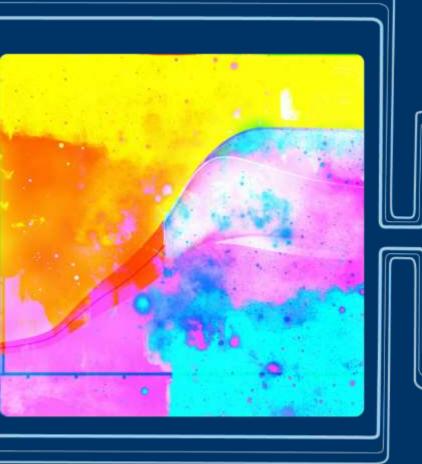
# Climate Risks at 1.5°C and 2°C Rachel Warren, Tyndall Centre,



IPCC Special Report

on

University of East Anglia

Global Warming of 1.5°C

## Reasons for Concern: Example Unique and Threatened Systems

 RFC1 Unique and threatened systems encompass ecological and human systems that (i) have restricted geographic ranges constrained by climate related conditions and (ii) have high endemism or other distinctive properties. They include coral reefs, the Arctic and its indigenous people, mountain glaciers, and biodiversity hotspots.

Global mean surface temperature change relative to pre-industrial levels (oC)

H

H

- 5006-2015

RFC1

Unique and threatened

systems

Undetectable

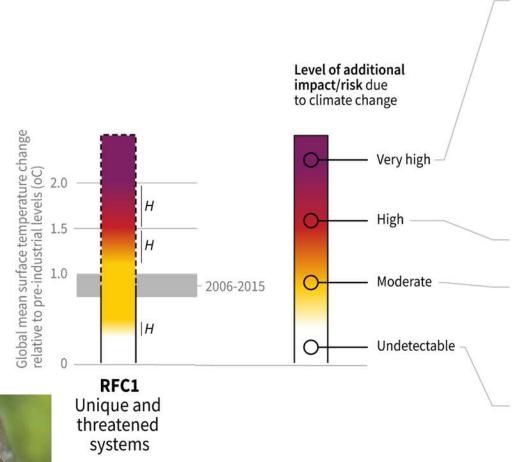
Moderate

Level of additional impact/risk due to climate change

**Yellow** indicates that impacts/risks are detectable and attributable to climate change with at least medium confidence.

**White** indicates that no impacts are detectable and attributable to climate change.

### Reasons for Concern: Example Unique and Threatened Systems



Purple indicates very high risks of severe impacts/risks and the presence of significant irreversibility or the persistence of climate-related hazards, combined with limited ability to adapt due to the nature of the hazard or impacts/risks.

**Red** indicates severe and widespread impacts/risks. **Yellow** indicates that impacts/risks are detectable and attributable to climate change with at least medium confidence.

**White** indicates that no impacts are detectable and attributable to climate change.

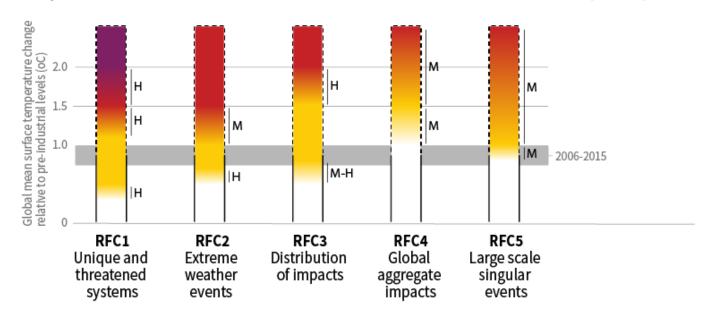




## SPM2

How the level of global warming affects impacts and/or risks associated with the Reasons for Concern (RFCs) and selected natural, managed and human systems

### Impacts and risks associated with the Reasons for Concern (RFCs)



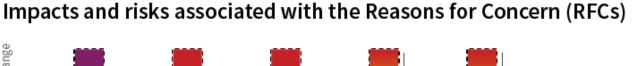
Confidence level for transition: L=Low, M=Medium, H=High and VH=Very

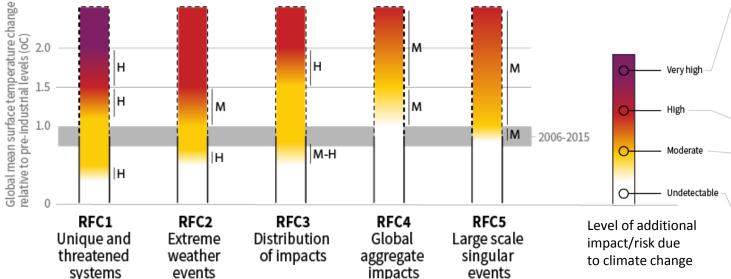




## SPM2

How the level of global warming affects impacts and/or risks associated with the Reasons for Concern (RFCs) and selected natural, managed and human systems





Purple indicates very high risks of severe impacts/risks and the presence of significant irreversibility or the persistence of climate-related hazards, combined with limited ability to adapt due to the nature of the hazard or impacts/risks.

widespread impacts/risks. **Yellow** indicates that impacts/risks are detectable and attributable to climate change with at least medium confidence.

**Red** indicates severe and

**White** indicates that no impacts are detectable and attributable to climate change.

Confidence level for transition: L=Low, M=Medium, H=High and VH=Very high









lason Florio / Aurora Photos

## **Increased Concern**

Assessed levels of risk have increased since AR5 for global warming of 2°C.

- Transition from high to very high risk between 1.5 and 2°C for RFC1 (Unique and threatened systems)
- Transition from moderate to high risk between 1°C and 2°C for RFC3 (Distribution of impacts)







## **Increased Concern**

Assessed levels of risk have increased since AR5 for global warming of 2°C.

- Transition from moderate to high risk between 1°C and 2.5°C for RFC5 (Large scale singular events)
- Instabilities in Greenland & W. Antarctic ice sheets may trigger under 1.5 to 2C warming (medium confidence)

Jason Florio / Aurora Photos



## Lower impacts on the economy

At 1.5°C compared to 2°C:

Risks to global economic growth are lower

 Countries in the tropics and S Hemisphere sub-tropics expected to experience largest impacts on economic growth

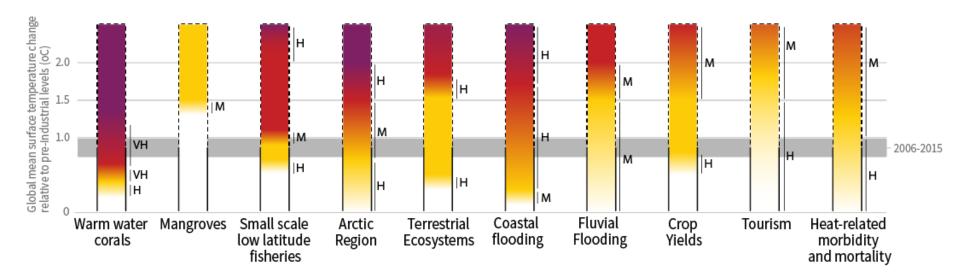




## SPM2

How the level of global warming affects impacts and/or risks associated with the Reasons for Concern (RFCs) and selected natural, managed and human systems

### Impacts and risks for selected natural, managed and human systems



Confidence level for transition: L=Low, M=Medium, H=High and VH=Very high





