Why the COPs are wonderful, and… totally insufficient!

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The Climate Urgency after Belém, Sablon Diplomatic Circle, Brussels, 11 December 2025

Thanks to the Walloon Government (funding the Walloon Platform for IPCC) & to my team at UCLouvain for their support

The Essential Truth About Climate Change in Ten Words

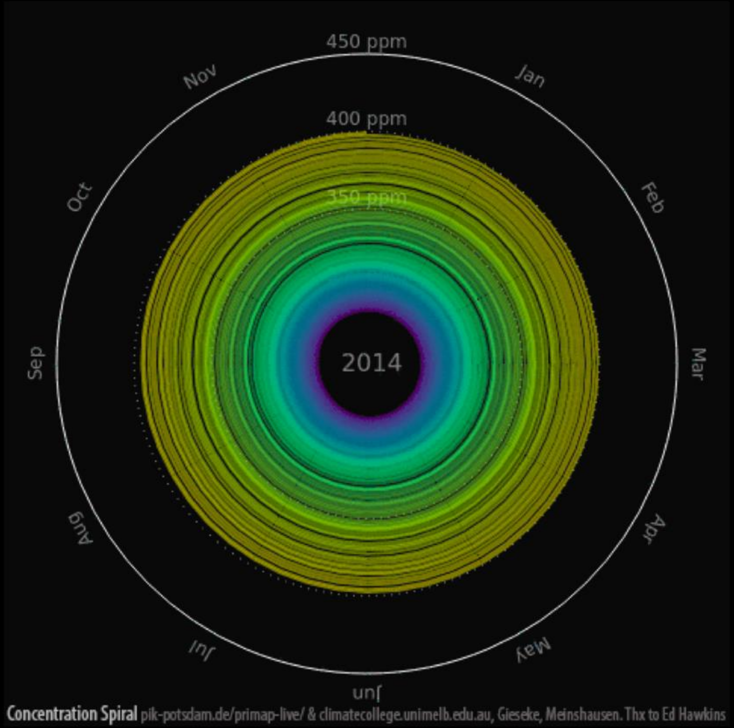
The basic facts of climate change, established over decades of research, can be summarized in five key points:

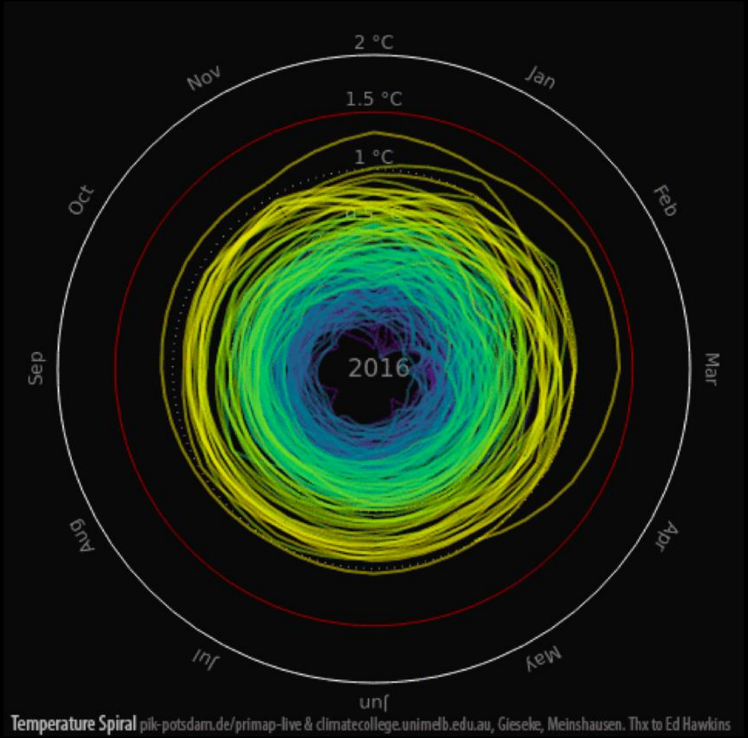
IT'S REAL	Global warming is happening.
IT'S US	Human activity is the main cause.
EXPERTS AGREE	There's scientific consensus on human-caused global warming.
IT'S BAD	The impacts are serious and affect people.
THERE'S HOPE	We have the technology needed to avoid the worst climate impacts.

Source: @JohnfoCook

A little science

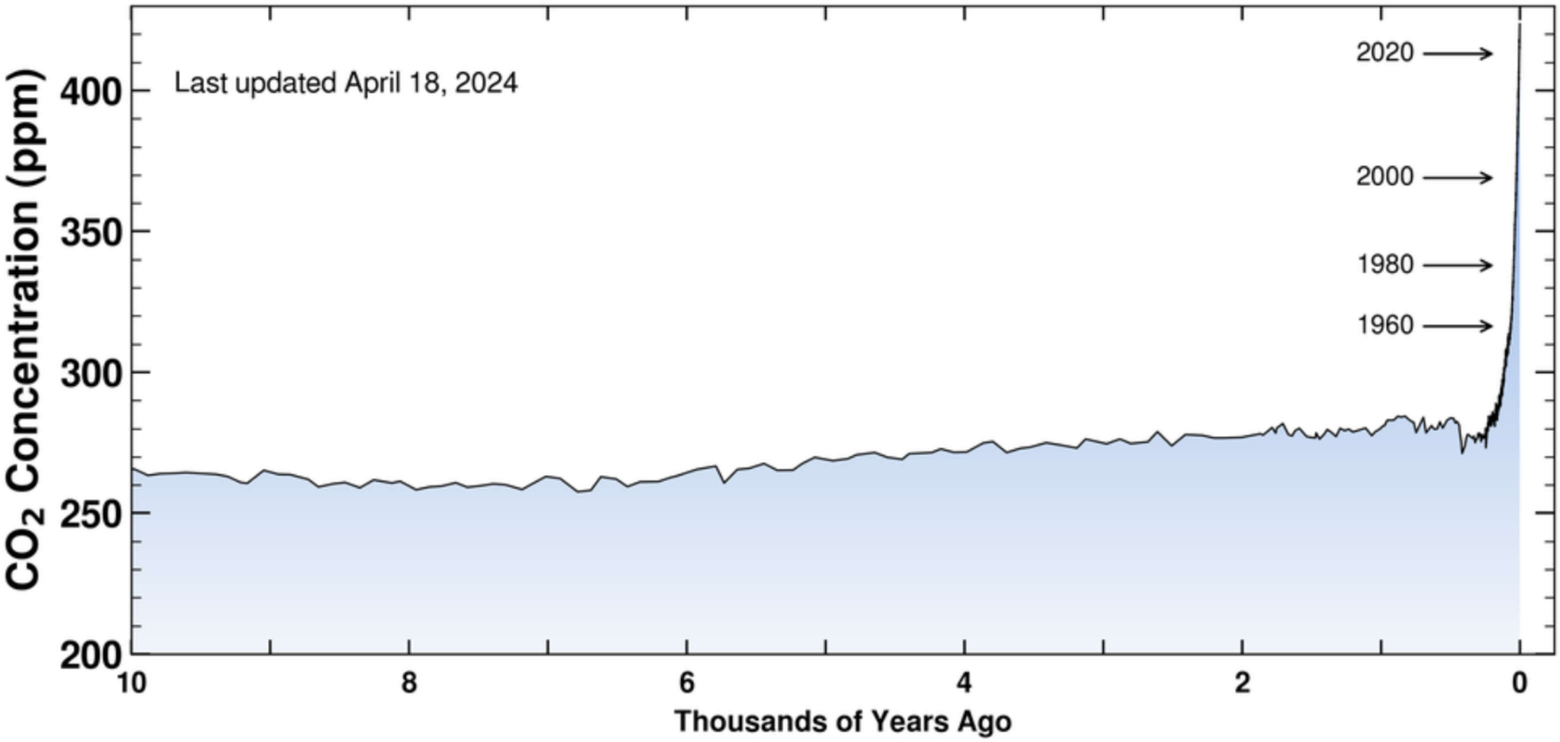
CO_2 Concentration and Temperature spirals





CO_2 Concentration since 1850 and Global Mean Temperature in °C relative to 1850 – 1900
Graph: Ed Hawkins (Climate Lab Book) – Data: HadCRUT4 global temperature dataset
Animation available on http://openclimatedata.net/climate-spirals/concentration-temperature/

CO_2 Concentration 18 April 2024: 427,14 ppm (Keeling curve + last 10000 years)



