

Climate Change: what it will mean for Cheshire West and Chester

Roy Alexander

RSK Professor of Environmental Sustainability
University of Chester

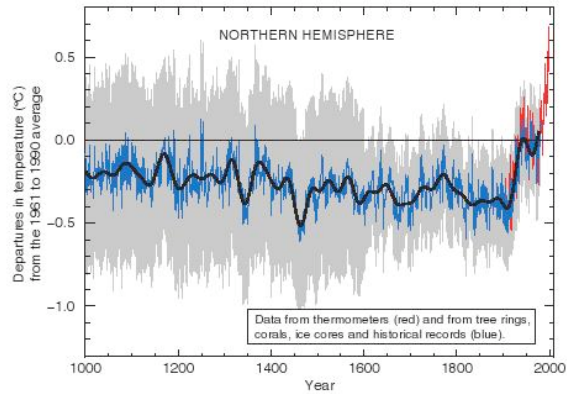


Structure

- Context
- Some projections for the area:
 - Temperature projections
 - Rainfall projections
- Some key findings from our Local Climate Impact Profile (LCLIP) work.
- Recommendations
- Q & A



Unprecedented temperature rise

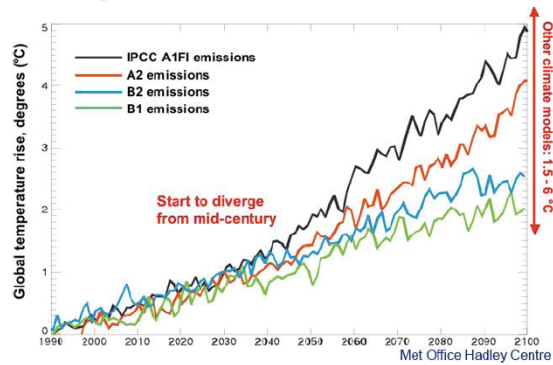


The famous “Hockey Stick” graph published in 1998 which caused much controversy but has been supported by subsequent work.



Climate Change

Climate change is unavoidable



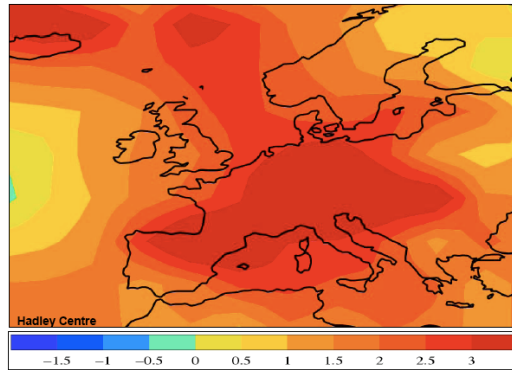
Scenarios:

- A1F1 - Fossil intensive
- A2 - High Pop growth, slow economic and technical change
- B2 - Intermediate pop and econ growth, local sustainability solutions
- B1 - Convergent world; same pop as A1 but rapid change to service/info economy



Remember 2003?

Recent extreme event: the heat wave in Europe of 2003



Europe:

30,000 deaths attributed to the heat wave

Forest fires and crop damage seriously impacted economy

Economic losses in excess of £7.5bn

England (3-14/8/03):

Excess mortality

All ages: 2091(17%)

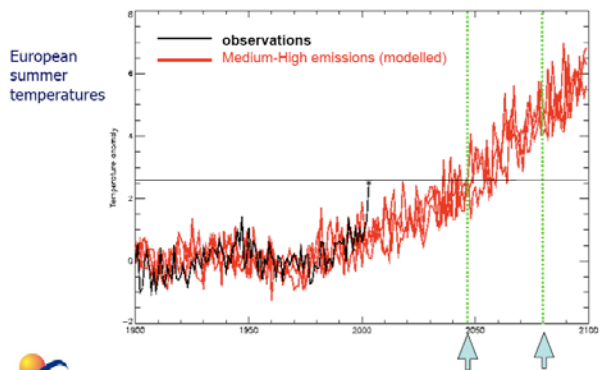
>75: 1781(23%)

Emergency hospital admissions (>75)
1490 (6%)



Remember 2003?

