



COP23 FIJI
UN CLIMATE CHANGE CONFERENCE
BONN 2017



Join the conversation:
#ClimateRisk

Insurance and Comprehensive Climate Risk Management – Addressing Needs of the Poor & Vulnerable

Chair: Simone Ruiz, Allianz Climate Solutions | @sruizvergote

Panel:

- Joanna Haigh, Grantham Institute, Imperial College London | @Grantham_IC
- Soenke Kreft, Munich Climate Insurance Initiative | @_MCII_
- Christian Barthelt, Munich Re Foundation | @MunichReFound
- Admasu Feyisa, Ministry of Finance and Economic Cooperation (Federal Democratic Republic of Ethiopia) | @TweetMofED

Climate change impacts and extreme events

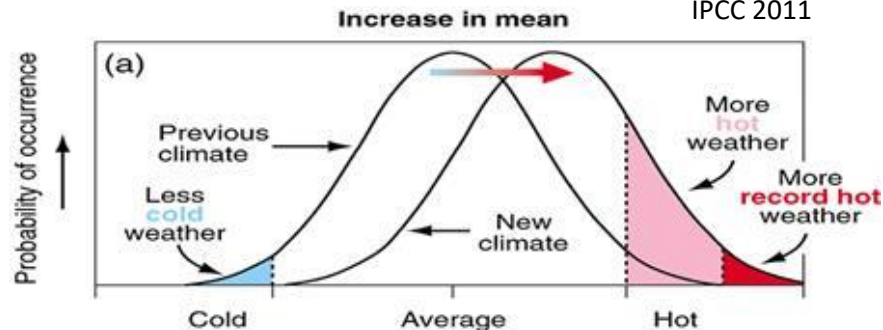
Joanna Haigh

COP23 event on climate change impacts
and insurance

Bonn 7 Nov 2017

Impacts arise from changes in:

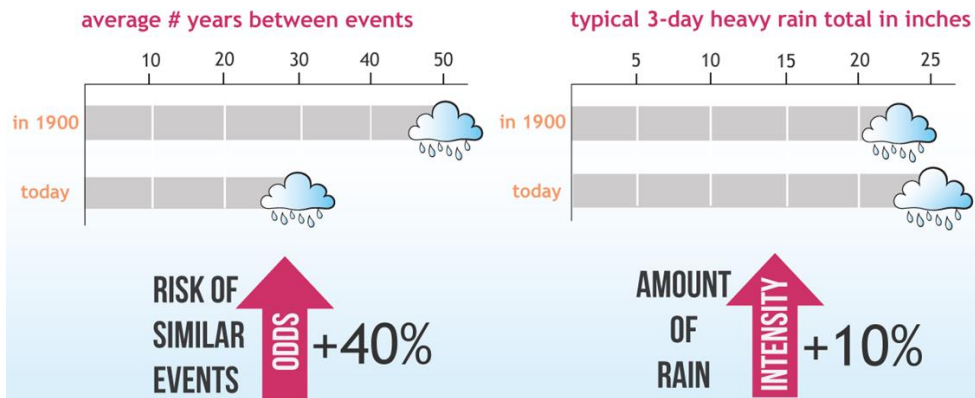
- average conditions
- extremes



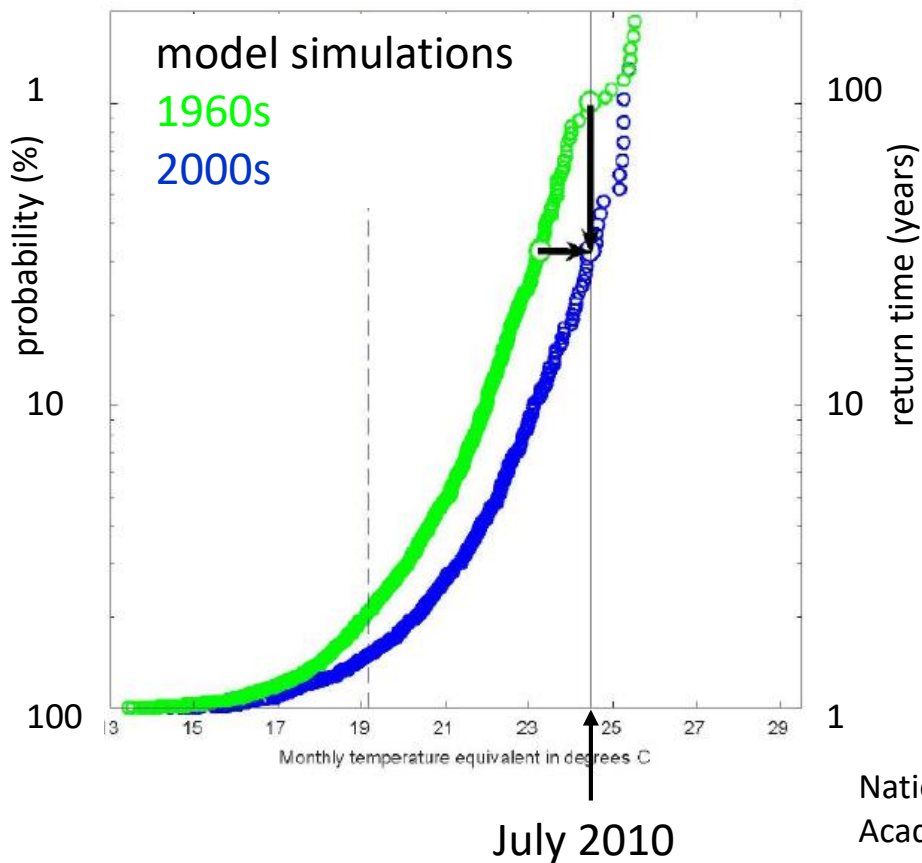
How does climate change affect the occurrence and/or severity of extreme weather events?