Source: scripps.ucsd.edu/programs/keelingcurve/

Progression of Understanding: Greater and Greater Certainty in Attribution

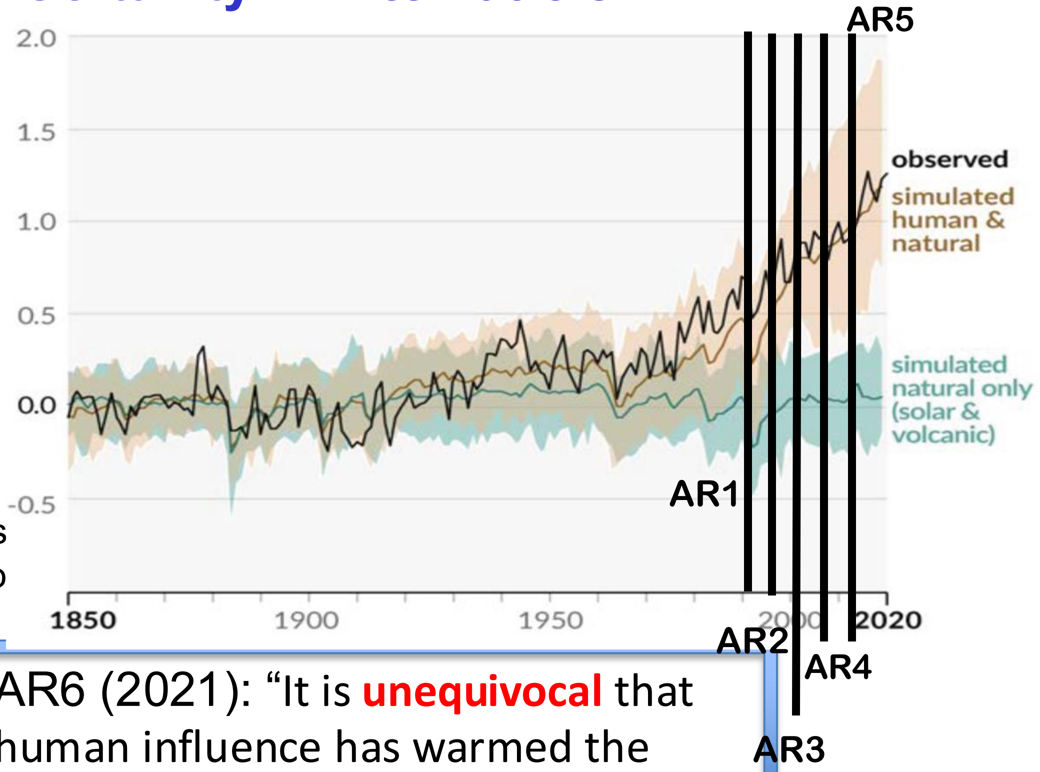
AR1 (1990): “unequivocal detection not likely for a decade”

AR2 (1995): “balance of evidence suggests **discernible** human influence”

AR3 (2001): “most of the warming of the
past 50 years is **likely**
(odds 2 out of 3) due
to human activities”

AR4 (2007): “most of the warming is **very likely** (odds 9 out of 10) due to greenhouse gases”

AR5 (2013) «It is **extremely likely** (odds 95 out of 100) that human influence has been the dominant cause… »



AR6 (2021): “It is **unequivocal** that human influence has warmed the atmosphere, ocean, and land.”

IPCC

Human-induced climate change is already affecting many weather and climate extremes in every region across the globe

