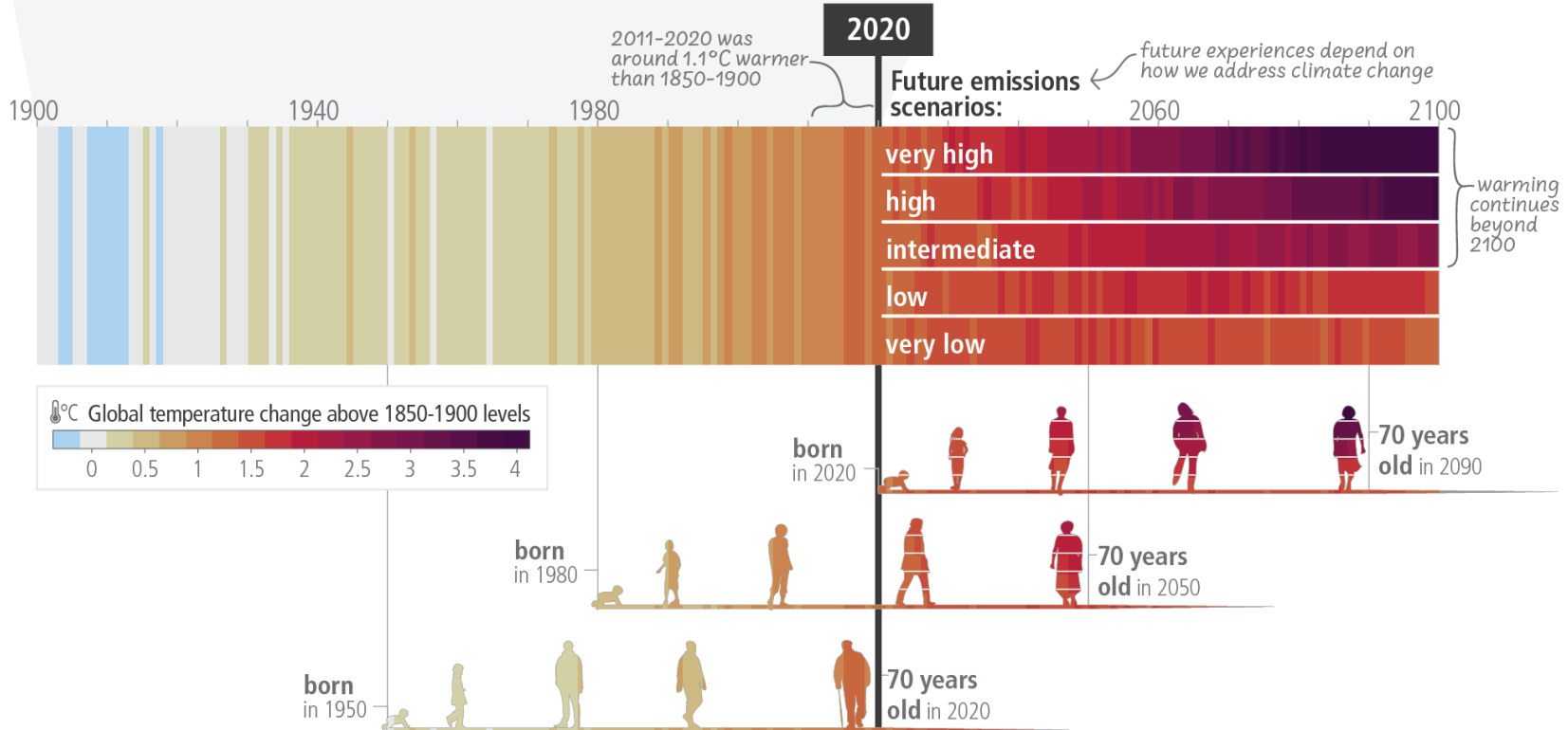
“Recent changes in the climate are widespread, rapid, and intensifying, and unprecedented in thousands of years.



[Credit: Yoda Adaman | Unsplash]

“ It is indisputable that human activities are causing climate change, making extreme climate events, including heat waves, heavy rainfall, and droughts, more frequent and severe.

c) The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near-term





[Credit: Hong Nguyen | Unsplash]

“ Climate change is already affecting every region on Earth, in multiple ways.

The changes we experience will increase with further warming.



Global warming
has caused dangerous and
widespread disruption in nature...

...and climate change is affecting the lives of billions of people, despite efforts to adapt.

WG
II

3.3 – 3.6 billion people live in hotspots of high vulnerability to climate change.

