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The feasibility of an inventory of impacts of anthropogenic climate change

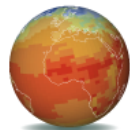


Loss and damage?

“the actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems”



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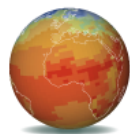
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Impacts of *climate change*



Figure 18-3 IPCC AR5 WGII



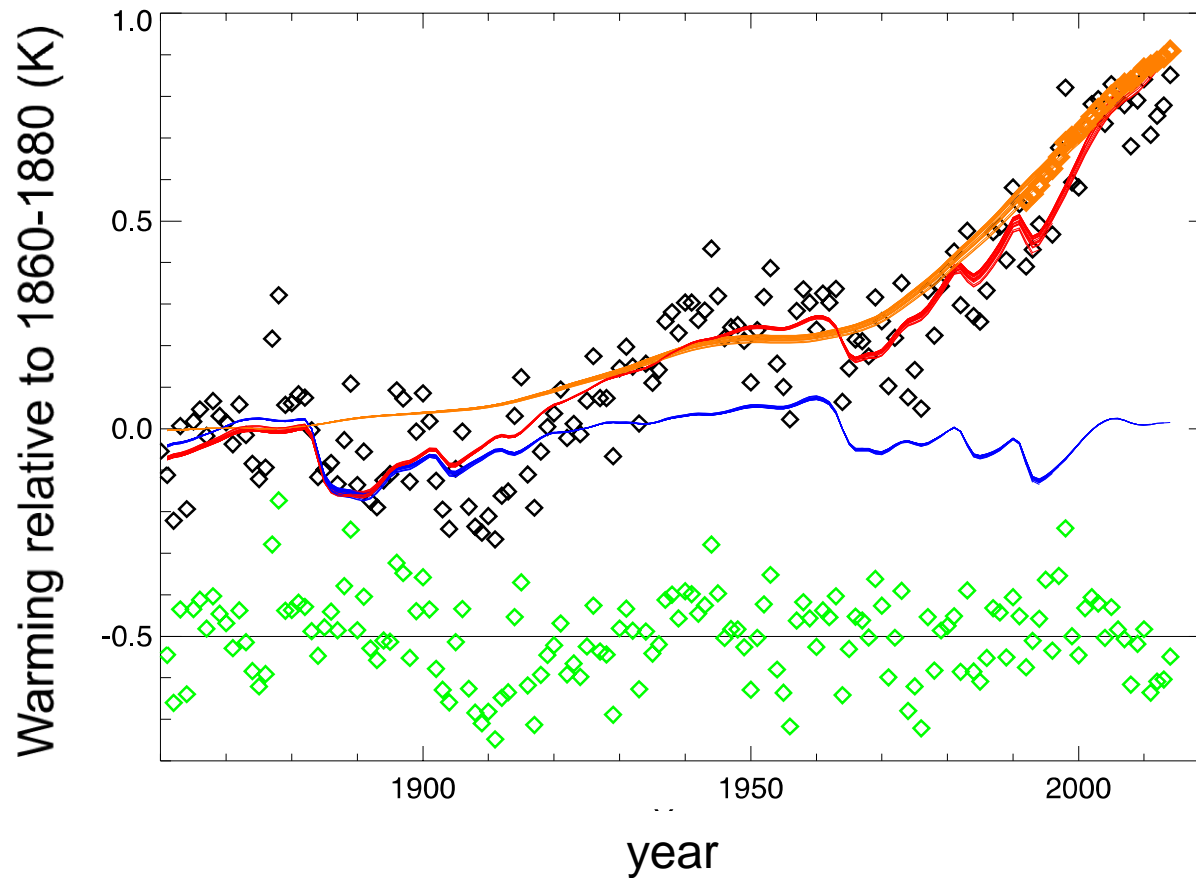
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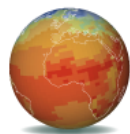
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Attribution of slow-onset phenomena is comparably straight forward



Otto et al., 2015



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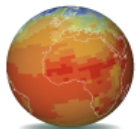
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Inventory of impacts of *anthropogenic* climate change