e.g. Gulf of Mexico heavy rain events Aug 2016

How can we attribute a particular event to climate change?

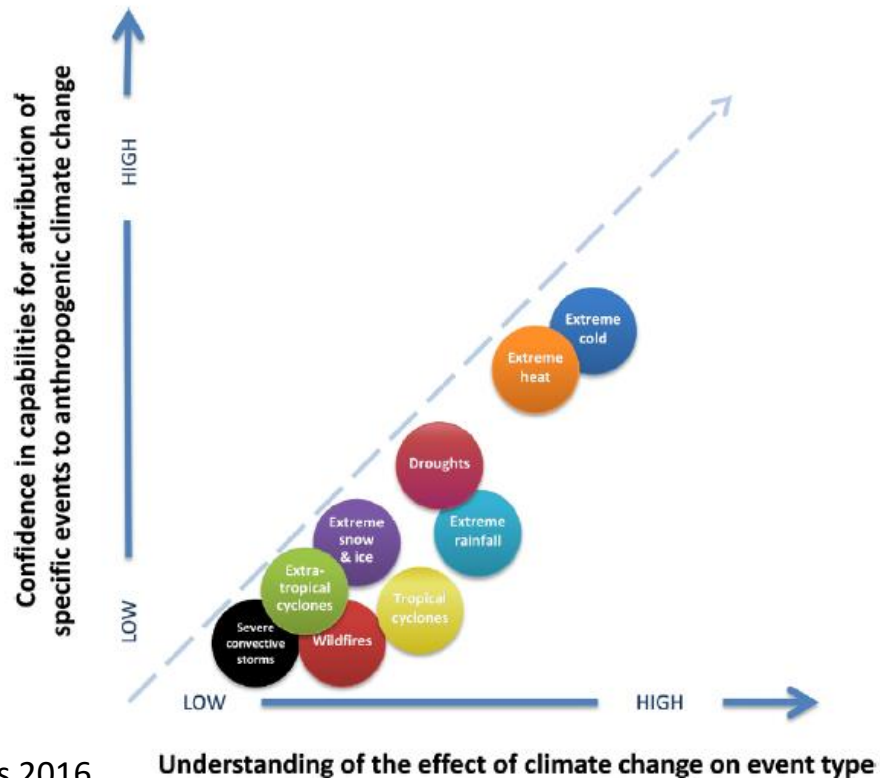


Russian heat waves 2010



National Academies 2016

Different challenges for each event type



Evidence for human-influenced climate change was identified for:

- Ten extreme heat events, including heat waves in Europe, India, Pakistan, China, Indonesia, Japan, and Australia
- The record average global temperature in 2015
- Record-low Arctic sea ice in March
- Alaska's intense wildfire season
- Extreme drought in southwestern Canada
- Extreme May rainfall in southeast China
- Florida's “sunny day” flood in September
- Record winter sunshine in the United Kingdom

Attribution of extreme events 2015

BAMS 2016

No climate change signal was found for:

- Outbreaks of extreme cold in the eastern US and Canada
- The late onset of Nigeria's spring rainy season
- Heavy daily precipitation in December over Chennai, India

Current C emissions pathway will result by 2100 in...



2 billion people with increased water scarcity

10-12 billion person-exposures to heatwaves/year



70-90 million people/year affected by river flooding

Cooling demands 2x



50% of plant species lose > half habitat

60% of cropland less suitable for agriculture



AVOID2
Can we avoid dangerous climate change?