

SIXTH ASSESSMENT REPORT
Synthesis

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Climate – Biodiversity – Human society: Current imbalance between three interacting systems

Basic understanding:
The Earth's climate and ecosystems influence each other and define the basis of life for humans, who in turn shape nature and climate through their own actions which are not sustainable, causing

- climate change,
- biodiversity loss,
- land degradation,
- pollution, etc.

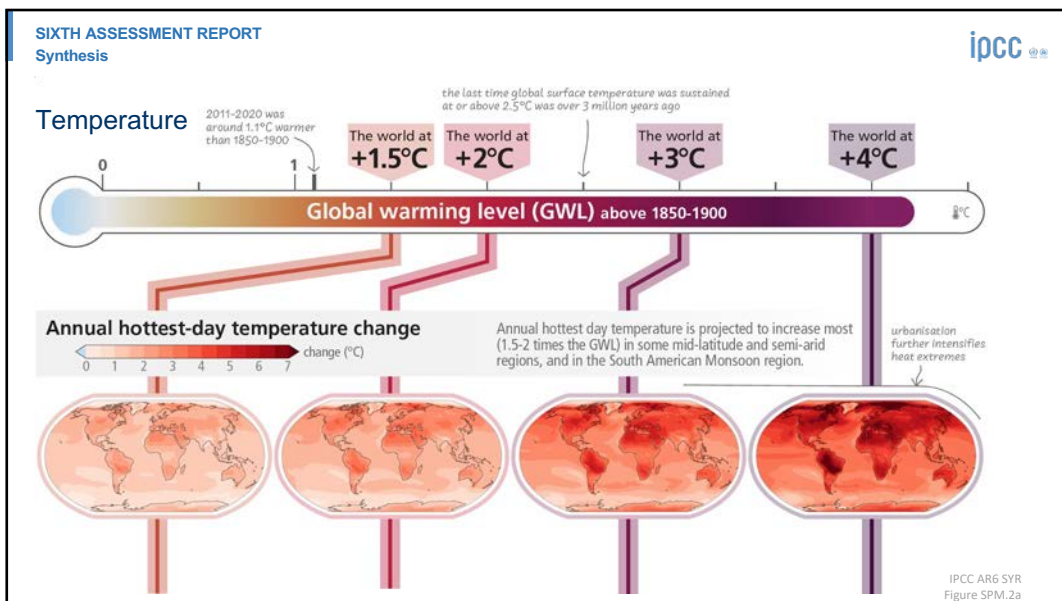
The risk propeller shows that risk emerges from the overlap of:

- Climate hazard(s)
- Vulnerability
- Exposure

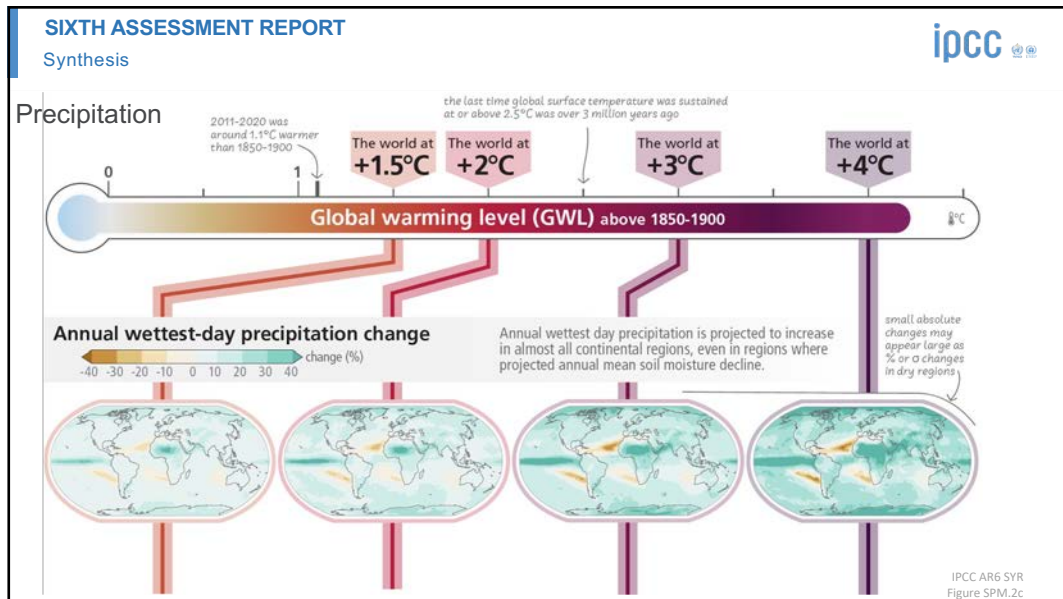
of human systems, ecosystems and their biodiversity

[Axel Gulbourg CC BY-NC-ND 2.0; Hugh Han / Unsplash; Axel Fassio/CIFOR CC BY-NC-ND 2.0]