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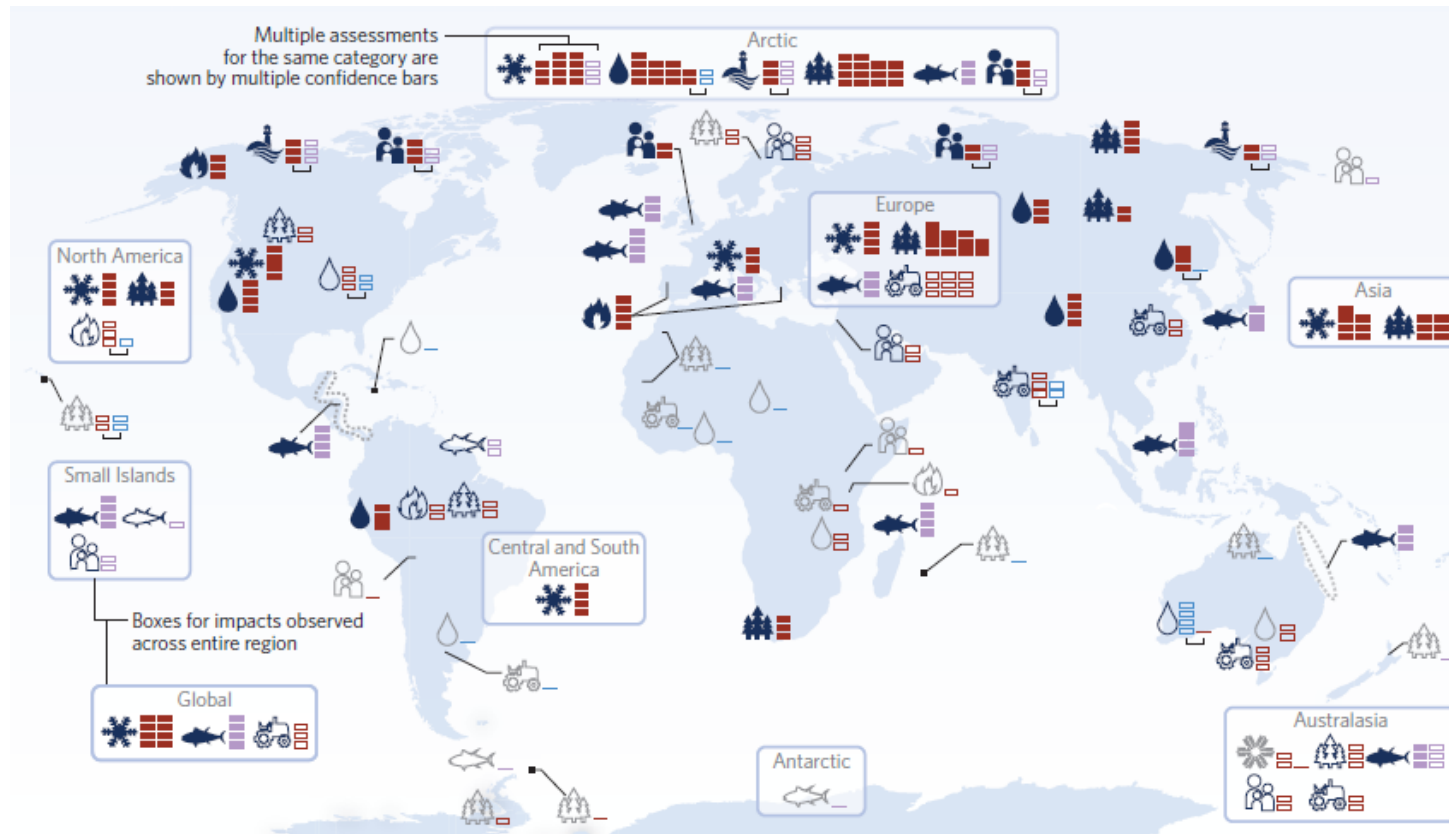
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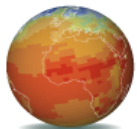
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But, what about extreme events?



