Heat Risk and Climate Change in London

From emergency response to year-round resilience: managing heat in London

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CLIMATE


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LSx
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UCL


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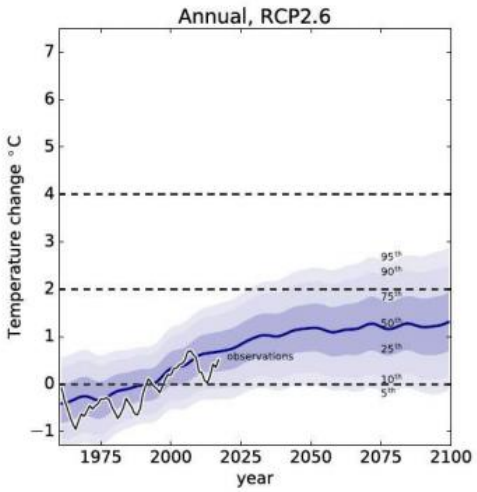
Thames
Water

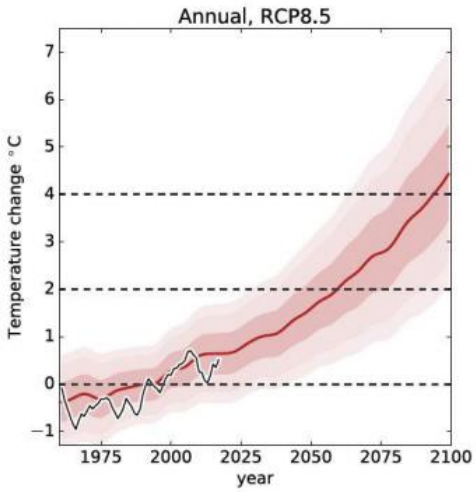

LONDON
COUNCILS

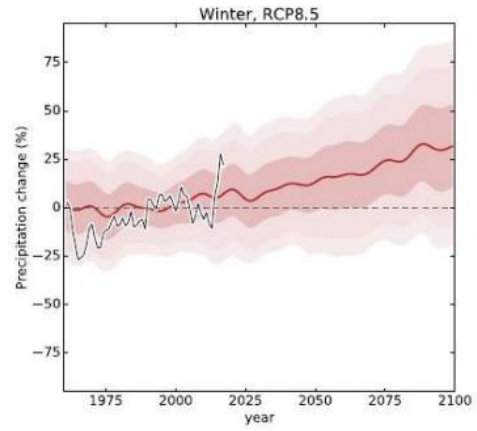

ice

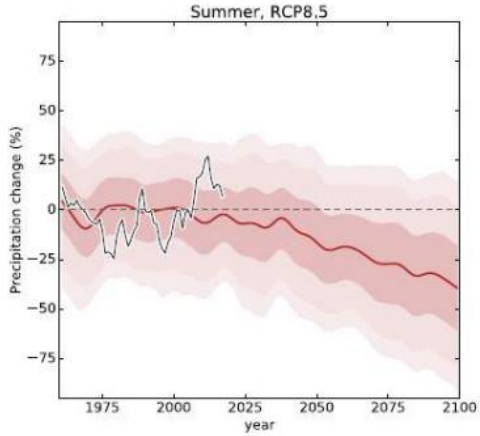
Climate change…

- Hotter, drier summers
- Warmer, wetter winters
- More frequent/severe extreme weather