Extreme heat

More frequent

More intense

Heavy rainfall

More frequent

More intense

Drought

Increase in some regions

Fire weather

More frequent

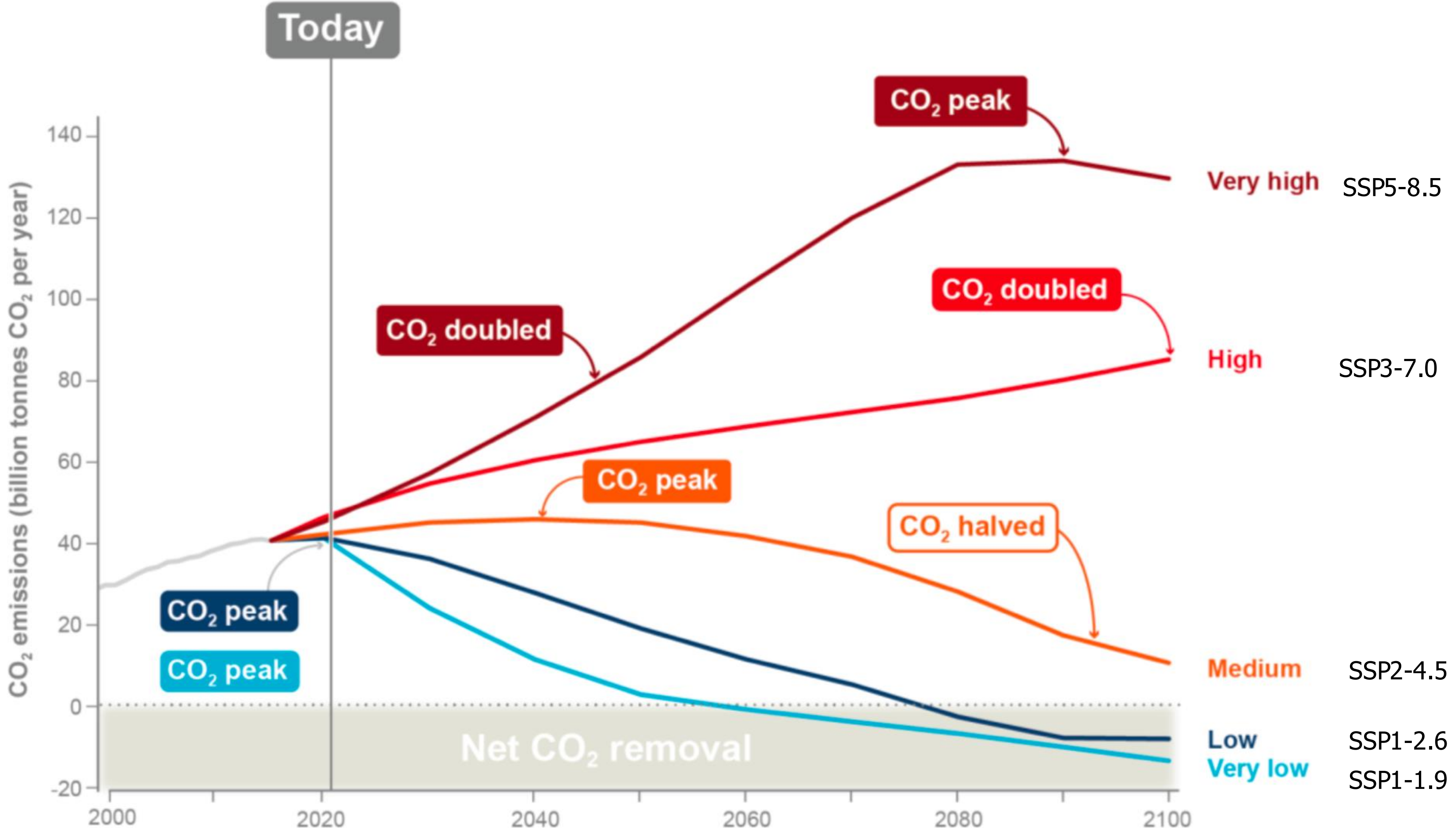
Ocean

Warming

Acidifying

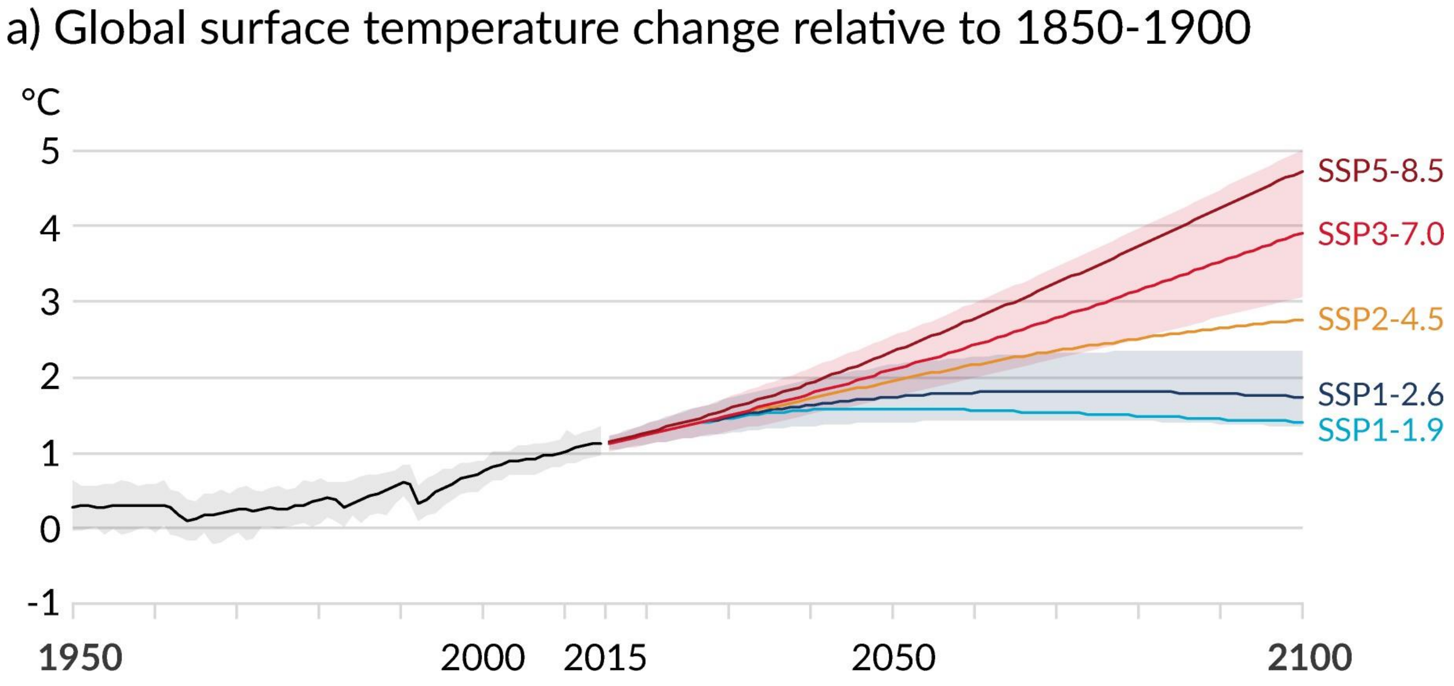
Losing oxygen

Photo Credits from left: 1. Luiz Guimaraes 2. Jonathan Ford 3. Peter Burdon 4. Ben Kuo 5. NOAA


Today
CO_2 emissions (billion tonnes CO_2 per year)
140
120
100
80
60
40
20
0
-20
2000
2020
2040
2060
2080
2100
CO_2 peak
CO_2 doubled
CO_2 doubled
CO_2 peak
CO_2 halved
CO_2 peak
CO_2 peak
Net CO_2 removal
Very high
High
Medium
Low
Very low
SSP5-8.5
SSP3-7.0
SSP2-4.5
SSP1-2.6
SSP1-1.9

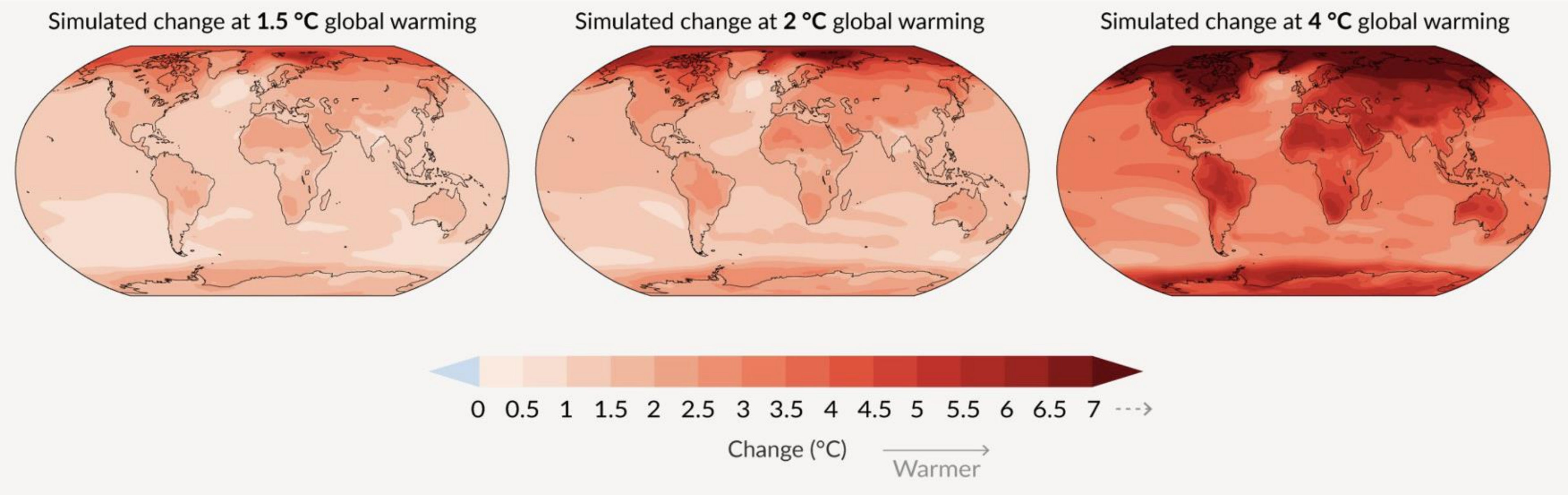
Human activities affect all the major climate system components, with some responding over decades and others over centuries

Figure SPM.8



Across warming levels, land areas warm more than oceans, and the Arctic and Antarctica warm more than the tropics

+1.5° C | +2° C | +4° C



Les glaciers, d'un siècle à l'autre

Rédaction : Philippe Marbaix et Bruna Gaino

La Mer de Glace (massif du Mont-Blanc, France)

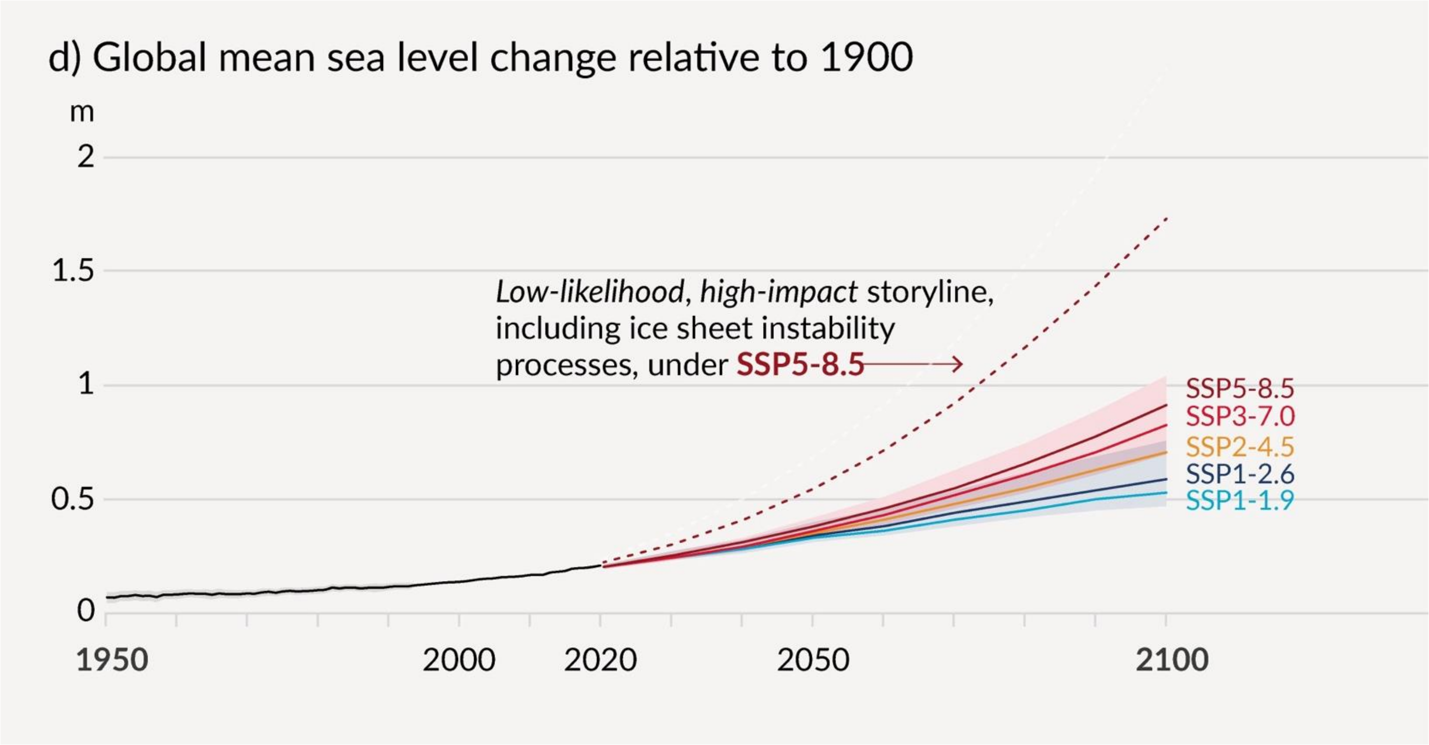
1919 2019

Photo : Walter Mittelholzer, ETH-Bibliothek Zürich *Photo : Dr Kieran Baxter, Université de Dundee*

