Climate Change, Extreme Weather and Climate Hazards

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Key SPM Messages
19 Headlines
on less than 2 pages

Summary for Policymakers
14,000 Words

14 Chapters & Atlas
1,100,000 Words
IPCC Assessment Reports (2008–2014)

Warming of the climate system is unequivocal

Temperature Difference 1901 to 2012 based on trend (°C)
The five hottest summers in Europe occurred after 2001, the five coldest before 1924.

Human influence on the climate system is clear.
modified from IPCC 2014, Fig. SPM.1

IPCC AR5 Working Group I
Climate Change 2013: The Physical Science Basis
Continued emissions will cause further warming and changes in all components of the climate system.
modified from IPCC 2012, Fig. SPM.3
Small shifts in the mean produce large changes in the statistics of extremes.

A 1-in-20 year hottest day is *likely* to become a 1-in-2 year event by the end of the 21st century

⇒ 10× more frequent
Increases in exposure will result in higher direct economic losses from tropical cyclones.

The average tropical cyclone maximum wind speed is *likely* to increase.

Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.
Today we have a choice.