The type of 2003 summer could be normal by 2040s and cool by 2080s

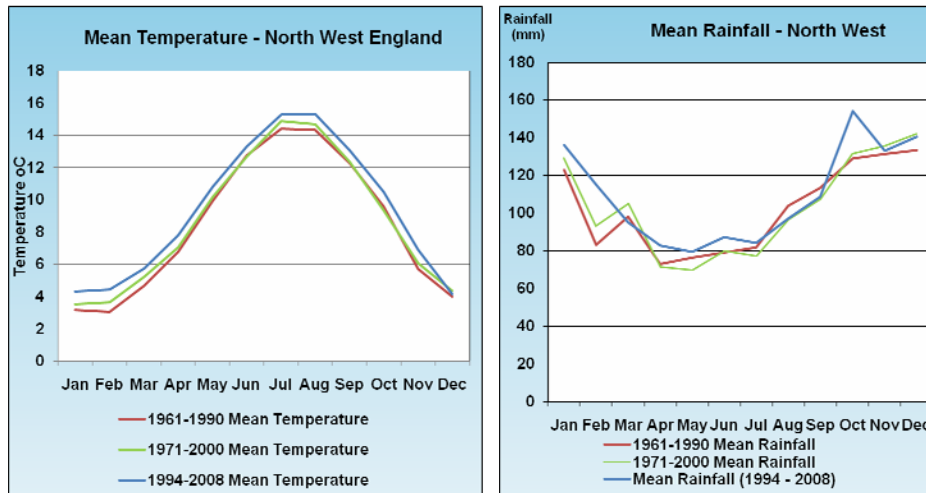


Source: Peter Stott, Hadley Centre

Hence both mitigation and adaptation are essential



Change has already happened



Both temperature and Autumn/Winter rainfall have increased

Data from Met Office

What might this mean for us?

- **Hotter Drier Summers/Heatwave**
 - Premises overheating increasing heat stress of staff - rising energy use/bills for cooling
 - Highway damage impacts on local economy - freight/materials/services to businesses
 - Increased fire risk – 1°C rise increases wildfires incidents by 28%
 - Increased outdoor activity – rising levels of health and wellbeing in communities
 - Opportunity - cafe culture, leisure, tourism, product/market diversification, technology



What might this mean for us?

- **Warmer, Wetter Winters**
 - Rising levels of damp – increased levels of respiratory illness amongst vulnerable
 - Infrastructural/building damage - rising costs due to increased repairs
 - Increased risk of slips, trips, falls
 - Opportunities – business diversification into new technologies, products, services
- **Flooding/Storms**
 - Impact on local economy - 60%+ of firms suffer disaster not trading two years later
 - Rising insurance/uninsurable premises – closure/migration of businesses
 - Loss of traditional support structures – schools, community facilities etc closed down



Local Climate Impact Profile

- A Local Climate Impact Profile (LCLIP) provides a sound basis for judging what needs to be done. It involves:
 - looking at extreme weather events and their impacts in the recent past
 - Using these to gauge the implications of future climate change for the area and ...
 - Developing appropriate adaptation strategies to minimise the impacts



An LCLIP for CWaC

- Recently completed a Local Climate Impact profile for Cheshire West and Chester.
- Researched extreme weather events in the area during the past 16 years and looked at their impacts to get an idea of what the future may bring if projections become reality
- Media search: On line and paper (first 6 pages)

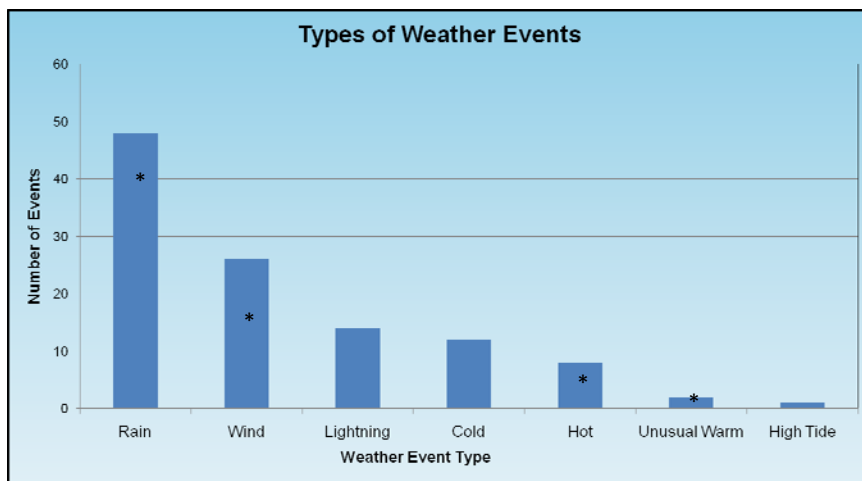


Weather Events

- Flood, heavy rain, flash flood
- Heatwave, warm, hot, dry
- Storms, high winds, gales
- Freezing conditions: snow, ice, fog
- Thunder/lightning storms
- Unseasonably warm weather (winter)
- High Tides