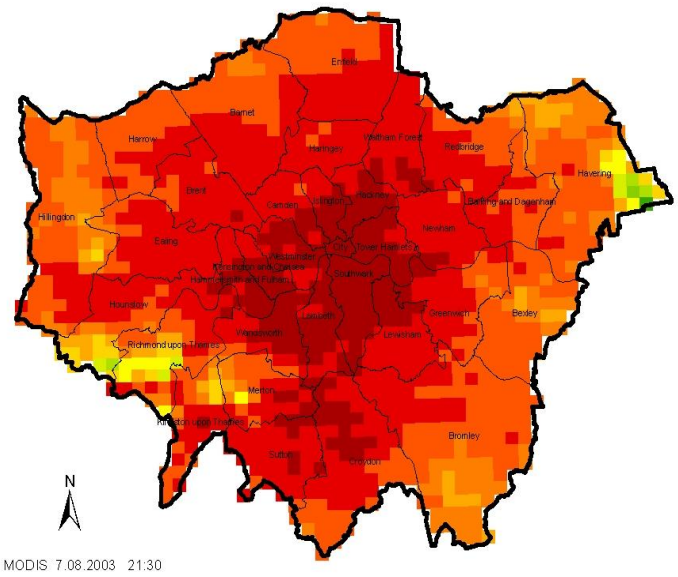
Met Office UKCP18

…and what it means for health

- Direct impacts on people's health
- Impacts on delivery of health services
- Demand for emergency response from extreme weather

Hot weather and impacts

Temperature distribution in London, August 2003



MODIS 7.08.2003 21:30

- Heat already impacts services and people
- Buildings
- It’s not just about heatwaves
- Urban Heat Island
- Impacts not equal or fair

Care homes (Gupta, et al., 2016)

- **Buildings** - risk of summertime overheating, especially during short-term heat waves with indoor temperatures nearly 30ºC in communal areas and resident rooms.

- **Non-structural** - fixed daily routines of residents make it difficult to accommodate periods of intense heat; management systems do not always allow staff to alter temperatures; a culture focused on cold as the main climate risk

Heat impacts on emergency response

Changes to risks requiring Fire and Rescue response:

- Wildfire
- Fire behaviour and likelihood
- Transport incidents due to heat on rail, in tunnels

Changes to capacity to respond:

- Reduced availability of water: impact on operations and alternatives
- Impact of heat on safety of emergency responders

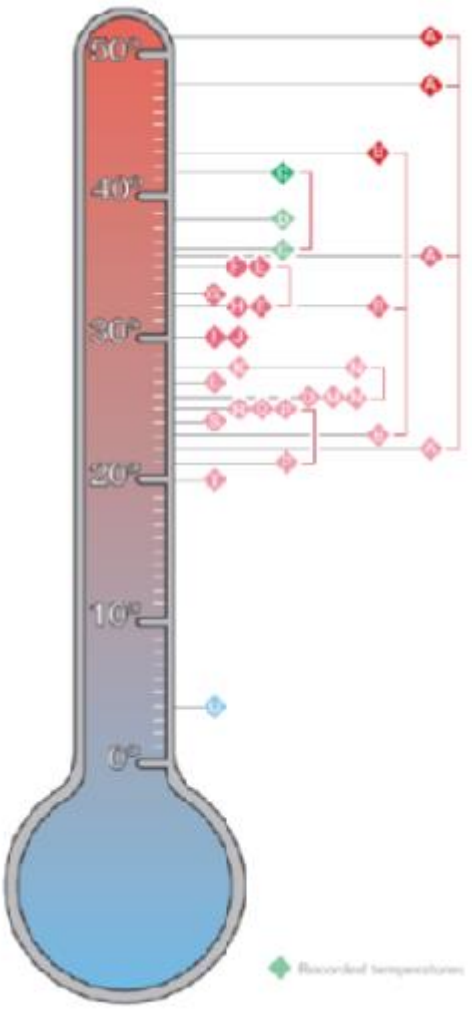
Heat Thresholds for London

- 24° C – London Underground enacts overheating plans - public health comms and measures to prevent tracks from buckling

- 24.7° C – over two days: greater incidences of morbidity, mortality, and hospital admissions

