

IPCC Special Report SR1.5: Climate impacts and associated risks on natural and human systems in Africa

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Where does the science stand?

Since pre-industrial times, human activities have caused approximately 1°C of global warming.

- Already seeing consequences for people, nature and livelihoods
- At current rate, would reach 1.5°C between 2030 and 2052
- Past emissions alone do not commit the world to 1.5°C
- Warming from past anthropogenic emissions will persist for centuries to millennia and continue to cause further long-term changes.

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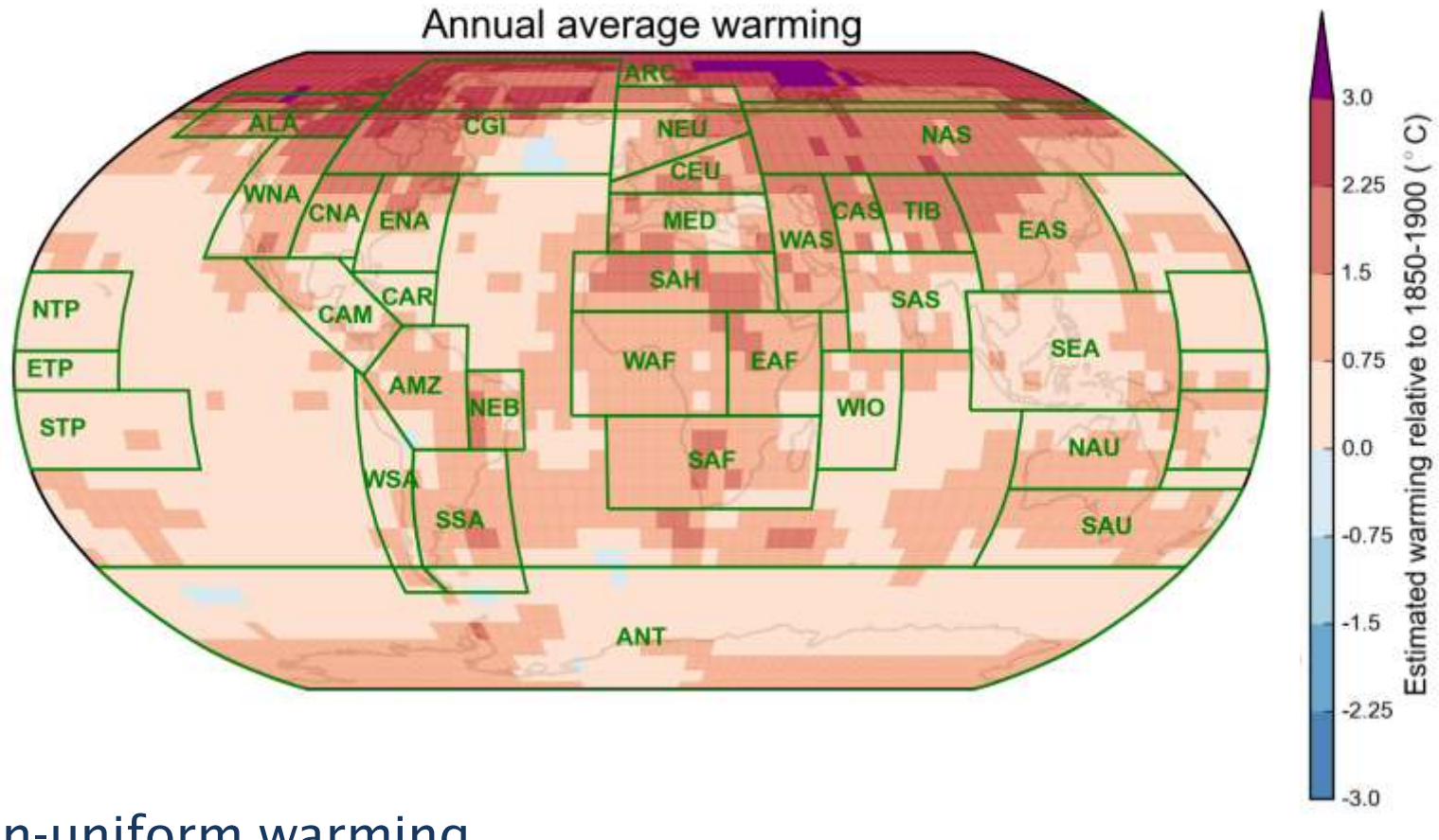
What's in this report for Africa