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Hansen & Stone 2015

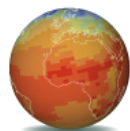
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High-impact, extreme weather events are more likely to cause loss and damage, at least in the short term.



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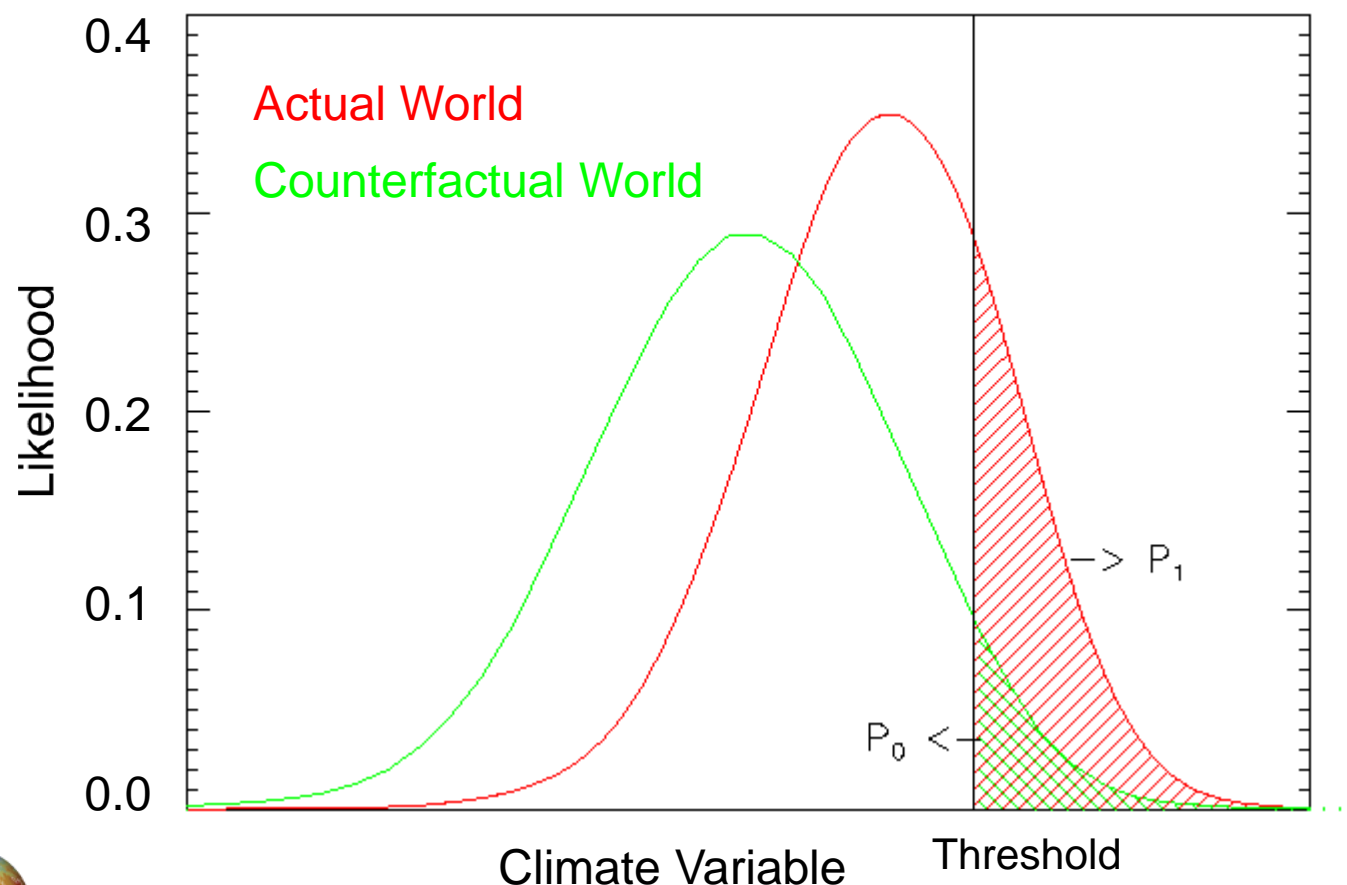
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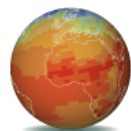
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Generally impossible to say “this event would not have occurred without human influence”, ...