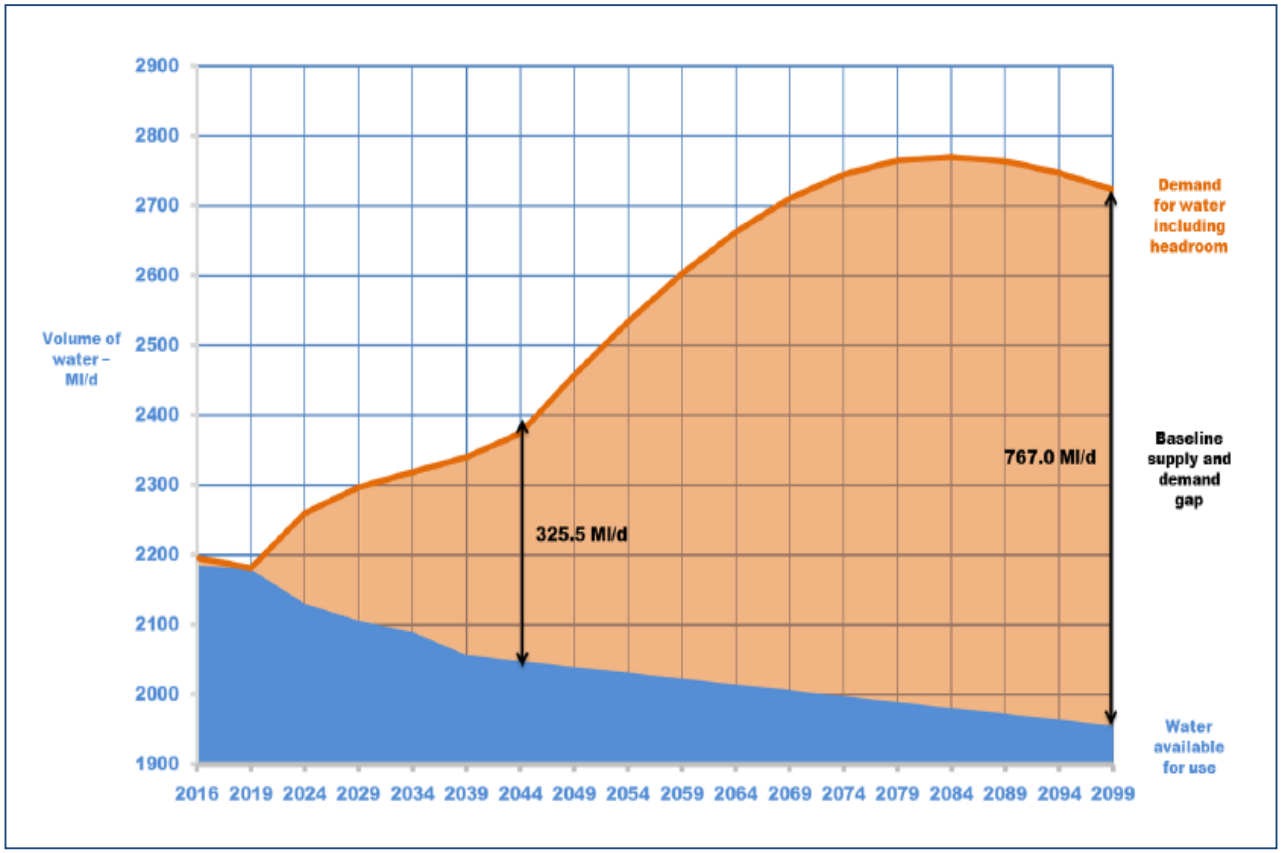
- 33° C – softening of road surface generally begins to occur