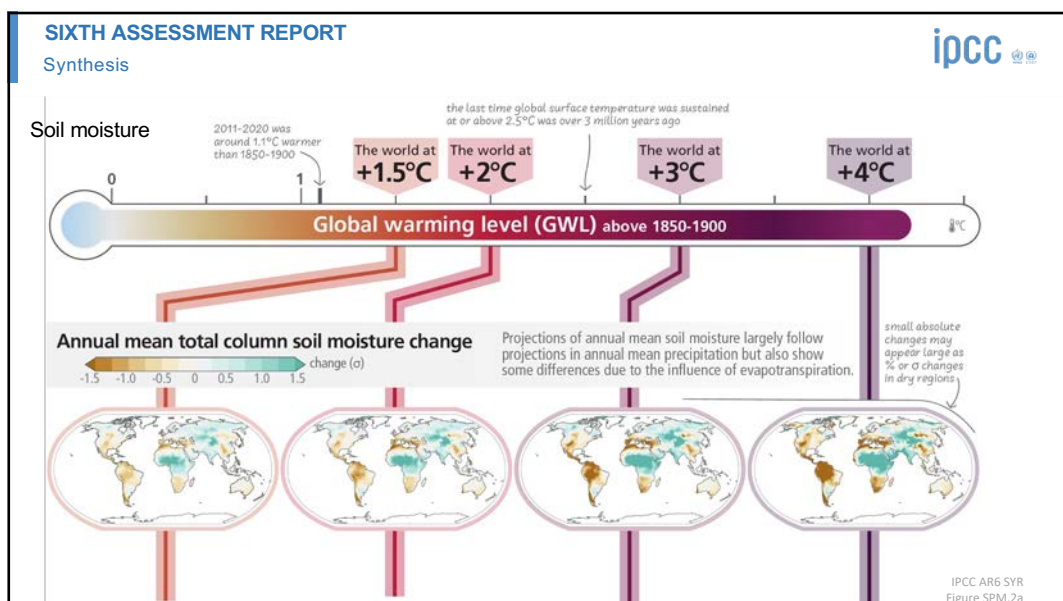
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3.3 – 3.6 billion people live in hotspots of high vulnerability to climate change... large parts of Africa, South Asia, Central and South America, small islands and the Arctic.

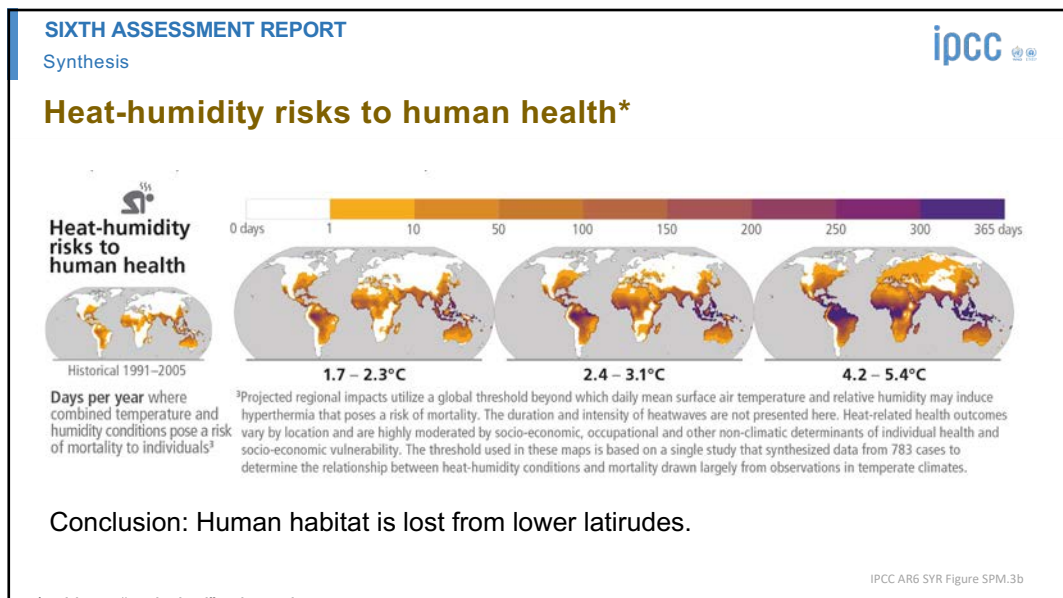


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INTERGOVERNMENTAL PANEL ON climate change

