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Representing the Creating the
Greenest County Delivery Partnership

July 2009



Suffolk
Creating the Greenest County

www.greensuffolk.org



Creating the Greenest County - Our challenges



Climate mitigation: reducing the impact



Climate adaptation: managing the change

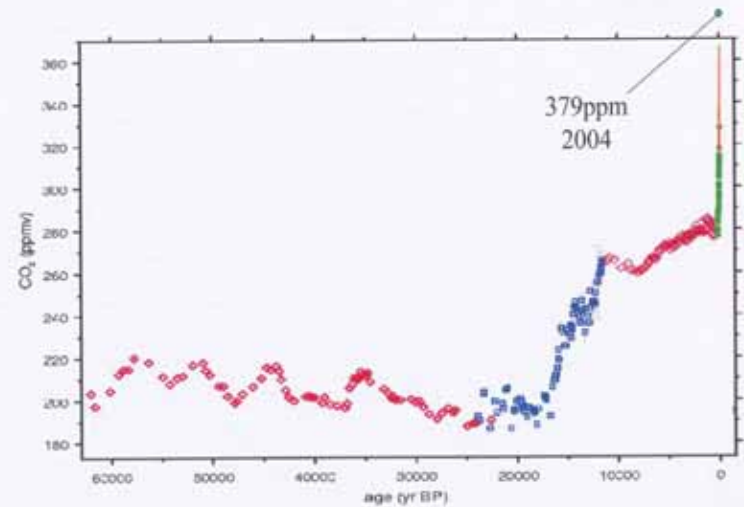


Protecting and enhancing our environment

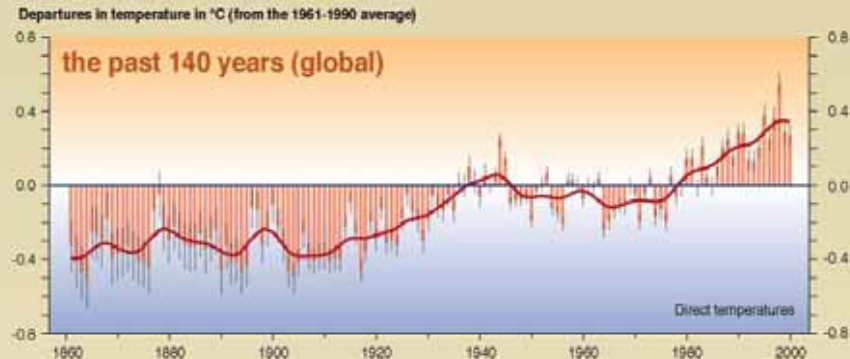
Why adapt?

- Climate change is happening even the sceptics accept this, they just disagree about the cause .
- Even if we switch all the lights off today, we still have to deal with many decades of climate change.
- The debate may continue but every day without adaptation action will raise the cost.
- Consequently...

Carbon dioxide levels over the last 60,000 years



Variations of the Earth's surface temperature for...