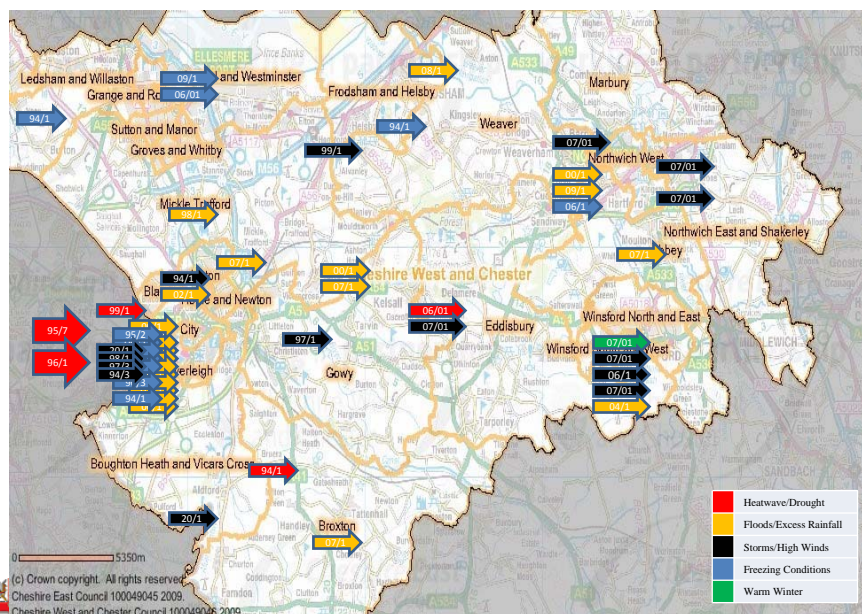


Weather Events - Type



* Most likely to increase under UKCP09 scenarios?





West Cheshire and Chester: Significant Weather Events 1994 - 2009



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 Cheshire East Council 100049045 2009.
 Cheshire West and Chester Council 100049046 2009.

Winter 09/10 big freeze – everywhere!

Impacts & Consequences

Weather Event	Impacts
 Heavy Rain (16 events)	<ul style="list-style-type: none"> • Road closure (flooding & collisions) • Business/school closures • Homes flooded - evacuation • Businesses flooded • Sewage • Disruption to transport services 
 Freezing Conditions: Snow, ice, fog (13 events)	<ul style="list-style-type: none"> • Increase in calls to emergency services • Gritting • Clearing roads • Schools closed • Businesses closed • Disruption to public transport • Refuse collection disrupted • Roads closed - collisions 



Impacts & Consequences

Weather Event	Impacts
 Strong Winds/Gales (12 Events)	<ul style="list-style-type: none"> • Roads closed – collisions/accidents • Damage to properties • Fallen trees • Roofs blown off • Boats torn from mooring • Loss of electricity • Schools closed 
 Dry Hot/Warm Weather (12 Events)	<ul style="list-style-type: none"> • Increase in grass / forest fires • Water shortage • Increase in heat related illnesses • Boost for tourist trade • Noise pollution • Road collisions – roads like ice 



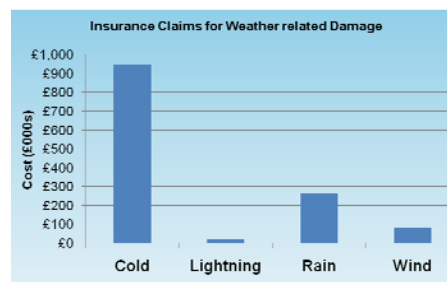
Next Steps

- It is essential to take action on mitigation but we must also be prepared to adapt to some inevitable change.
- Following identification of events and their impacts the next stage of the LCLiP was to speak to senior council officers to validate and quantify their costs.
- Combining what we know about the impacts of past events with a more detailed analysis of the likelihood of their future occurrence is critical in building adaptation into future planning.



Costs

- Historic CCC Insurance claim data: 1994 – 2010
- Estimated Cost £1.3m > winter overspend (£950,000)
- Excess £100K/50K/30K – employee/public/building liability > dealt with internally
- Only storm inc heavy rainfall, lightning and severe winds damage
- Directorates/schools claim: Services handling internally don't claim
- Hidden costs: £1 spent on insurance claim £8 - £36 spent on hidden costs.
- Cheshire County Council costs from £10.4 - 46.8m



Recommendations

10.1. Baseline:

- Knowledge base to ensure UKCP09 Projections analysed/implications identified
- Record > extreme weather events: Impacts/costs/hidden costs
- Data analysis > current/future costs - UKCP09 Projections
- Headline indicators – Awareness/Understanding - implications of climate change

10.2. Staff

- Step change in staff awareness.
- Key staff assigned/sanctioned/authorised
- Directorate workshops - All Directorates
- Corporate working group - senior officers



Recommendations - Robin

10.3 Risk Assessments

- Structured/documentated risk assessment
- Internal
- External
- All Council Directorates.
- Viable cross service working options

10.4 Strategy/ Policy

- Proactive approach
- Corporate Strategy/Policy
- All Directorates, Services, Departments, Teams and Officers - aware/understand their role



Recommendations

10.5 Action Plan

- Comprehensive/Resourced
- Proactive
- Objectives and Targets
- Agreed/Identified/Responsible – Officers
- Agreed/enforced/reported

10.6 Partnership

- Impacts will cut across all traditional boundaries /affect each and every one of us.
- Appropriate/Relevant partnerships
- Best practice sharing
- Key LSP Partners
- Framework – Policy/Strategy/Action Plan/Ownership



Thanks for listening !!