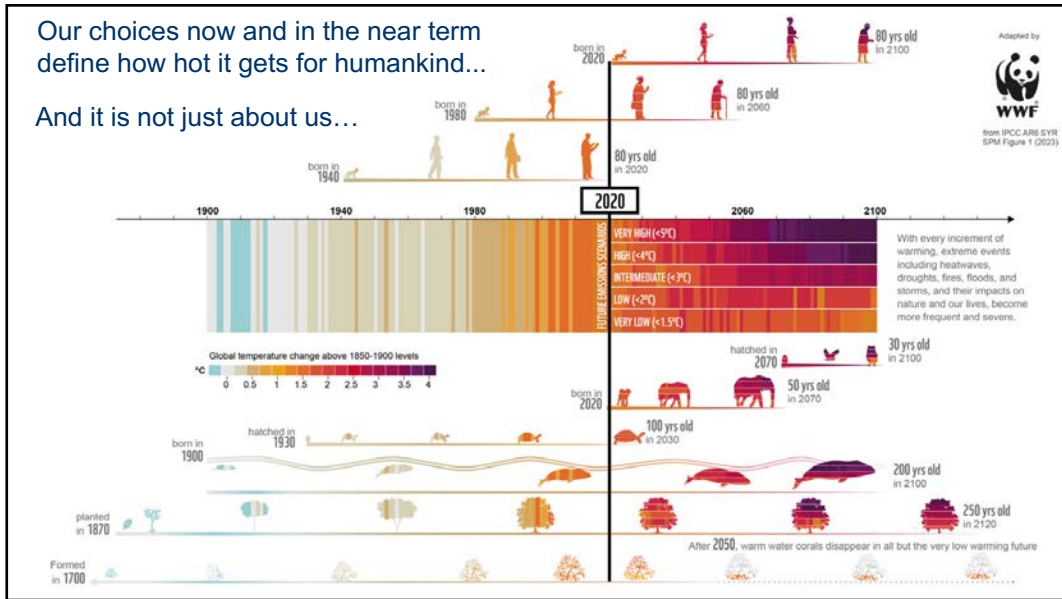
WHO
UNEP

[Denis Onyodi / KRCS CC-BY-NC 2.0]

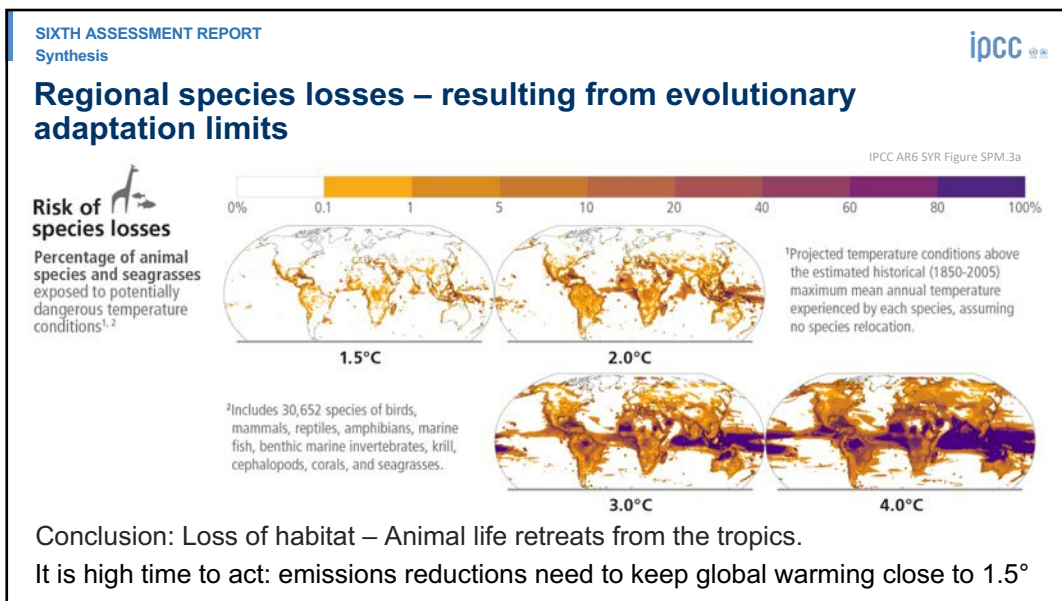
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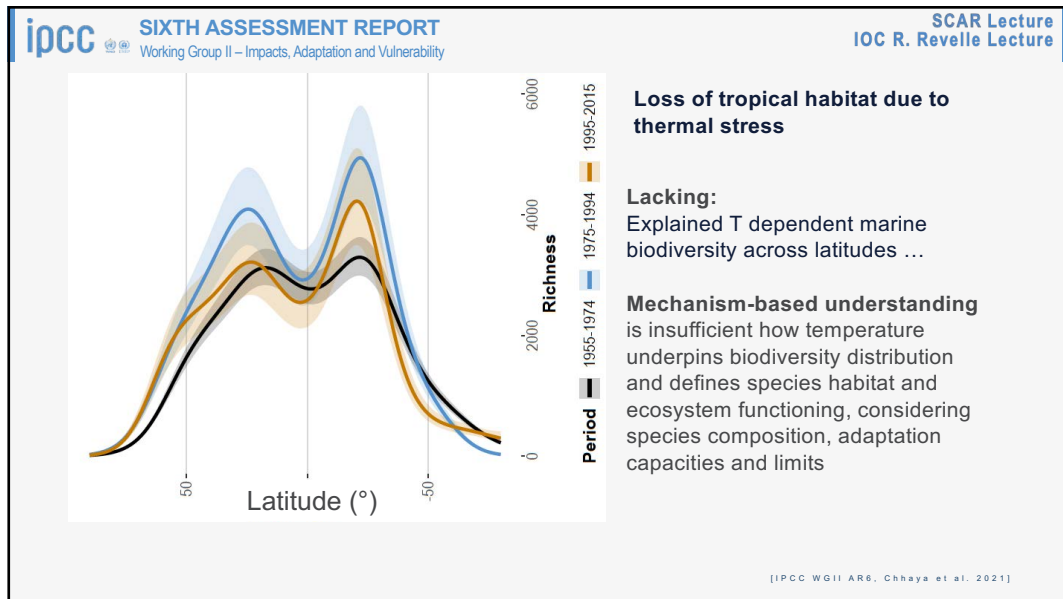