- Climate models project robust regional differences between present-day and global warming of 1.5°C, and between 1.5°C and 2°C.
- Projected risks to natural and human systems are lower at 1.5°C than 2°C.
- Compared to current conditions, 1.5°C global warming would nonetheless pose heightened risks to eradicating poverty, reducing inequalities and ensuring human and ecosystem well-being.
- Africa's climate is changing and **further change is inevitable** at 1.5°C and 2°C.
- Worse impacts on sustainable development will be felt among poor urban dwellers in African cities.

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Regional warming in the decade 2006-2015 relative to preindustrial

Annual average warming



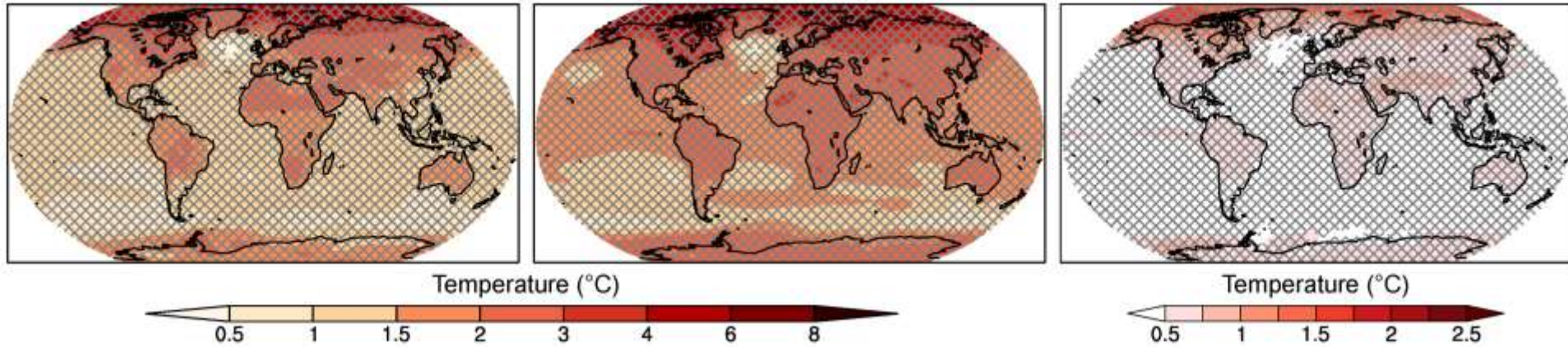
- Non-uniform warming
- Many parts of Africa experience higher than the average