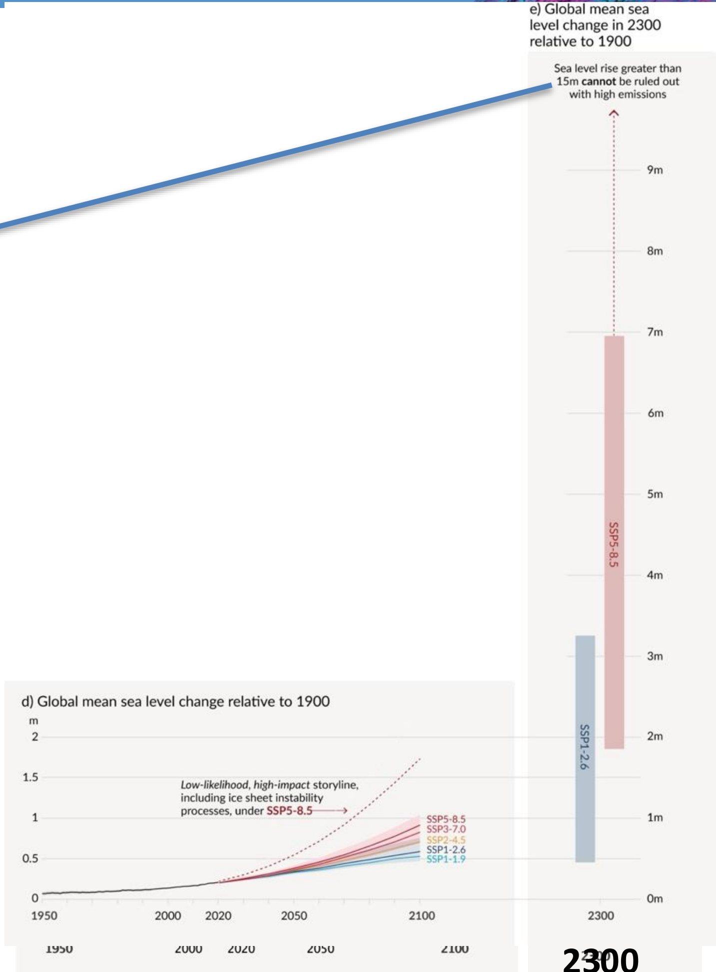
Mer de Glace, Chamonix, France

Human activities affect all the major climate system components, with some responding over decades and others over centuries

Figure SPM.8



« Sea level rise **greater than 15 m** cannot be ruled out with high emissions »

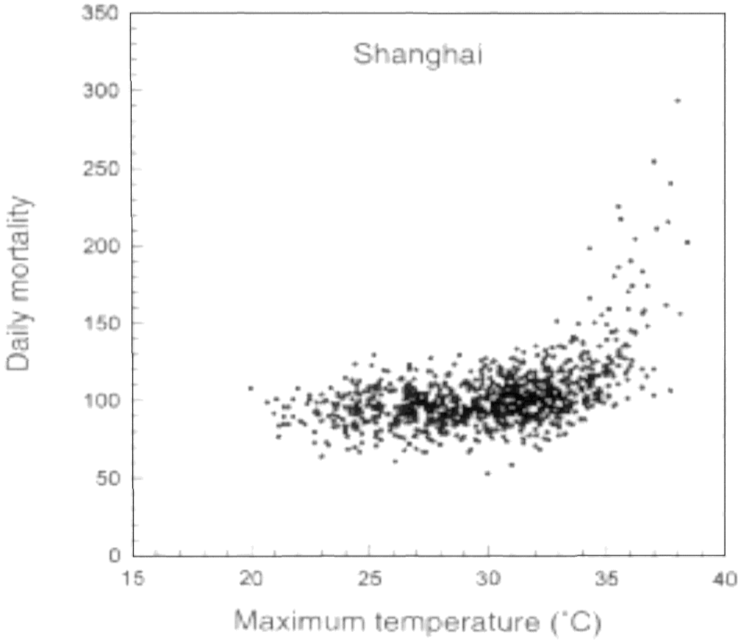


7 m

2 m

2300

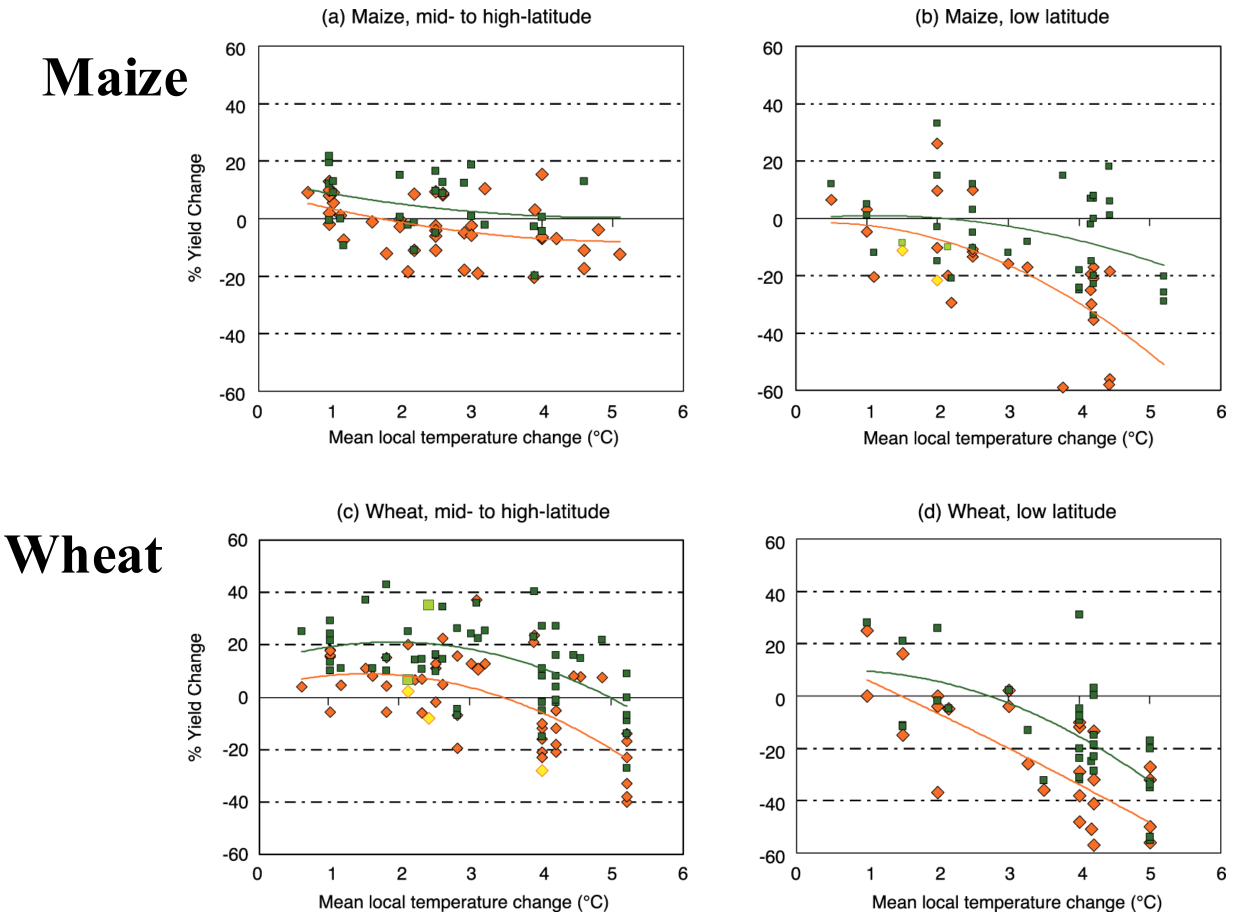
Relationship between maximum temperature and mortality in Shanghai, China, 1980-89