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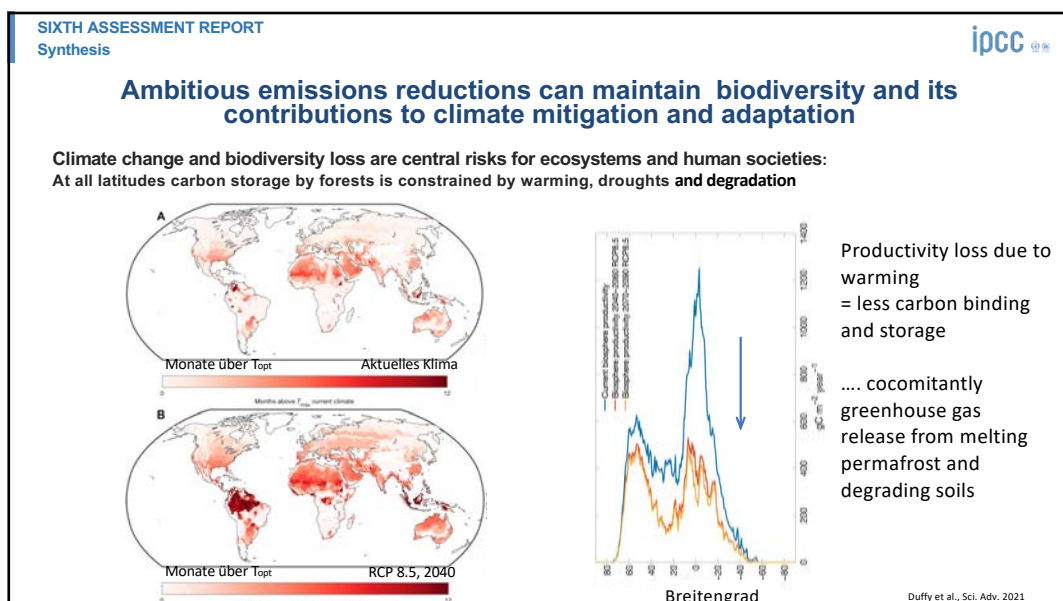
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SCAR Lecture
IOC R. Revelle Lecture