Decisions based on historic climate data are no longer as robust

Europe summer 2003:
US\$15bn economic losses,
30,000 fatalities



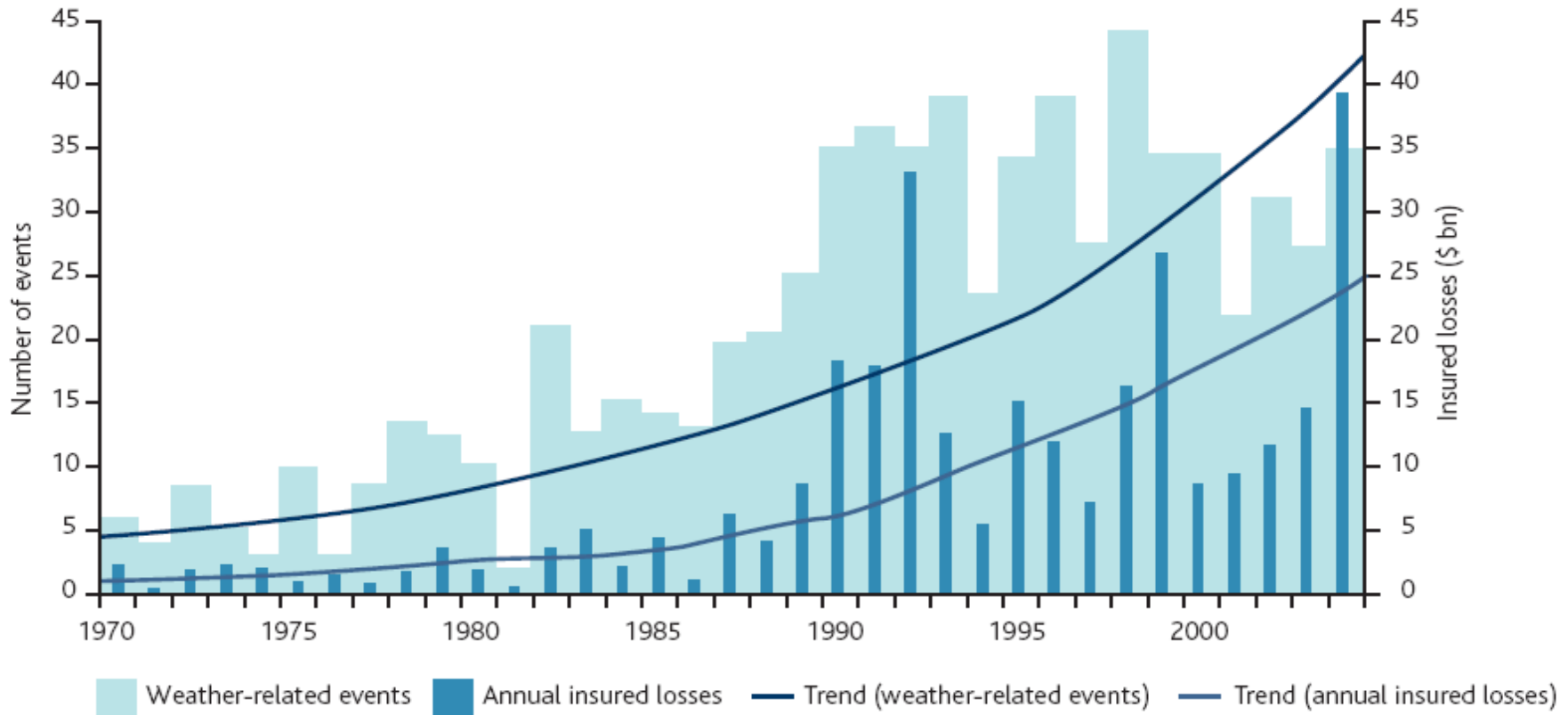
Hurricane Katrina:
US\$40bn-60bn insured
losses, 1,200 fatalities



- Increasing variability
- Temperatures increasing
- Heat wave risk increasing
- Rainfall patterns changing
- Drought, flood risk increasing
- Sea level rise
- Increased storm intensity and frequency

By 2040, summers like 2003 will be considered normal and by 2080, cool

It's not an environmental issue – it's risk management



Weather related catastrophes and insured losses

Source: Financial risks of climate change ABI, 2005.

Report prepared by Acclimatise

What do Councils need to do to manage the risk?

- Understand how climate change will affect the services and infrastructure which they are responsible for
- Assess the potential significance of the impacts
- Plan what can be done to adapt or prepare for the impacts
- Define when action will be taken (short, medium or long term)

We have begun: Local Climate Impacts Profile

A first step, not the end product

This LCLIP aimed to:

- Raise awareness of the potential impact on council services of extreme weather events.
- Begin to assess the cost and other implications of these weather events on our public services.
- Highlight the potential scale and frequency of future impacts in order to identify both risks and opportunities.
- Provide information to justify adaptation measures relating to potential future climate change.



November 2007 Tidal Surge

Total Cost = ~ £83,332

- Suffolk escaped devastating floods by 3cm but the county still spent a lot of time and money in preparing for the predicted impacts.
- Flooding was seen at various breach points, e.g. the A12 at Blythburgh, this had knock on affects for various services.



Photo 3: A12 road closed due to flood from adjacent land (A12 looking north)

- Many lessons were learnt and best practice refined for future extreme tidal surges.



January 2007 Gale

Total Cost = ~ £123,455

- This event was more destructive because it occurred in the middle of the afternoon.
- Noticeable difference in fallen trees when comparing the similar wind speeds of this event with the 1987 gale. This change is partly due to the setup of annual tree health inspections.
- The changes in modern building design and tree inspection show that a **proactive** approach works in mitigating against gale damage.



July 2006 Heat wave

Total Cost = ~ £485,000

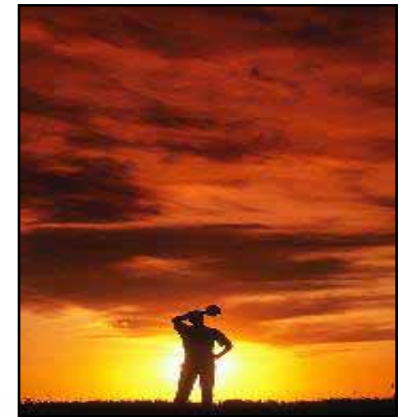


- The heat wave lasted longer than other extreme events and the impacts and costs to services built up slowly.