Référence : CILIMATE CHANGE AND HUMAN HEALTH, 1996

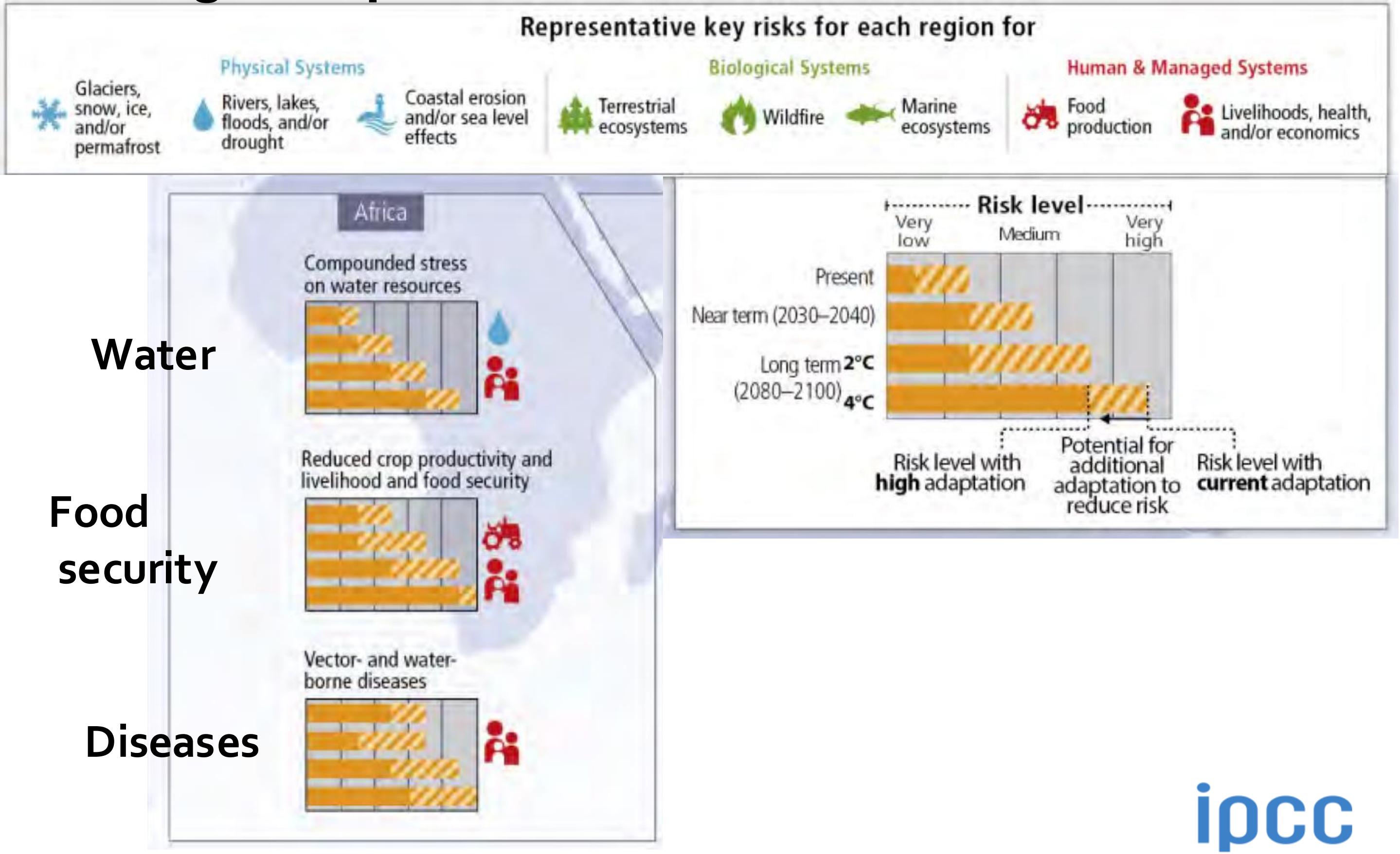
Jean-Pascal van Ypersele
(vanyp@climate.be)

Figure TS.7. Sensitivity of cereal yield to climate change



IPCC AR4 WGII

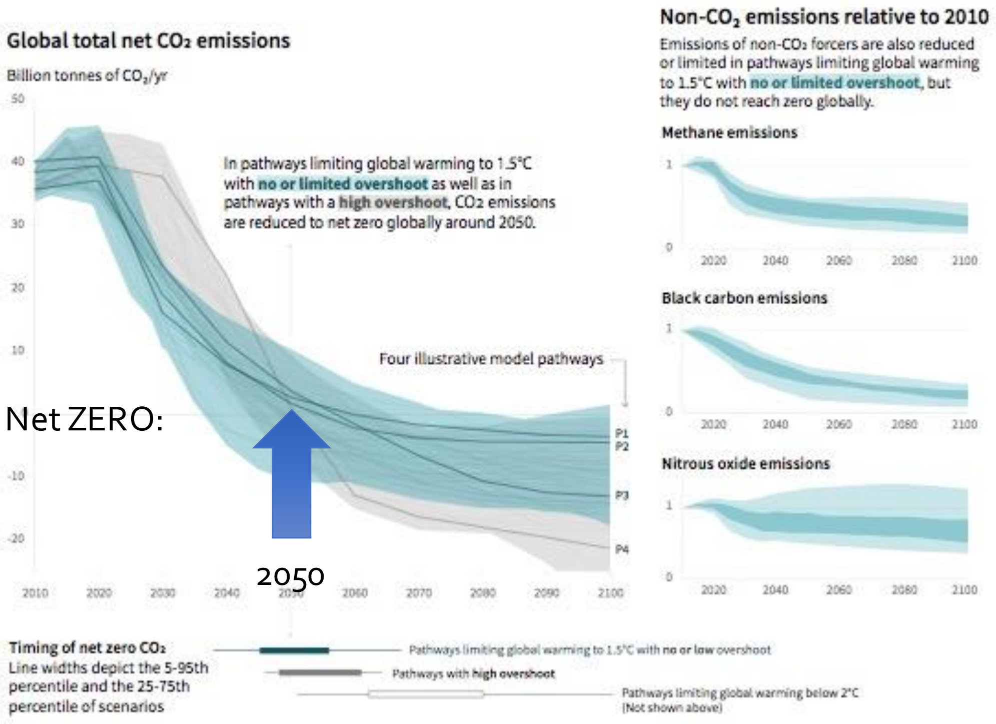
Regional key risks and risk reduction through adaptation: Africa



IPCC, AR5, SPM, Figure SPM.8

Global emissions pathway characteristics

General characteristics of the evolution of anthropogenic net emissions of CO_2, and total emissions of methane, black carbon, and nitrous oxide in model pathways that limit global warming to 1.5°C with no or limited overshoot. Net emissions are defined as anthropogenic emissions reduced by anthropogenic removals. Reductions in net emissions can be achieved through different portfolios of mitigation measures illustrated in Figure SPM3B.