Stott et al. 2015



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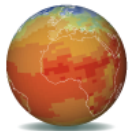
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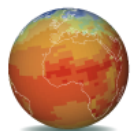
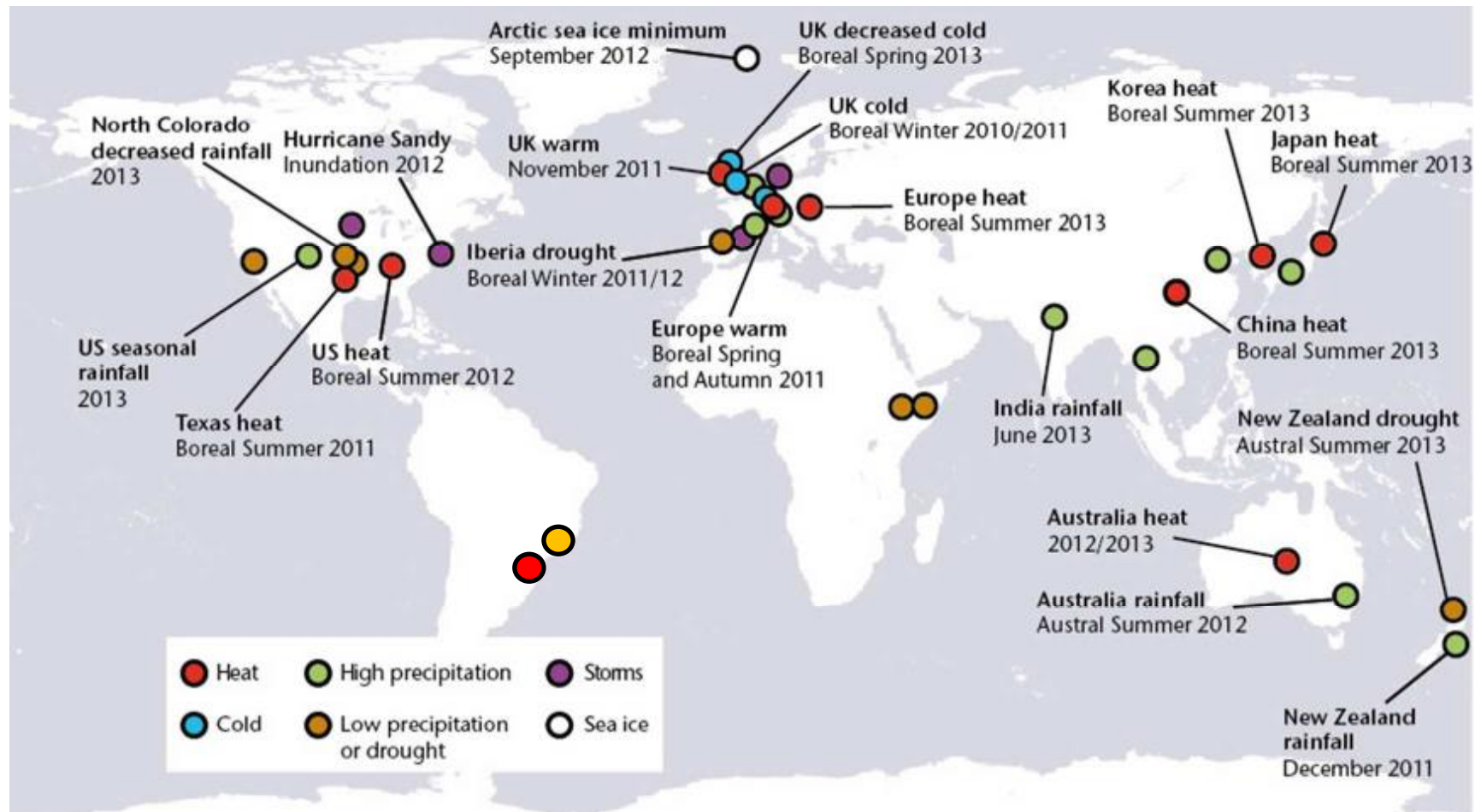
... but we can ask how the risk of *this type of* extreme event occurring has changed due to external factors