Global mean temperature change

1.5°C

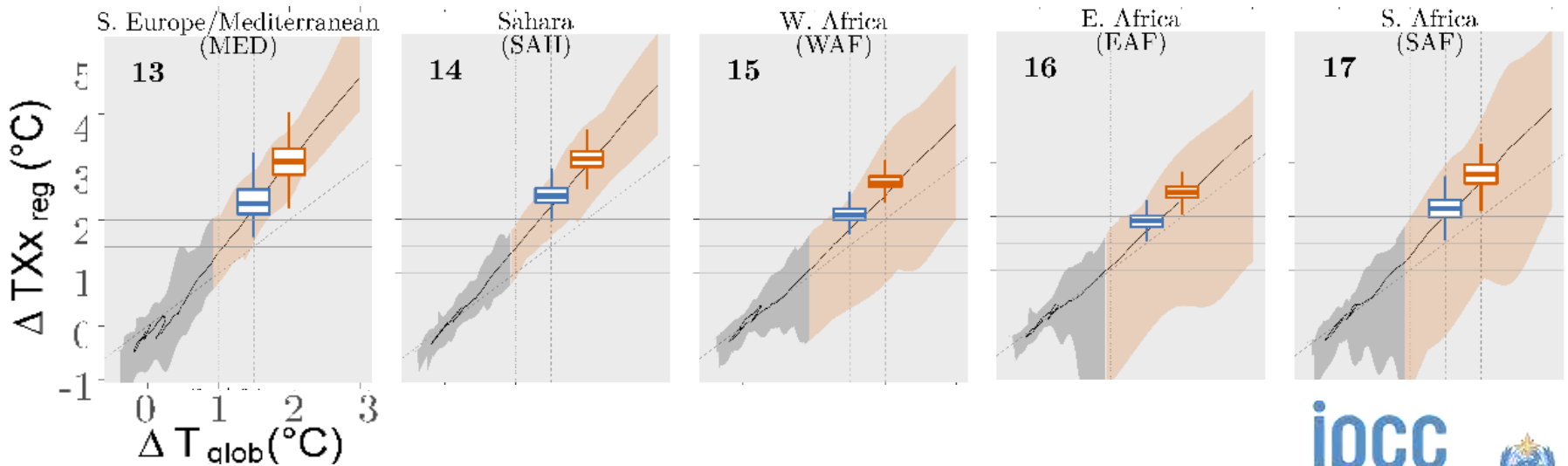
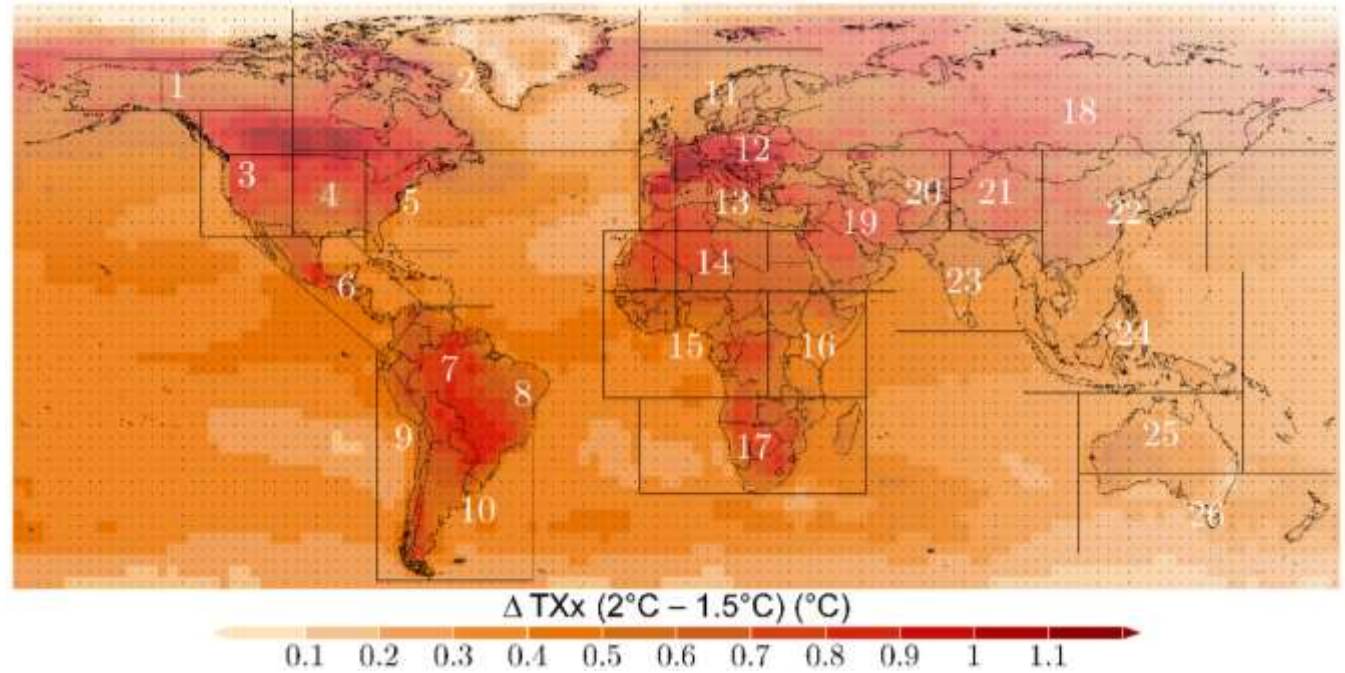
2.0°C