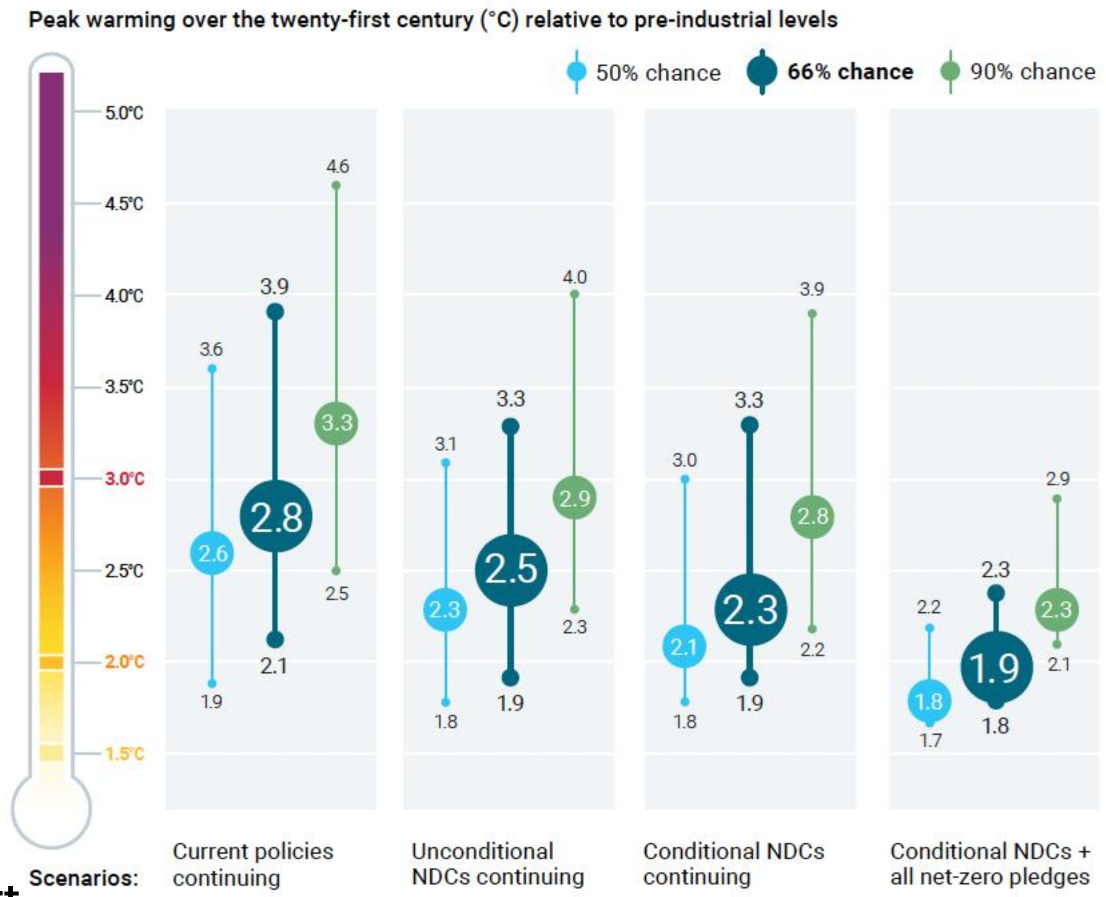


Source: IPCC Special Report on Global Warming of 1.5°C

The COPs are wonderful…

@JPvanYpersele


Nations Unies
onférence sur les Changements Climatiques
COP21/CMP11
Paris, France
SECRETAIRE EXECUTIVE CCNUCC
PRESIDENT



Emissions Gap Report UNEP (2025)

… but the COPs are totally insufficient

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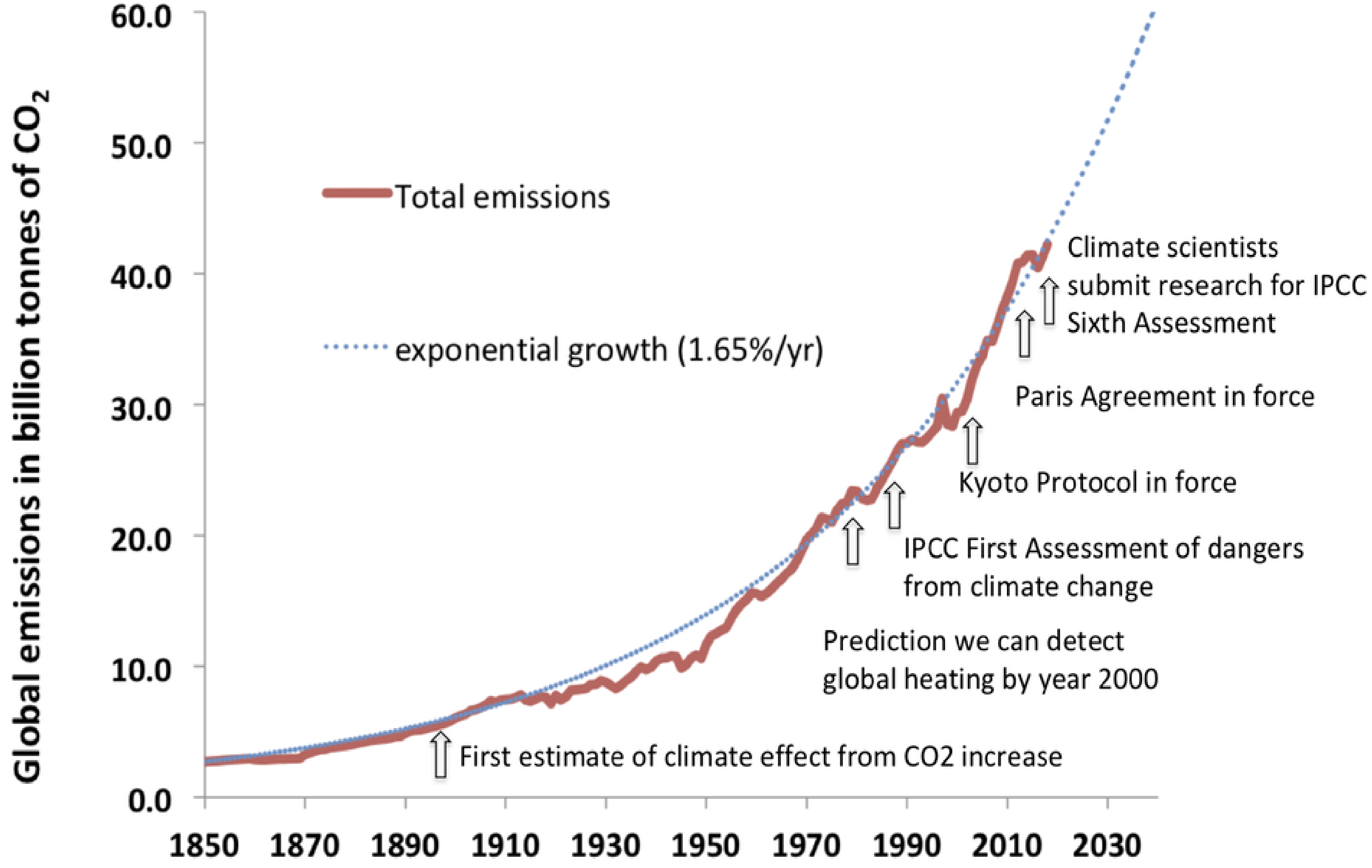
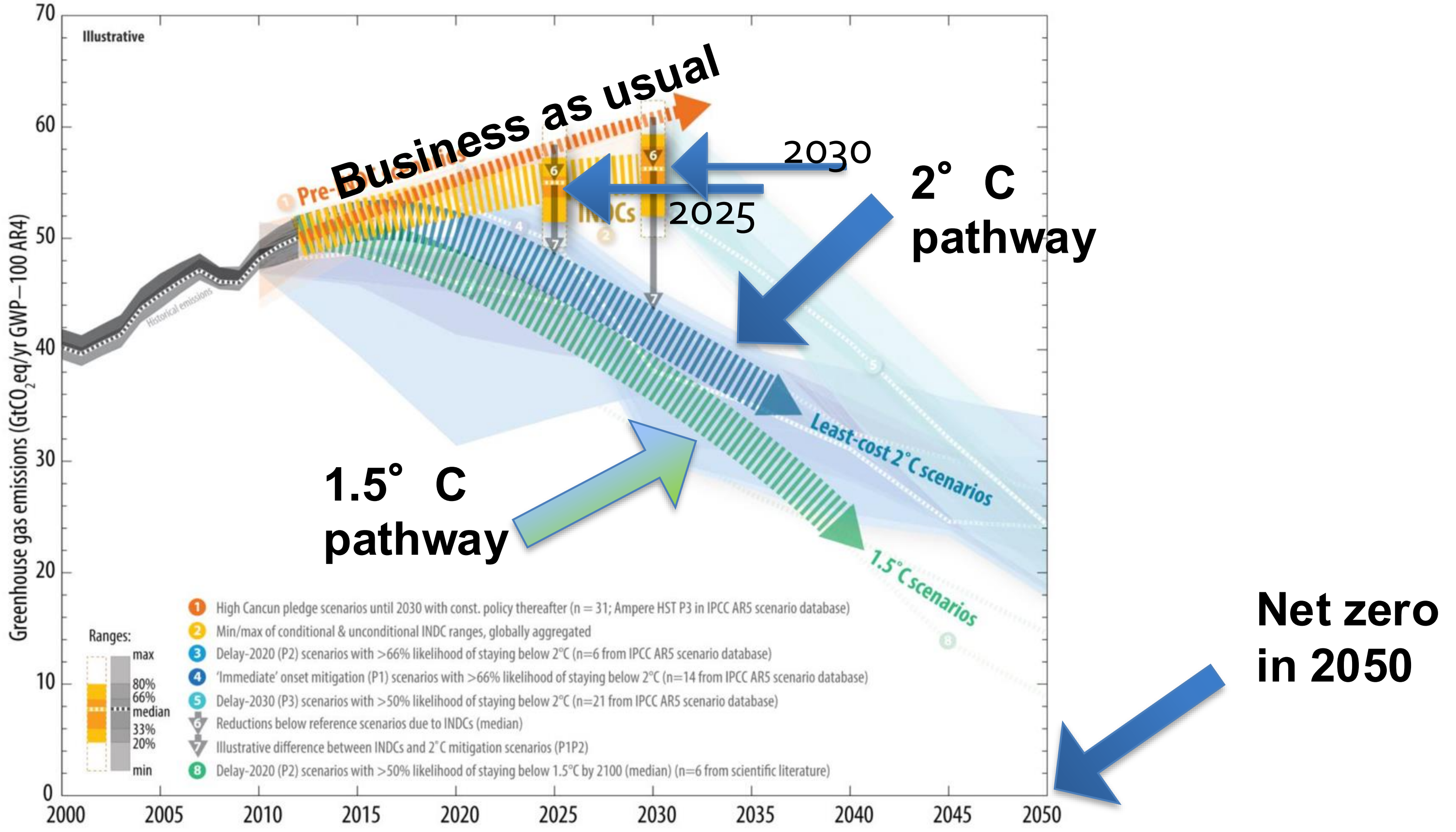


Source: Wolfgang Knorr, in The Conversation (2019)

Paris Agreement: plans not sufficient yet!