Possible outcomes of an attribution study:

1. The event was made more likely due to anthropogenic climate change
2. The event was made less likely due to anthropogenic climate change
3. Anthropogenic climate change did not alter the frequency of occurrence of the event
4. With our current understanding and tools we cannot assess whether and how the event was influenced by anthropogenic climate change



Extreme events analysed wrt attribution to *anthropogenic* climate change



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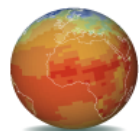
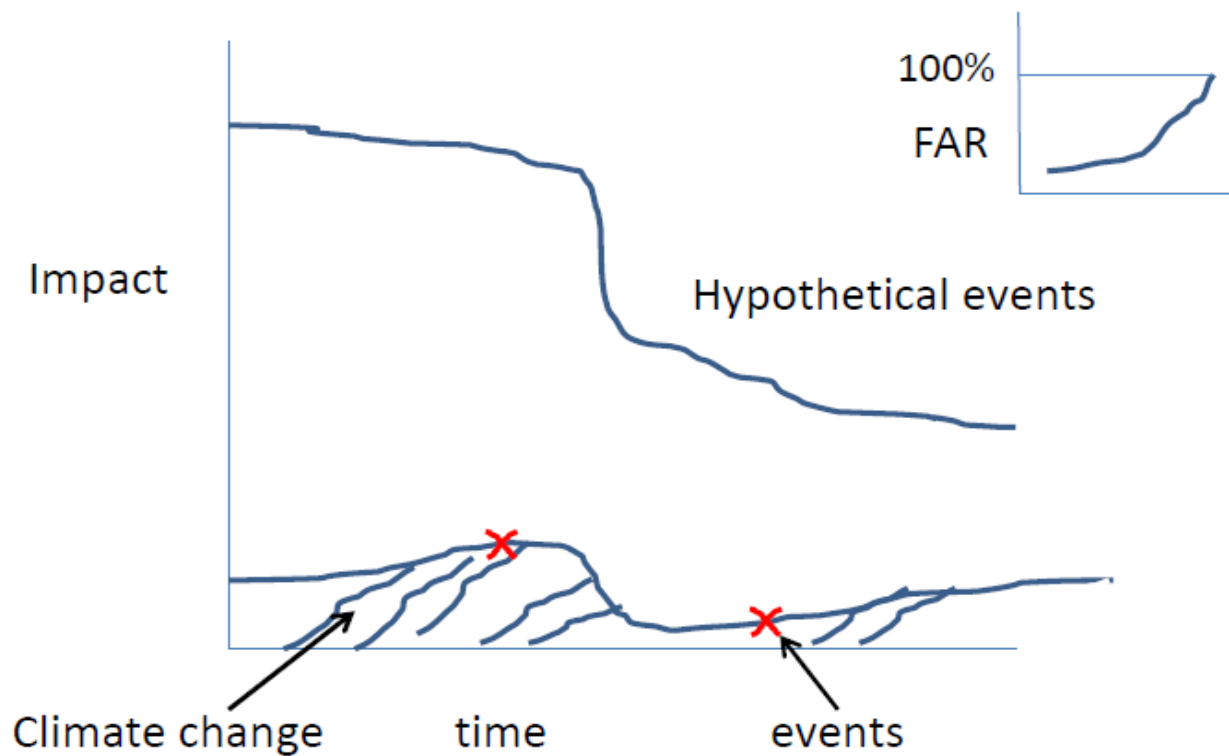
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Modified from Herring et al., 2014

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Damages and impacts



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Paris agreement article 50:

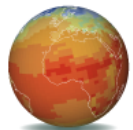
..... to develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change; ...

..



#everydayclimatechange+

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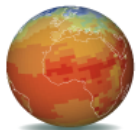
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An invitation we can't reject!

21. *Invites* the Intergovernmental Panel on Climate Change to provide a special report in 2018 on the impacts of global warming of 1.5 ° C above preindustrial levels and related global greenhouse gas emission pathways;



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