difference



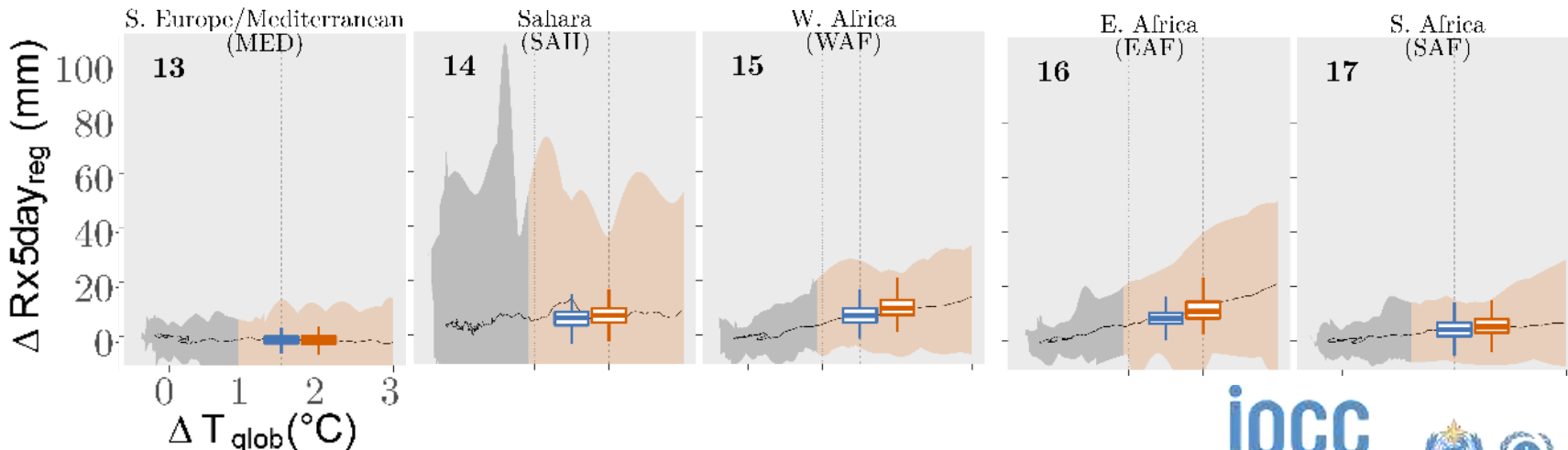
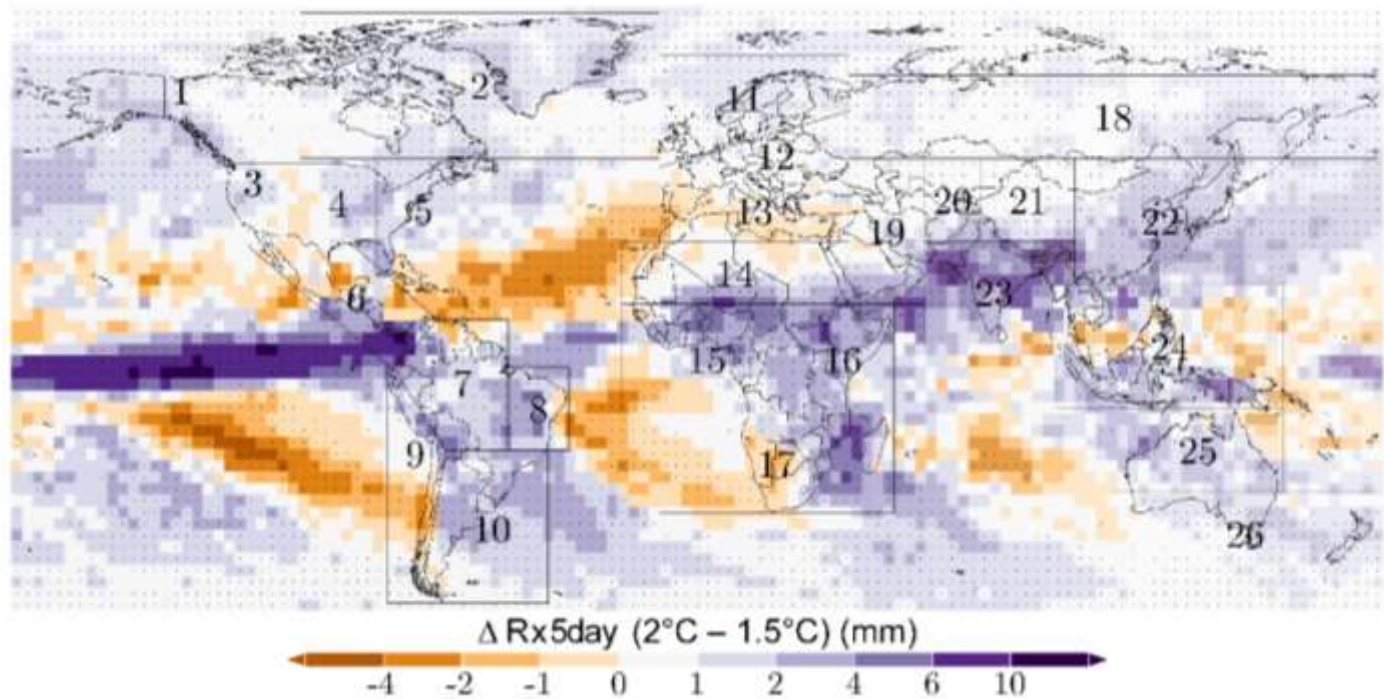
Changes in extreme high temperatures between 1.5°C and 2°C