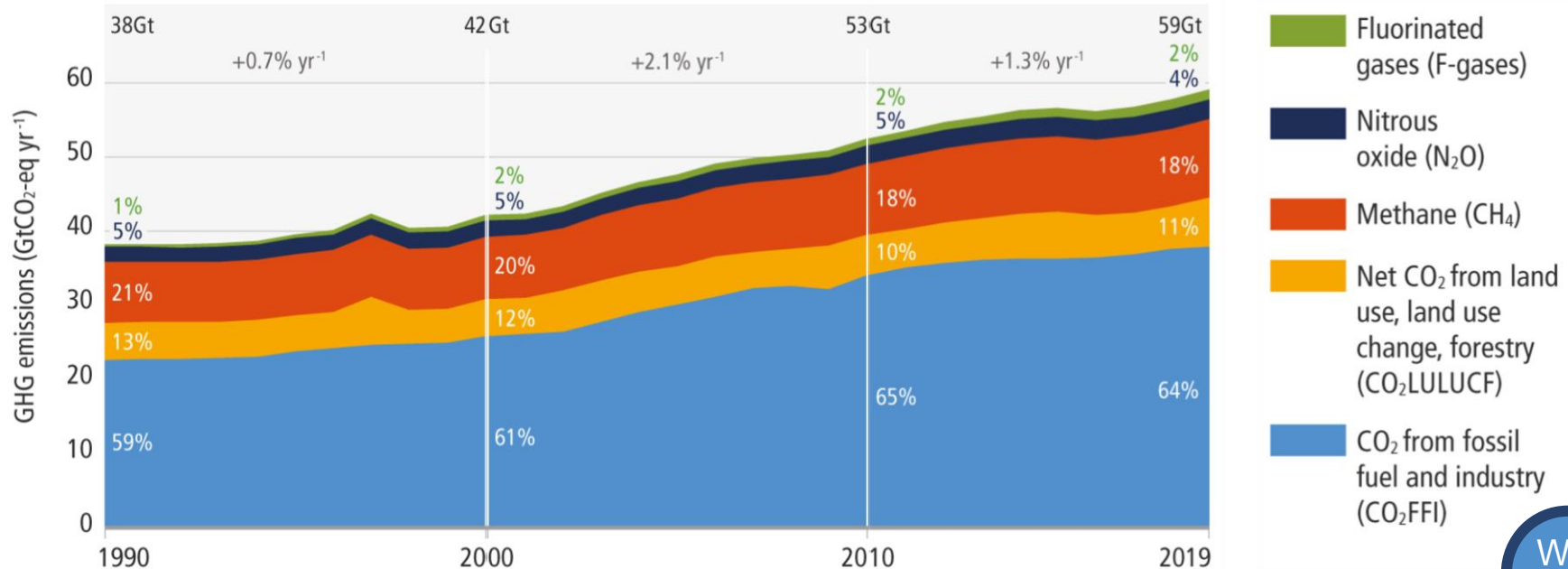
WG
II



“ Climate resilient development is already challenging at current global warming levels.

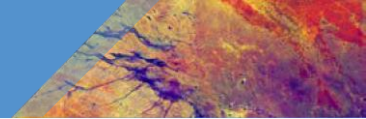
The prospects will become further limited if warming exceeds 1.5°C and may not be possible if warming exceeds 2°C.

We are not on track to limit warming to 1.5 °C.



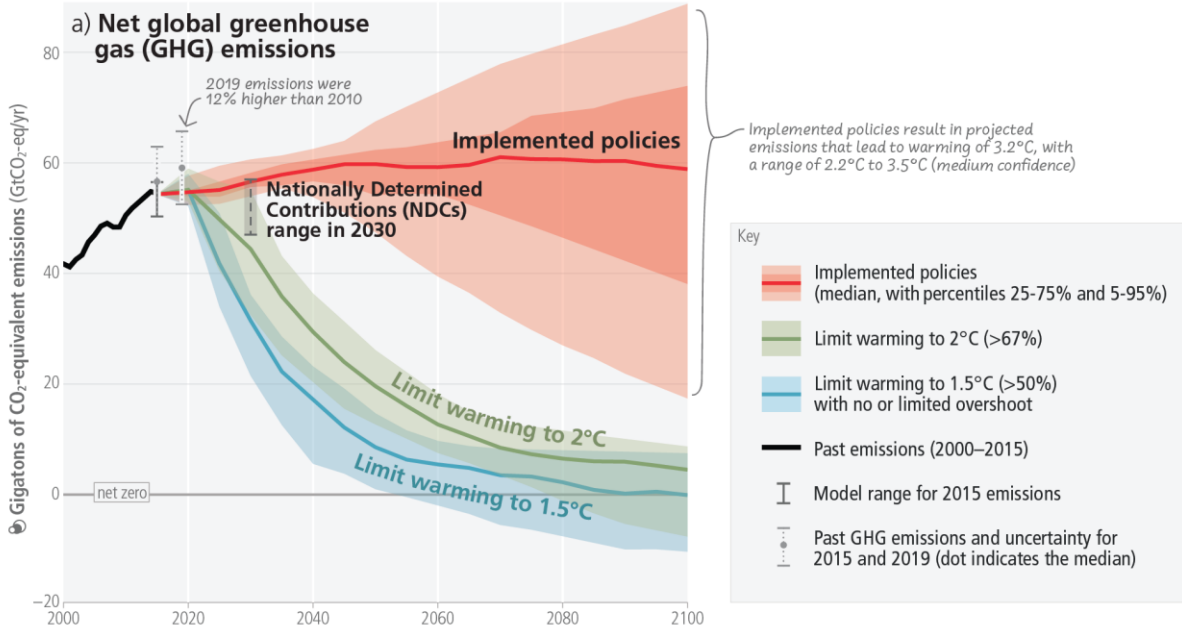
...but there is
increased evidence of
climate action