- Office work was disrupted because employees start to get lethargic with the heat and consequently could not concentrate on their work.

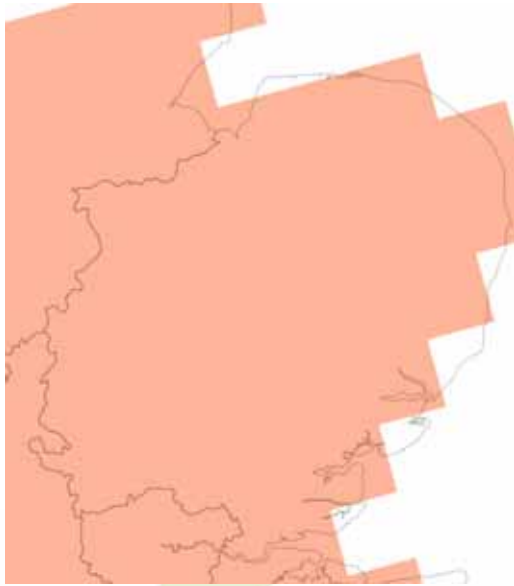
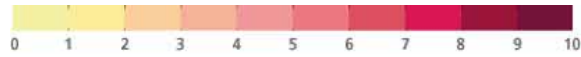
- Outside workers either had to take shelter in the hottest part of the day or were allowed to start their shifts earlier in the day.



Conclusions

- Not every service was affected by these specific events and impacts varied enormously depending on the nature of the service.
- Records were not sufficient to easily gather information on how services were affected by extreme weather.
- This leads to LCLIP cost being potentially underestimated and therefore a new monitoring systems needs to be setup centrally.
- It's often cheaper to act now.
- Many adaptations have the potential for a win win outcome.
- Great benefits to Councils working in partnership.

For summer average temperature, we see significant increases over the decades to the 2080