As a function of temperature increase



Changes in extreme precipitation between 1.5°C and 2°C

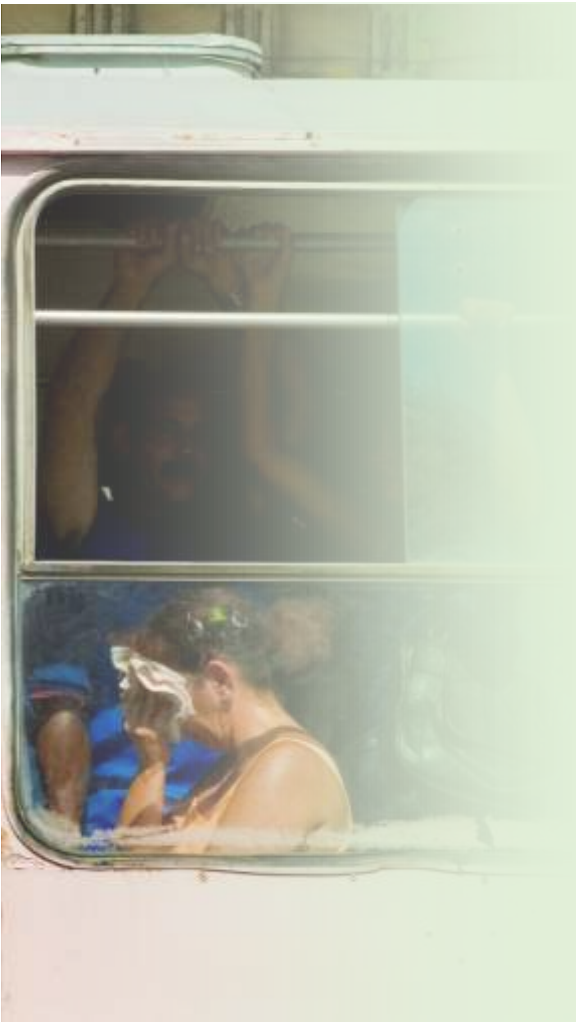
As a function of temperature increase





Projected impacts and risks

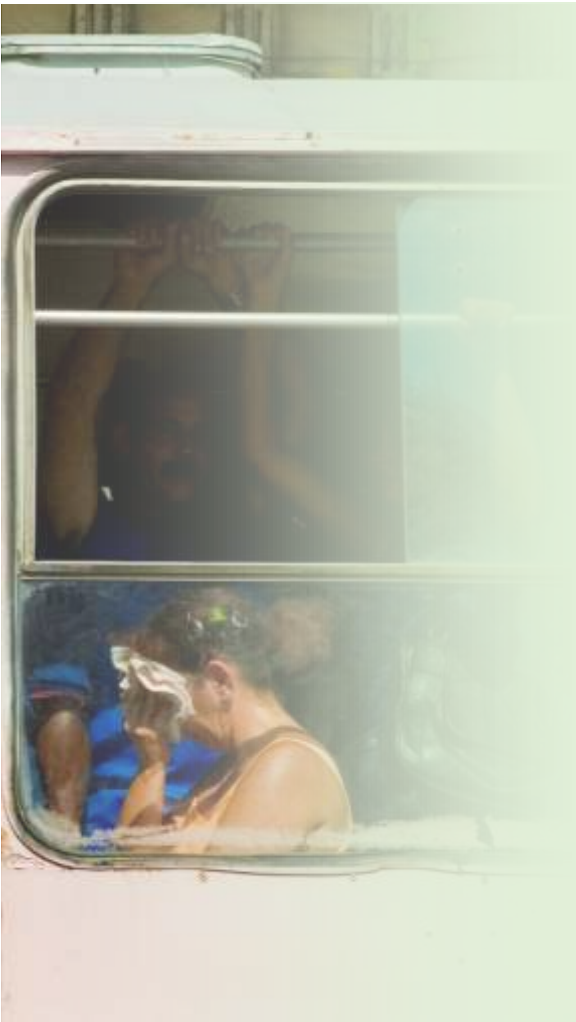
- People will face lower risks at 1.5°C compared to 2°C, in places that already bear disproportionate economic and social challenges to their sustainable development (e.g. West Africa, North Africa).
- Global warming of 1.5°C (as opposed to 2°C) is projected to reduce climate induced impacts on crop yield (maize, rice, wheat, and potentially other cereal crops) in Sub-Saharan Africa and nutritional content (rice and wheat) in West Africa, Southern Africa.
- Risks of food shortages are lower in the Sahel, southern Africa, and the Mediterranean at 1.5°C of global warming when compared to 2°C.



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Projected impacts and risks

- Challenges for poor African populations relating to food and water security, clean energy access, and environmental well-being will be less at 1.5°C vs 2°C
- Risks associated with increases in drought frequency and magnitude are substantially larger at 2°C than at 1.5°C in the Mediterranean region (including Northern Africa) and Southern Africa.
- The largest reductions in growth at 2°C compared to 1.5°C of warming are projected for low- and middle-income countries and regions including Africa.



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Women: 32%

Global Warming of 1.5 °C Authors of the Special Report: Geographic distribution



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INTERGOVERNMENTAL PANEL ON climate change



Thank you

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SPM1

Cumulative emissions of CO₂ and future non-CO₂ radiative forcing determine the probability of limiting warming to 1.5°C

a) Observed global temperature change and modeled responses to stylized anthropogenic emission and forcing pathways

Global warming relative to 1850-1900 (°C)