UNFCCC, Aggregate effect of the intended nationally determined contributions: an update
http://unfccc.int/resource/docs/2016/cop22/eng/02.pdf

And yet, hope is possible

@JPvanYpersele

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

Demand and services

Energy

Land use

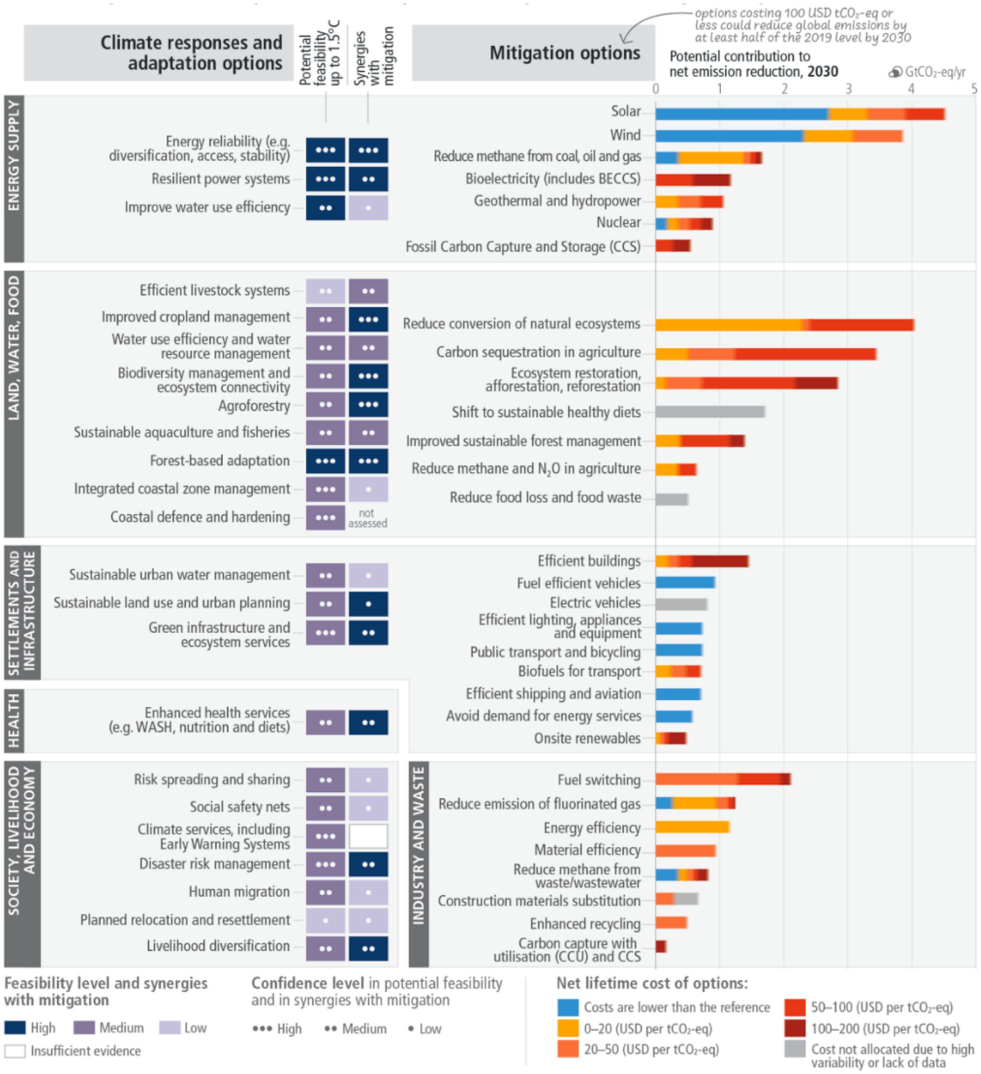
Industry

Urban

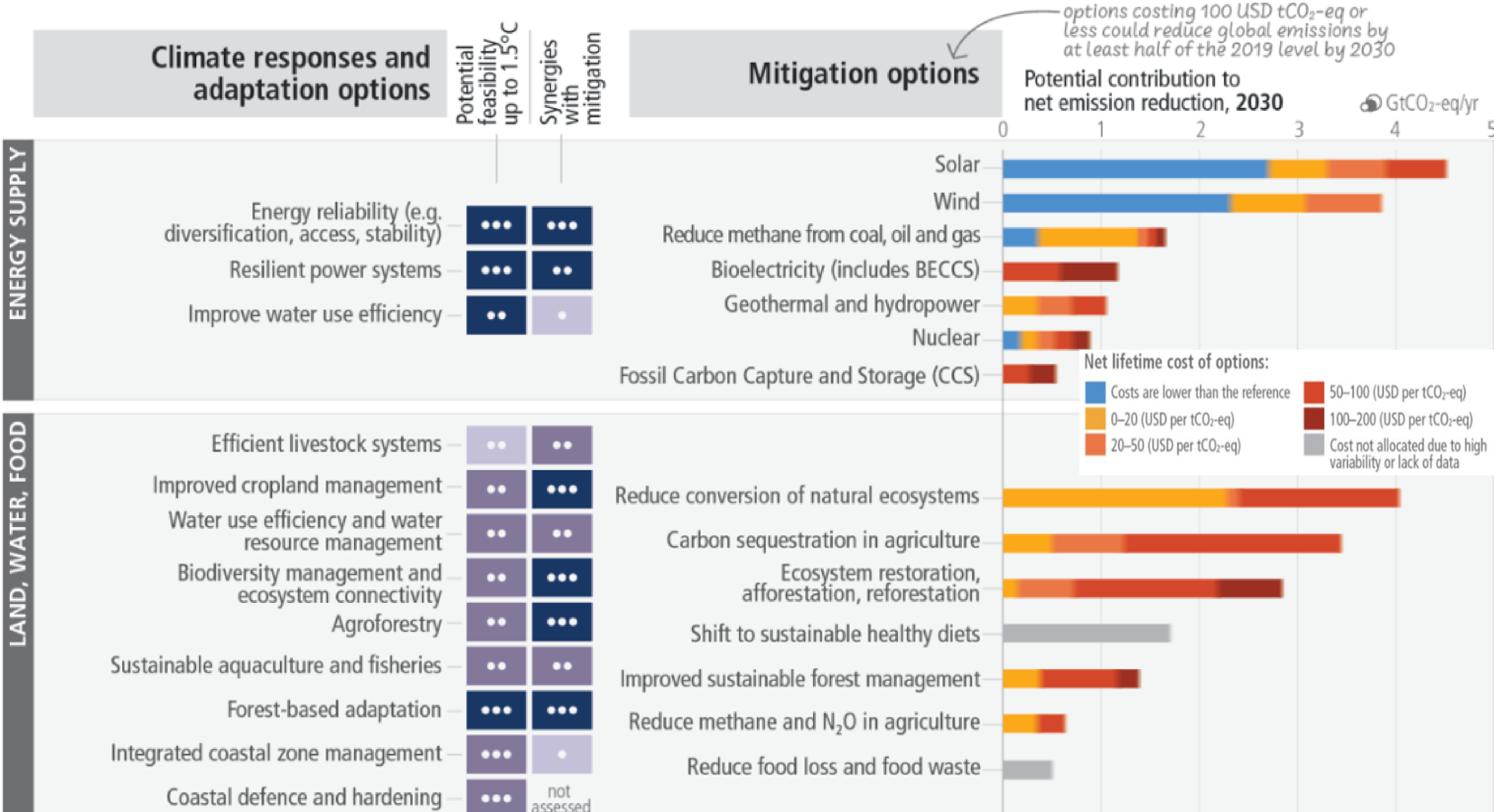
Buildings

Transport

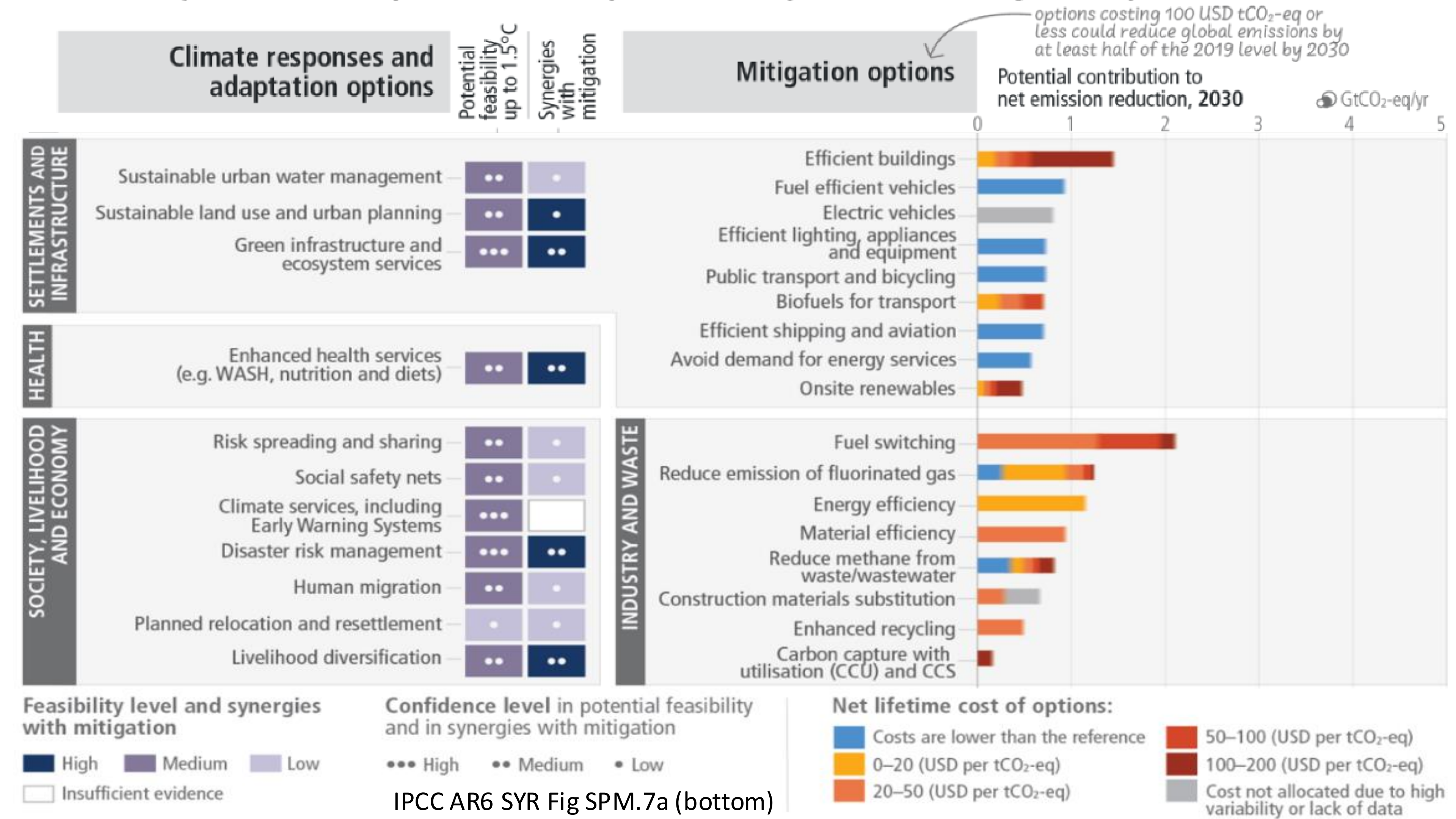
Feasibility of climate responses and adaptation, and potential of mitigation in the near-term



IPCC AR6 SYR Fig SPM.7a



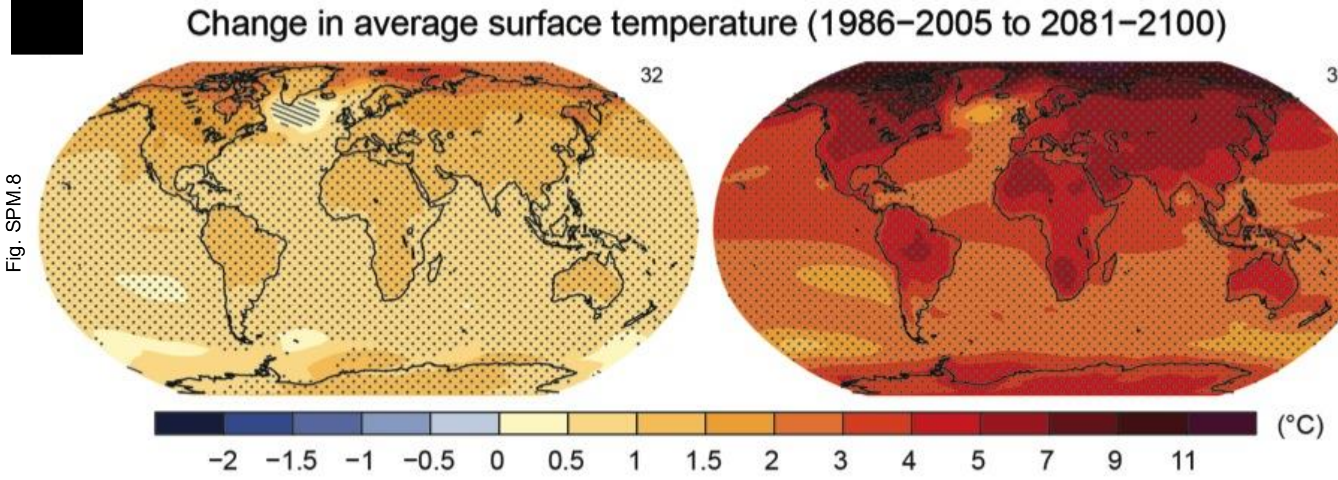
IPCC AR6 SYR Fig SPM.7a (top)



IPCC AR6 SYR Fig SPM.7a (bottom)

Low emission scenario

High emission scenario



Humanity has the choice

SUSTAINABLE DEVELOPMENT GOALS


Plateforme Wallonne pour le GIEC

Lettre N°13 - avril 2019

'Sauver le climat' : les bases

Suite à l'intense mobilisation des jeunes, les changements climatiques ont fait l'objet de beaucoup d'attention au cours des derniers mois. Elèves du secondaire, étudiants, professeurs, parents et grand-parents sont descendus dans la rue pour montrer leur désarroi face à la lenteur de l'action vis-à-vis des changements climatiques.

Nous nous réjouissons de cette mobilisation, car notre rôle nous met encore plus fréquemment que l'ensemble de la population en position de témoin des risques que font courir les changements climatiques, ainsi que de l'ampleur des efforts nécessaires pour mettre en œuvre les objectifs que se sont fixés les membres des Nations Unies à Paris en 2015 (COP21).