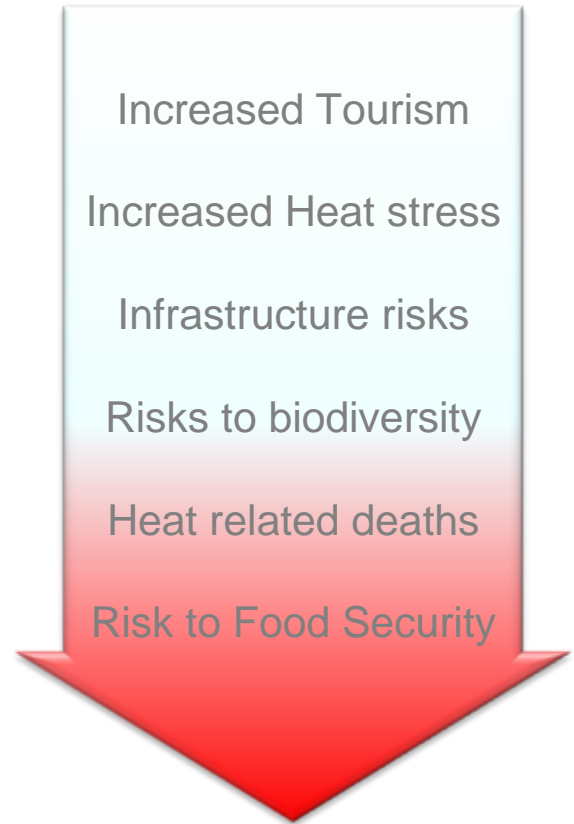


2020
+1.4°C

2040
+2.1°C

2080
+3.6°C

East England
central estimate
Medium emissions

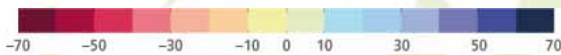
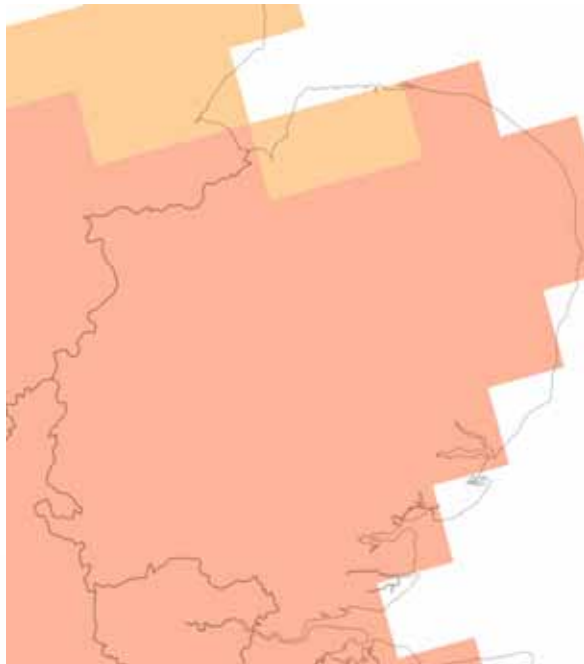


But the temperature on the hottest day of the year could increase by up to 9°C

The change for the 2080s is very unlikely to be less than 1.9°C and very unlikely to be more than 5.9°C



For rainfall we could see significant summer decreases

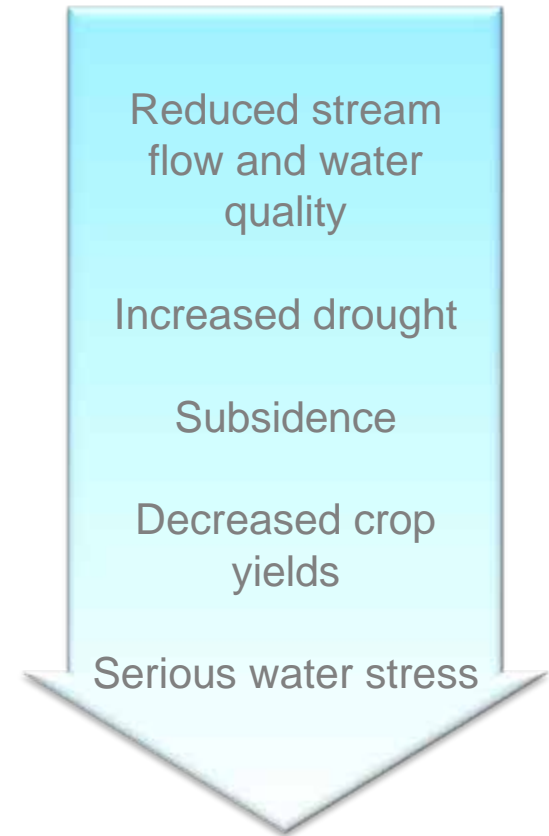


2020
-6%

2040
-11%

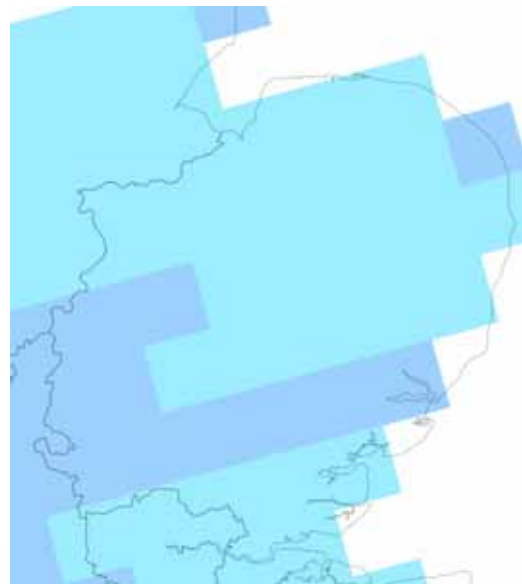
2080
-20%

East England
central estimate
Medium emissions



For the 2080s the change is very unlikely to be lower than -44% and very unlikely to be higher than +6%

