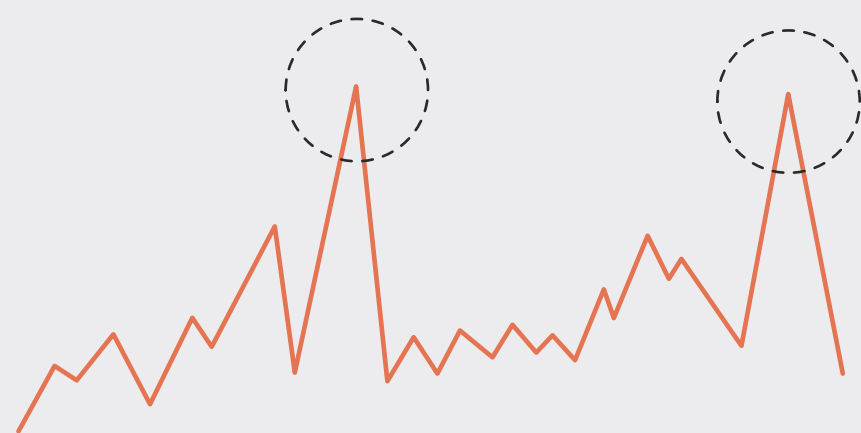


Assessing China's risk to climate related extremes

What is UNSEEN (UNprecedented Simulation of Extremes with ENsembles)?

Innovative technique



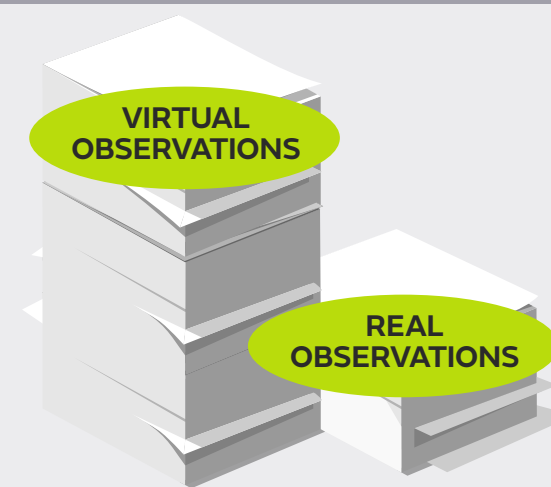
Simulates extreme events that haven't been recorded yet but could occur.

Super computer modelling



Enables multiple simulations of the current climate.

Virtual observations



Creates library of virtual observations increasing available data by one hundredfold.

What does UNSEEN tell us?

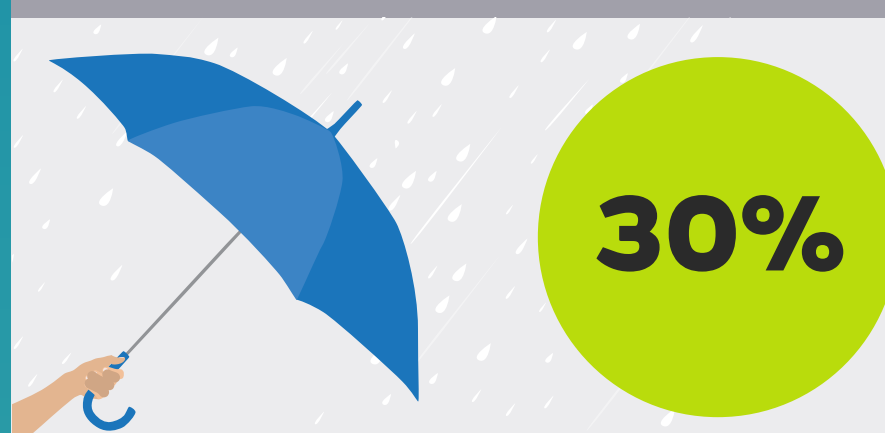
Extreme summer temperatures in China



In Southeast China, there is a 10% risk of an unprecedented hot summer month*

*July or August

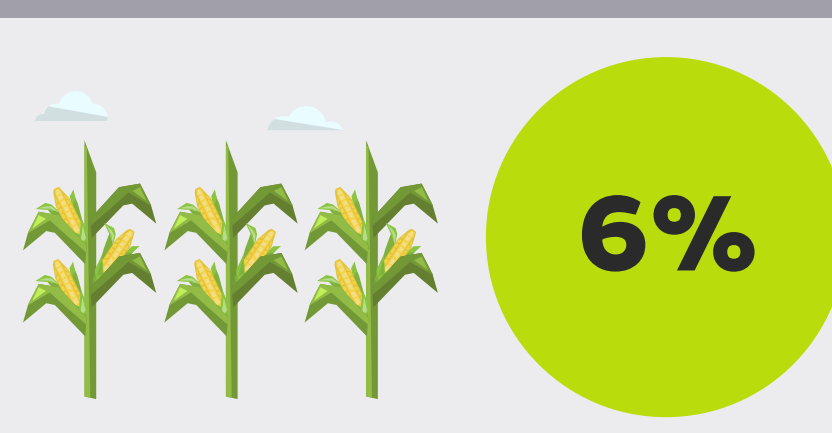
UK winter rainfall extremes



30% risk of record rainfall occurring in at least 1 region* in any given Winter (Oct-Mar)

*England and Wales - UK's National Flood Resilience Review (2016)

Global maize supply resilience



6% risk of maize crop failure simultaneously in China and USA over coming decade.

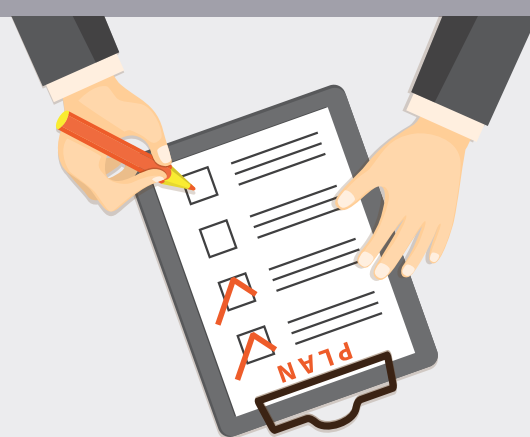
How can UNSEEN benefit decision makers and global populations?

Understanding risk of extreme events



Improves knowledge of extremes. Events of a higher magnitude than experienced are possible under the current climate.

Building climate resilience



Anticipating high-impact events enables estimation of risks and forward planning.

Global food security



Understanding risk of simultaneous crop failure which would result in supply falling and prices rising.

UNSEEN - UNprecedented Simulation of Extremes with ENsembles – is a technique developed as part of the Climate Science for Service Partnership (CSSP) China. The technique has since been used to simulate high-impact events in China, UK and globally. This includes through the Strategic Priorities Fund UK Climate Resilience programme and new work within the UK aid-funded Asia Regional Resilience to a Changing Climate (ARRCC) programme.



CSSP China is part of the Weather and Climate Science for Service Partnership Programme, supported by the UK-China Research and Innovation Partnership Fund as part of the Newton Fund.

SUSTAINABLE DEVELOPMENT GOALS

