

Personal comments on the IPCC AR6 Synthesis Report (SYR)

Masa Watanabe
WGI Ch7 LA
AORI, the University of Tokyo
hiro@aori.u-tokyo.ac.jp



SYR as a hybrid of three WG Reports

A.1 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).

Equity problem

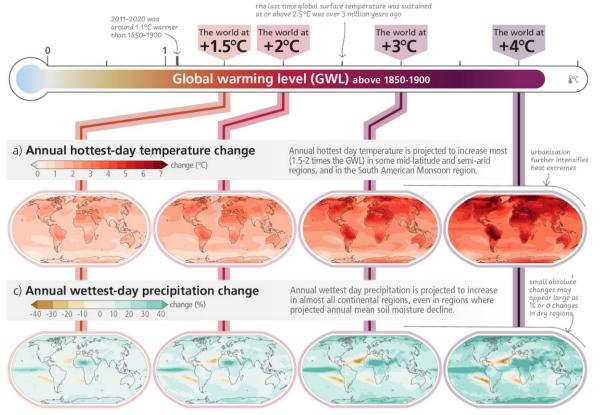
A.2 Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred. Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts and related losses and damages to nature and people (high confidence). Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected (high confidence). Loss and damage





Global Warming Level (GWL) thinking

 GWL was first introduced in the WGI AR6, and it is useful for quantifying climate change & impacts with a single measure With every increment of global warming, regional changes in mean climate and extremes become more widespread and pronounced





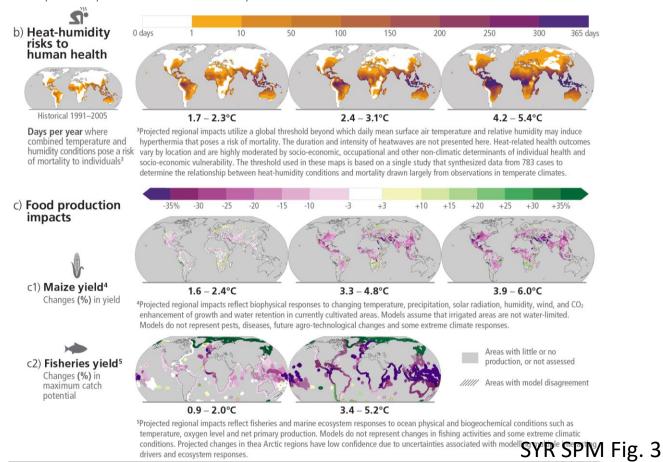


Global Warming Level (GWL) thinking

- GWL was first introduced in the WGI AR6, and it is useful for quantifying climate change & impacts with a single measure
- Some aspects in the Earth & ecological system do not scale with GWL
- Nonlinearity, irreversibility, and tipping are yet to be fully understood (e.g. B3 lacks specific details)

Future climate change is projected to increase the severity of impacts across natural and human systems and will increase regional differences

Examples of impacts without additional adaptation







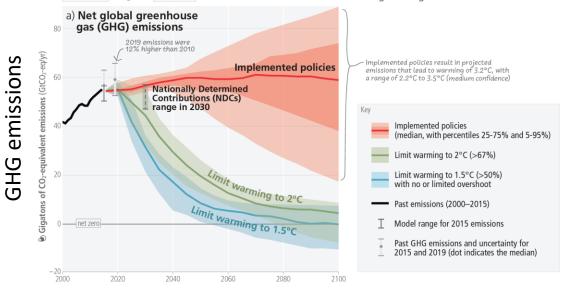


From policy neutral to prescriptive?

Projections and estimate of carbon budget scientific evidence (policy relevant)

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

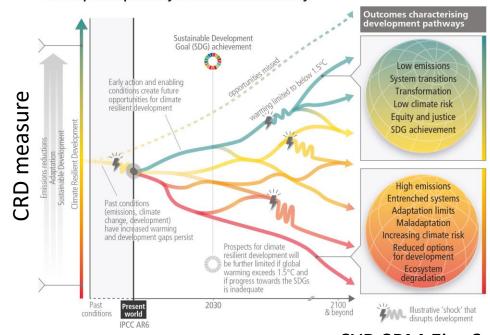


SYR SPM Fig. 5

This message is already prescriptive per se

There is a rapidly narrowing window of opportunity to enable climate resilient development

Multiple interacting choices and actions can shift development pathways towards sustainability



SYR SPM Fig. 6



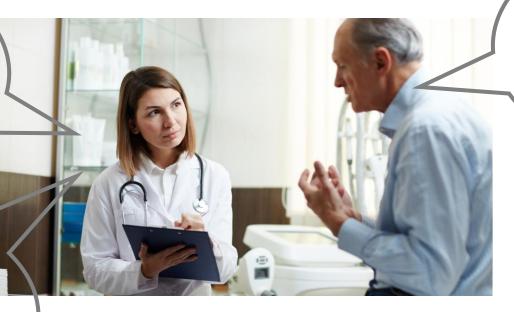




IPCC-ish stance of being prescriptive

Well, with current habitat your liver will be seriously damaged in 10 years ...

Conversation between MD and an alcoholic patient



Doctor, cannot stop drinking ...

You SHOULD stop drinking now if you would like to live for another 20 years!

Doctor could advice for a healthy life, but the decision is up to the patient

Likewise, IPCC could advice for sustainable society, but the decision is up to policy makers, companies, individuals



Future of IPCC?