SROCC

Evaluating risks

Limits to Adaptation

- E.g. physical, ecological, technological, economic, political, institutional, psychological, and/or socio-cultural

The IPCC concept of risk

Climate action entails risk reduction by adaptation and mitigation considering limits to adaptation

Level of added impacts/risks

Very high	Purple: Very high probability of severe impacts/ risks and the presence of significant irreversibility or the persistence of climate-related hazards, combined with persistence of climate-related hazards, combined with limited ability to adapt due to the nature of the hazard or impacts/risks.
High	Red: Significant and widespread impacts/risks.
Moderate	Yellow: Impacts/risks are detectable and attributable to climate change with at least medium confidence.
Undetectable	White: Impacts/risks are undetectable.

Confidence level for transition

- = Very high
- = High
- = Medium
- = Low
- | = Transition range

**see figure caption for definition

[IPCC SROCC, WGII AR6]

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Humans and nature are exposed to diverse risks.

Land-based systems

- Wildfire damage
- Permafrost degradation
- Biodiversity loss
- Dryland water scarcity
- Tree mortality
- Carbon loss

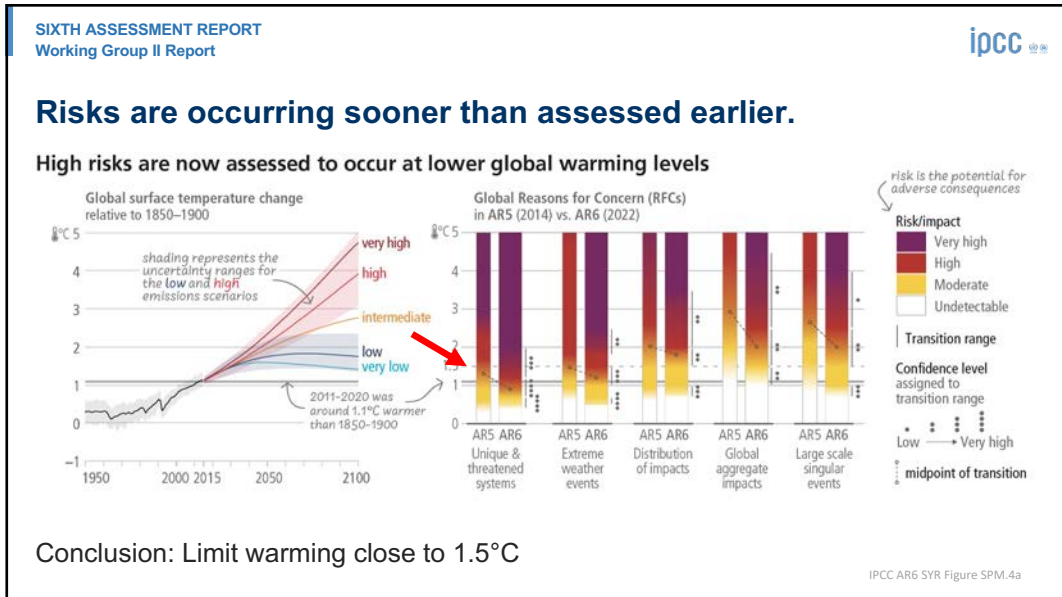
Ocean/coastal ecosystems

- Warm-water corals
- Kelp forests
- Seagrass meadows
- Epipelagic
- Rocky shores
- Salt marshes

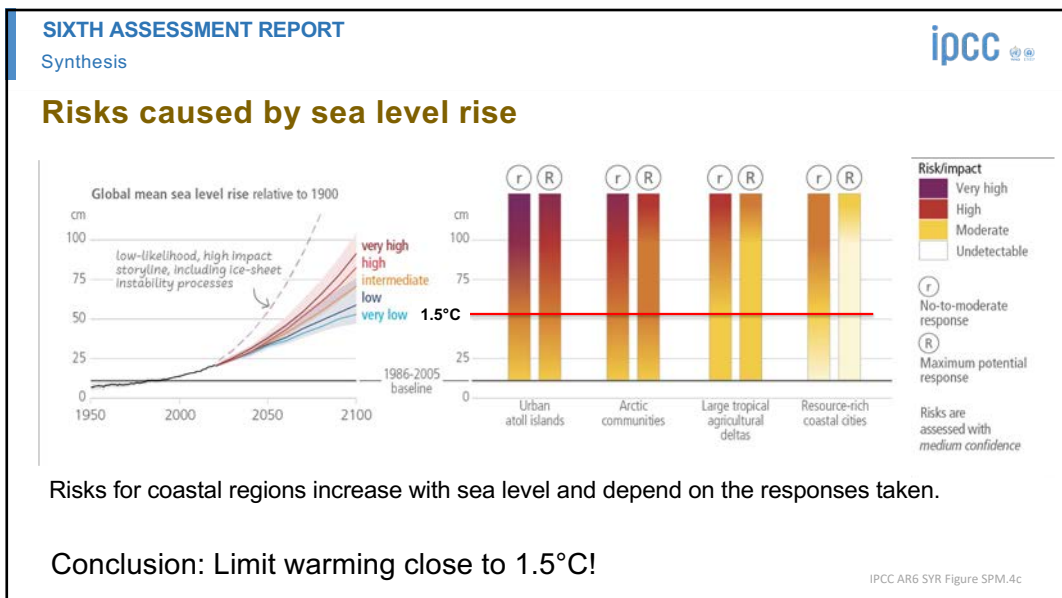
Conclusion: Limit warming close to 1.5°C