For rainfall we see significant winter increases



2020
+6%

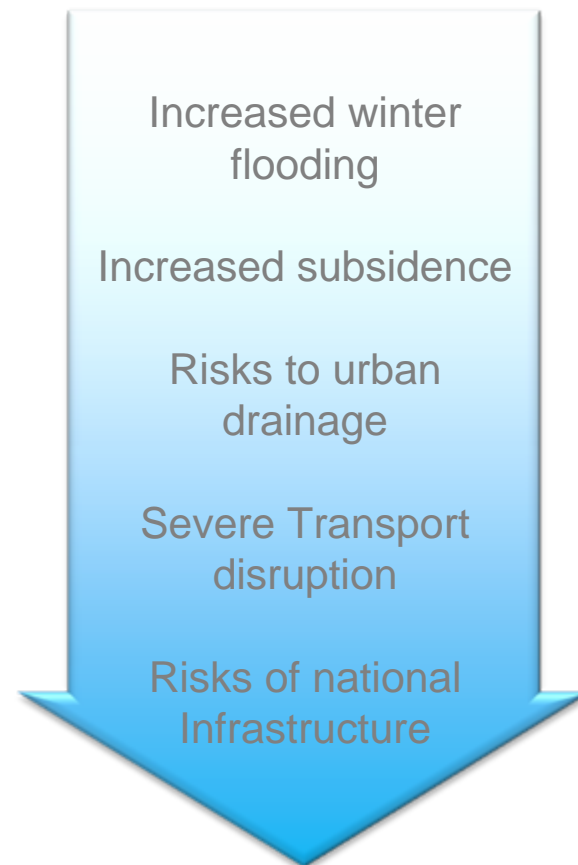


2040
+12%



2080
+20%

East England
central estimate
Medium Emissions

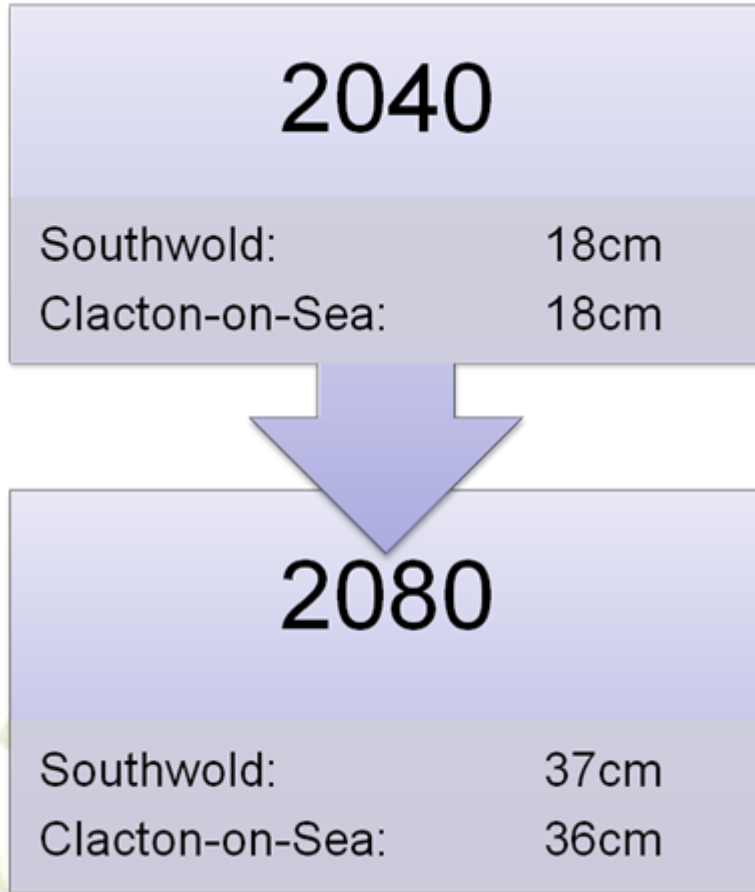


But rainfall on the wettest day of the year could increase by up to 41%.

For the 2080s the change is very unlikely to be lower than +4% and very unlikely to be higher than +44%



Relative Sea Level Rise (medium emissions, 50th percentile)



Next steps within local authorities – linked to government targets

LEVEL 1 – by April 2009	2008/09	2009/10	2010/11
Public Commitment made.			
Council leaders & senior management aware of developing adaptation programme.			
Vulnerabilities & Opportunities identified.			
Impact assessments carried out.			
Service Heads aware of all vulnerabilities through prioritised assessments.			
LEVEL 2 – by April 2010			
Partnership working to develop adaptation action plan.			
Action plan drawn up based on previously identified vulnerabilities & opportunities.			
Implementation of action plan started focused on key priority areas.			
Risk management plans drawn up for other vulnerabilities.			
LEVEL 3 – by April 2011			
Action plan drawn together with all other relevant partners.			
Adaptation embedded in decision making processes and across all its service areas.			
Action to be taken for <u>all</u> priority areas either on the ground or by risk management.			

Next steps across Suffolk

- **“Business LCLIP”** – working with small businesses in key sectors to better raise awareness of opportunities and risks.
- **Creating the Greenest County Conference – 2nd October 2009** – what does adaptation mean for Suffolk’s communities and businesses, practical advice and producing an action plan.





Lets not wait for climate change to impact us but adapt with it to grab new opportunities.

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