Limiting warming to 1.5°C and 2°C involves rapid, deep and in most cases immediate greenhouse gas emission reductions

Net zero CO₂ and net zero GHG emissions can be achieved through strong reductions across all sectors



Limiting warming to 1.5 °C

- Global GHG emissions peak before 2025, reduced by 43% by 2030.
- Methane reduced by 34% by 2030

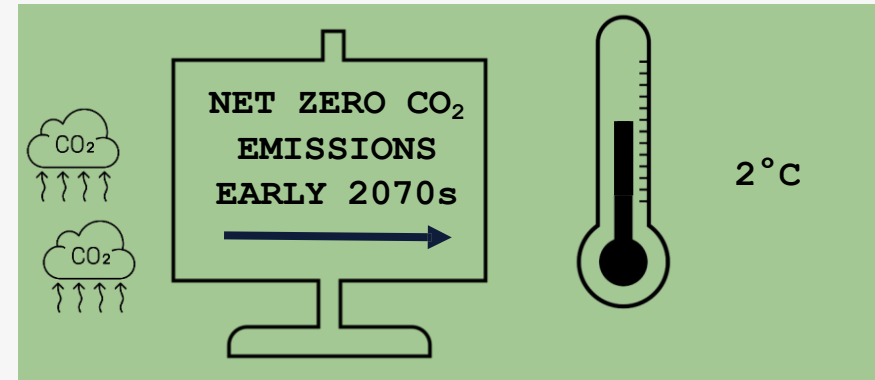
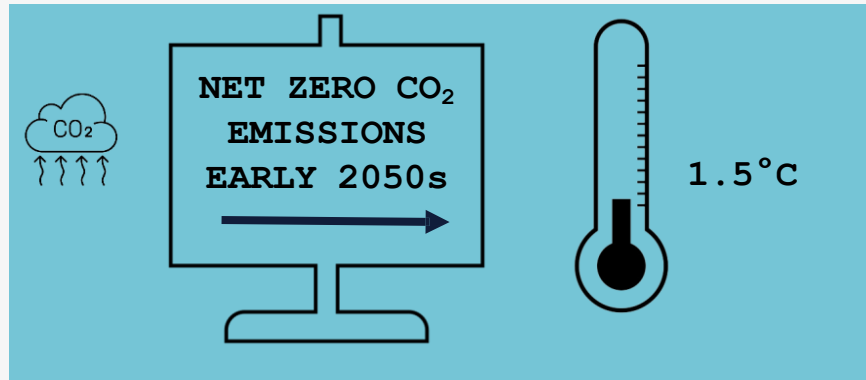
Limiting warming to around 2°C

- Global GHG emissions peak before 2025, reduced by 27% by 2030.

(based on IPCC-assessed scenarios)



The temperature will stabilise when we reach net zero carbon dioxide emissions

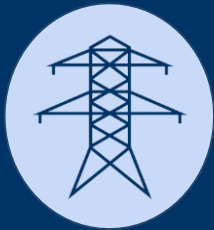


(based on IPCC-assessed scenarios)

There are options available **now** in every sector that can at least **halve** emissions by 2030



Demand and services



Energy



Land use



Industry



Urban



Buildings



Transport

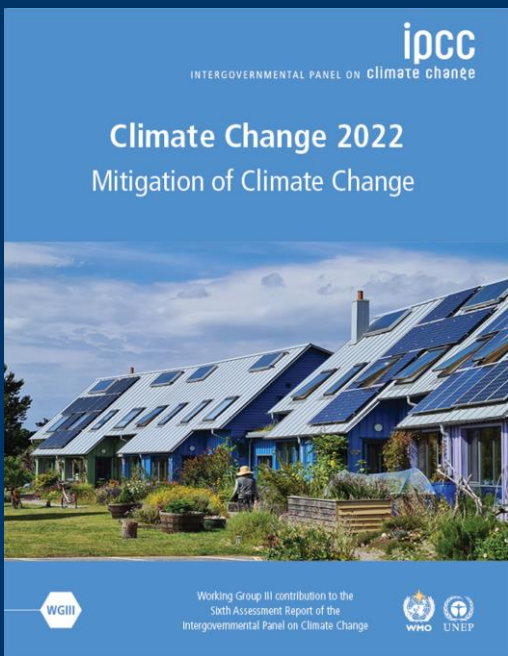


Demand and services



- potential to **bring down global emissions** by **40-70%** by 2050
- walking and cycling, electrified transport, reducing air travel, and adapting houses make large contributions
- **lifestyle changes** require **systemic changes** across all of society
- **some** people require additional **housing, energy** and **resources** for human wellbeing





“ **The evidence is clear:
The window to secure
a livable future is
closing and the time
for action is now.** ”