IPCC AR6 SYR Figure SPM.4b

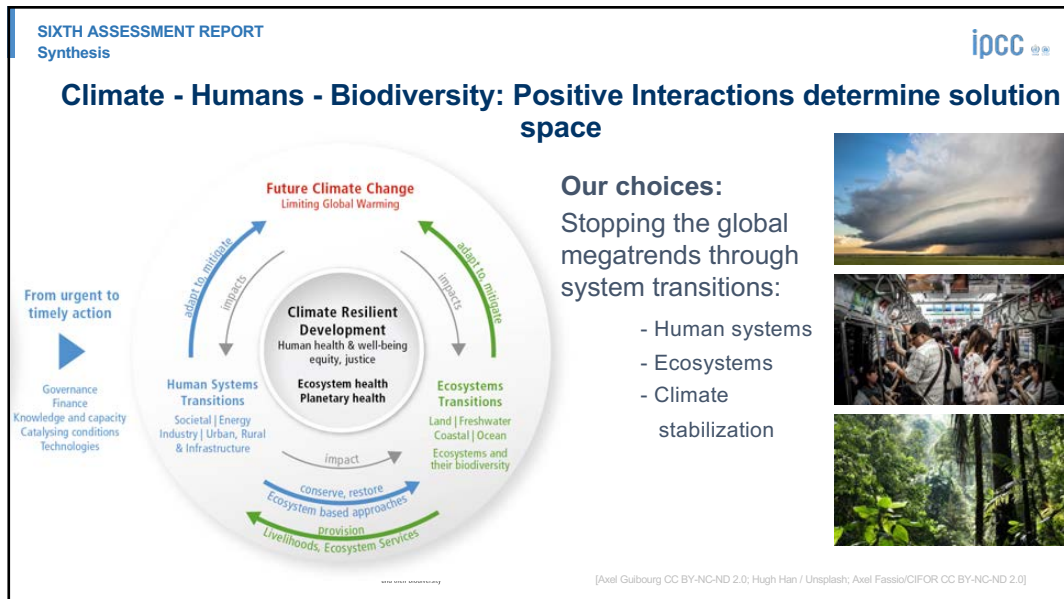
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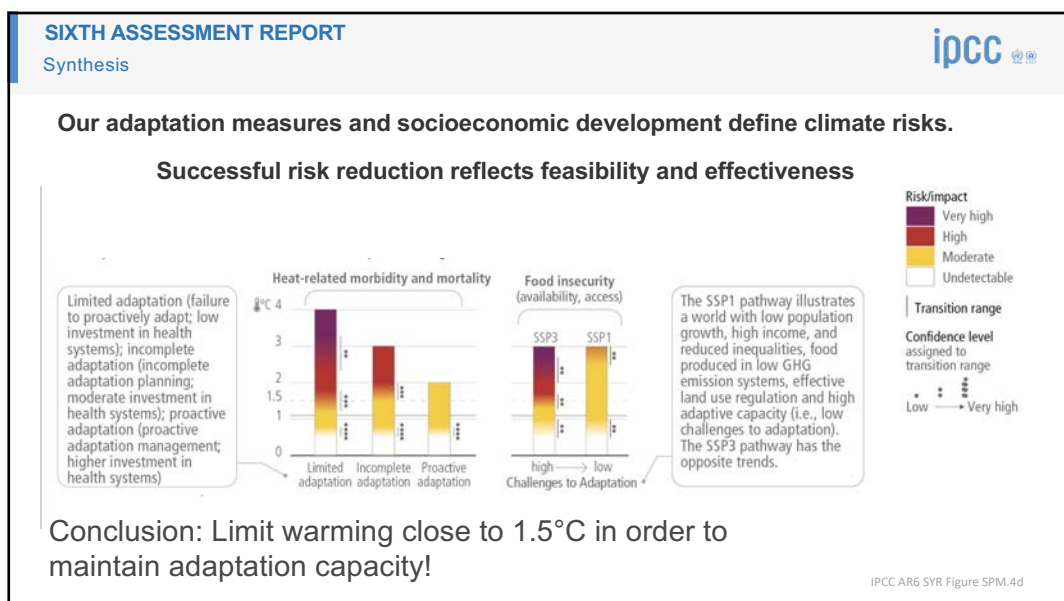
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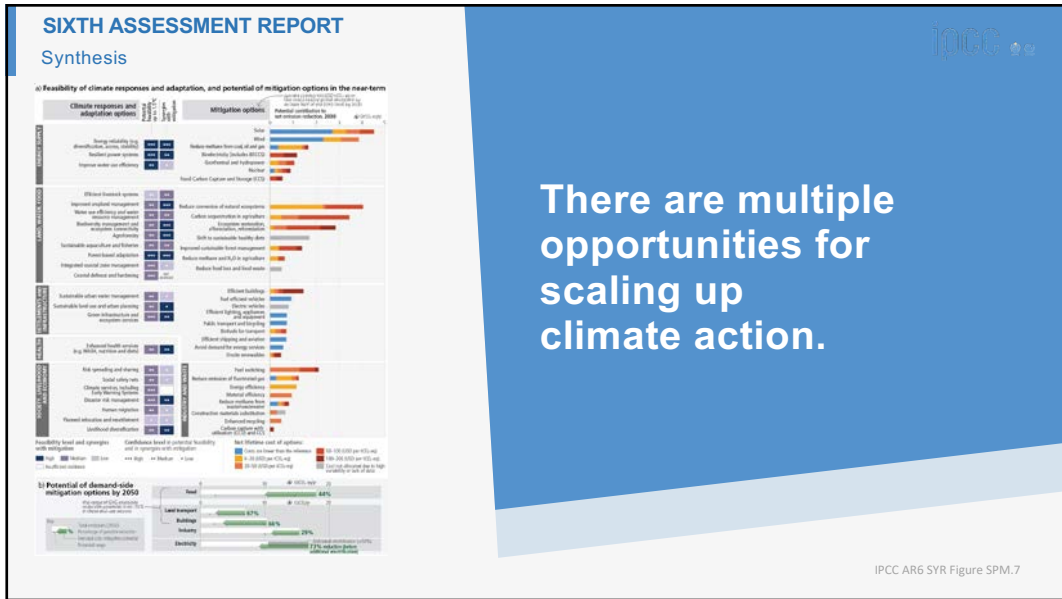