Une démarche essentielle en faveur de ces jeunes est de les aider à se former, à appréhender les principaux éléments de la problématique du climat, et plus largement, de l'influence de nos activités sur notre environnement et sur le futur de l'humanité. L'éducation est un des instruments essentiels pour évoluer vers une société plus durable et plus juste.

Pour y contribuer, nous présentons ici une brève synthèse de la problématique et une sélection de références commentées. Nous espérons que cette Lettre aidera enseignants et élèves à disposer d'une base d'information solide et ainsi à prendre leur part dans la solution à ce problème planétaire : agir à leur niveau et favoriser l'action dans leur entourage et au niveau sociétal.

Plusieurs témoignages d'élèves ou de professeurs sont également présentés.

Nous vous souhaitons une bonne lecture !

Jean-Pascal van Ypersele, Philippe Marbaix et Bruna Gaino

Sommaire

Wallonie environnement

Awac

Lettre N°13:

« Sauver le climat »: les bases

Avril 2019

- L' « ABC » des changements climatiques: une brève synthèse de la « problématique changements climatiques »
- Sélection de références commentées pour l'enseignement
- Organisations, associations et réseaux
- Témoignages: la parole est donnée à des professeurs et des élèves du secondaire

Disponible gratuitement, 6X/an: www.plateforme-wallonne-giec.be

https://plateforme-wallonne-giec.be/Lettre13.pdf

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- www.uclouvain.be/vanyp: my slides (under « conferences »)
- www.ipcc.ch: IPCC
- www.skepticalscience.com: answers to the merchants of doubt arguments
- www.plateforme-wallonne-giec.be: IPCC-related in French, Newsletter, latest on climate, climate science & action
- **Bluesky & X/Twitter: @JPvanYpersele & @IPCC_CH**