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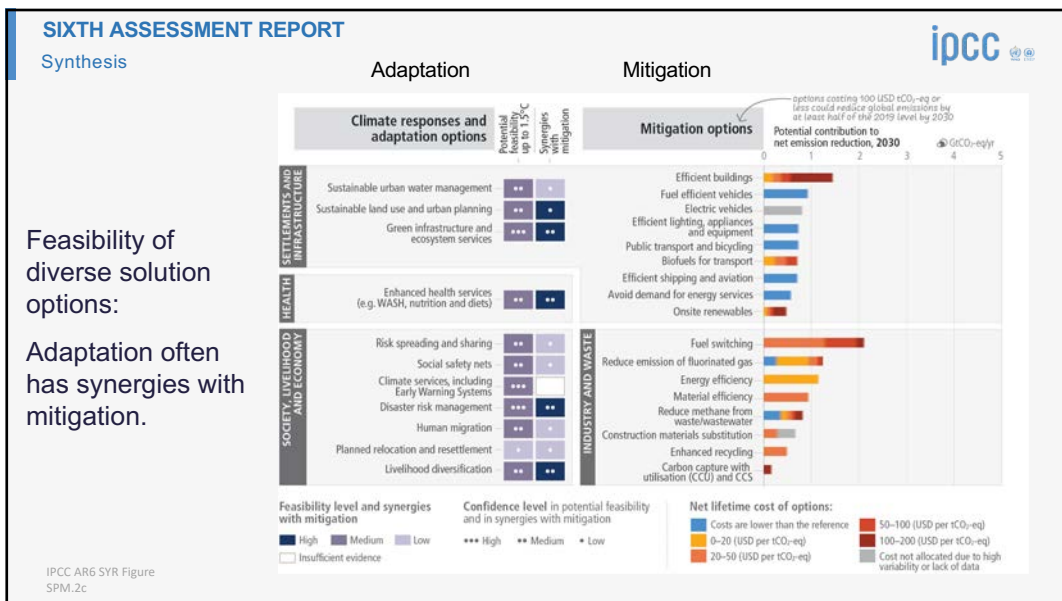
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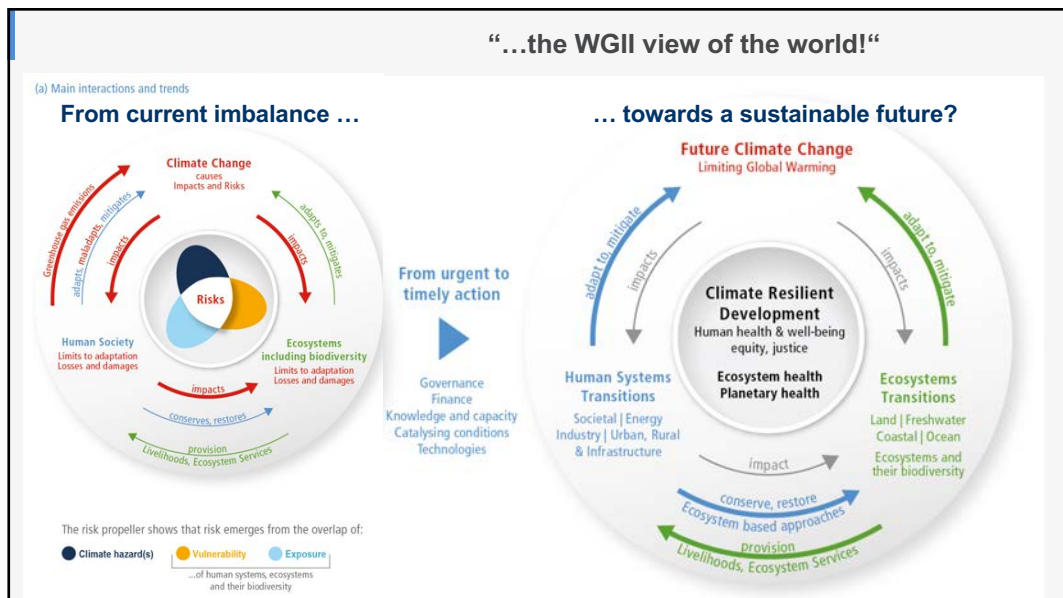
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Guiding principles

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Sustainability through mosaic land-, sea- and freshwater scapes sustaining gradients between well protected and used spaces

Corridors and mosaic of natural habitats enable climate migration:

- 1 Forest ecosystems
- 2 Savannah ecosystems
- 3 Mountain slopes
- 4 Ocean ecosystems

Corridors connect the mosaic of natural habitats in shared spaces with reservoirs of nature in intact spaces.

- Quantify effective and ecosystem-specific needs
- Include species migration corridors
- Effective and socially just protection measures to restore biodiversity on 30-50% of Land-, Freshwater and Ocean systems can help Planetary Health, including resilient ecosystem services (Nature's contributions to people)

IPBES-IPCC: Co-Sponsored Workshop on Biodiversity and Climate Change

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Guiding principles for ecosystem stewardship

- Mosaic spatial planning and implementation
- Conservation and stabilization of C-rich habitats with enhancement of C storage in organisms and soils.
- Consideration of adaptation limits
- "Net gain": implement compensatory measures with net gain for biodiversity
- Land gain through reduced meat and milk consumption, agroforestry, woodland pasture
- Integration of human interests, e.g. adaptation, livelihoods, health

From urgent to timely action

▶

Governance
Finance
Knowledge and capacity
Catalysing conditions
Technologies

Source:
IPCC WGII AR6
SPM Figure 1

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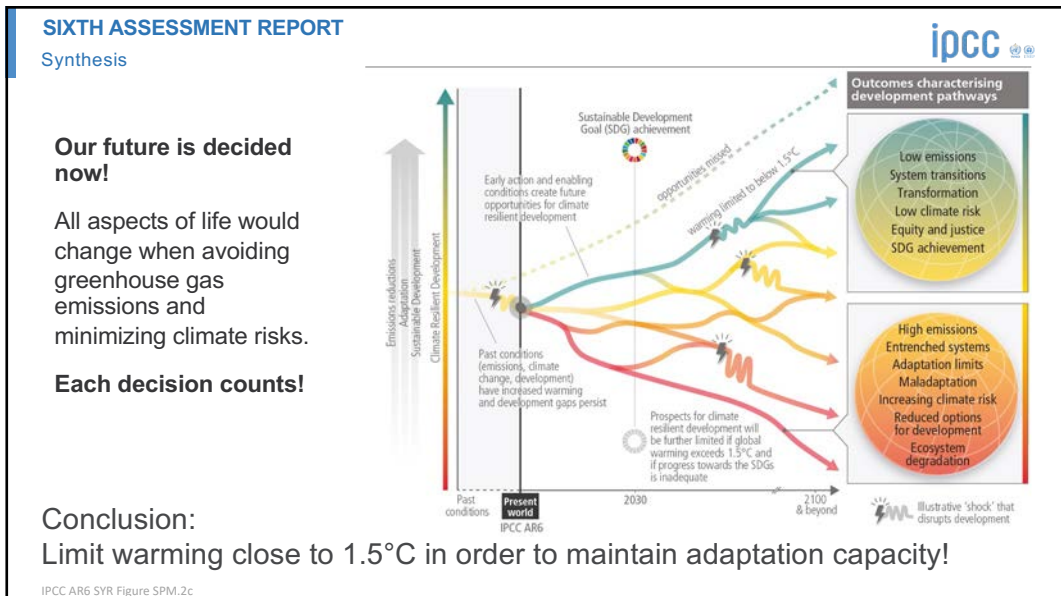
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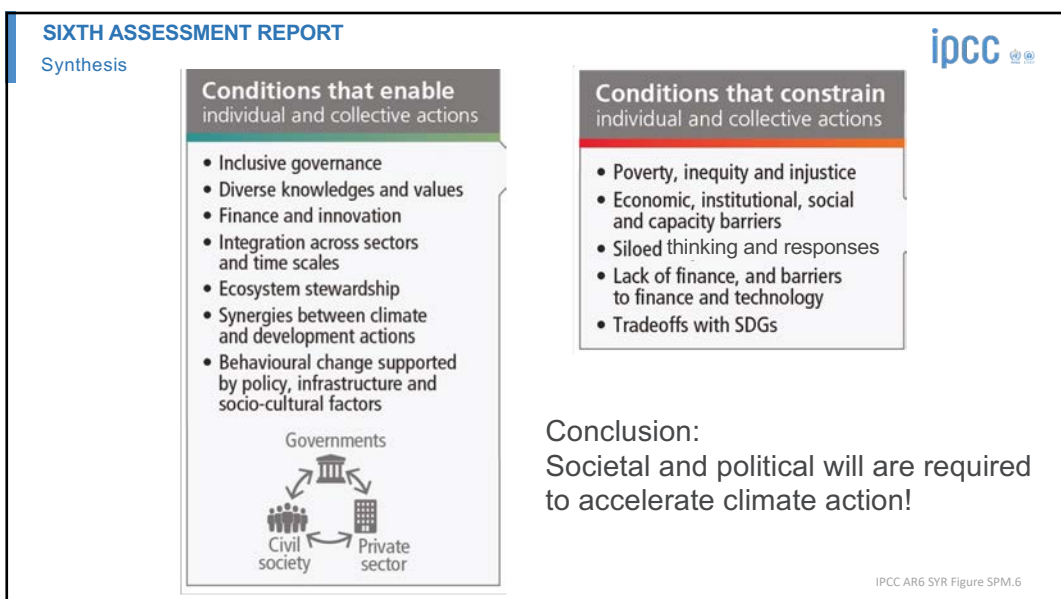
There is a rapidly narrowing time window of opportunity to enable higher climate resilient development.

IPCC AR6 SYR Figure SPM.6

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The science is clear.

Any further delay in concerted global action will miss a brief and rapidly closing window to secure a liveable future for all.

IPCC AR6 reports offer solutions. However, it is getting late.

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WHO UNEP

THANK YOU

For More Information:

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