- 36° C – power sources begin overheating, rail speed restrictions

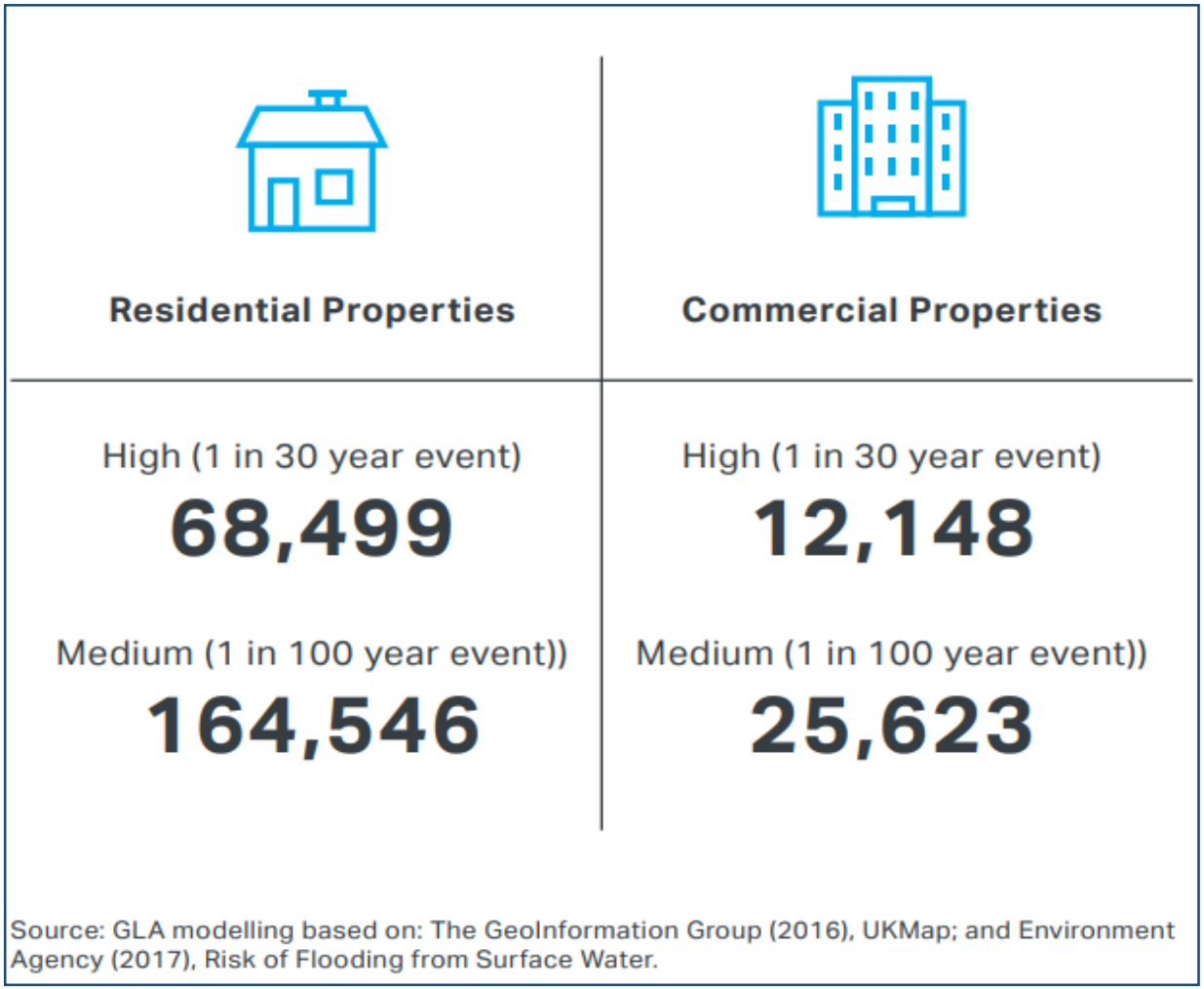


LCCP Heat Thresholds project, 2012

Water deficit projections (Ml/d) 2016-2100 under dry year annual average – Thames Water



Properties in London at risk of surface water flooding



Social vulnerability to climate change

- Londoners more likely to experience social isolation and loneliness than in other parts of UK
- Older, disabled Londoners in poorer quality homes
- Homelessness rising, social housing declining
- Relatively low proportion of owner-occupiers
- >1/3 Londoners foreign-born
- High reliance on public transport
- Disparities among communities

Key questions

Who is most socially vulnerable to climate impacts and extreme weather events?

Where are the most disadvantaged communities in relation to climate impacts and extreme weather events?

What actions can be taken to improve local community resilience to climate impacts and extreme weather events?

ClimateJust mapping tool
See how areas will be affected with our interactive map.

Who is most likely to experience fuel poverty?

What local actions can be taken to tackle fuel poverty?

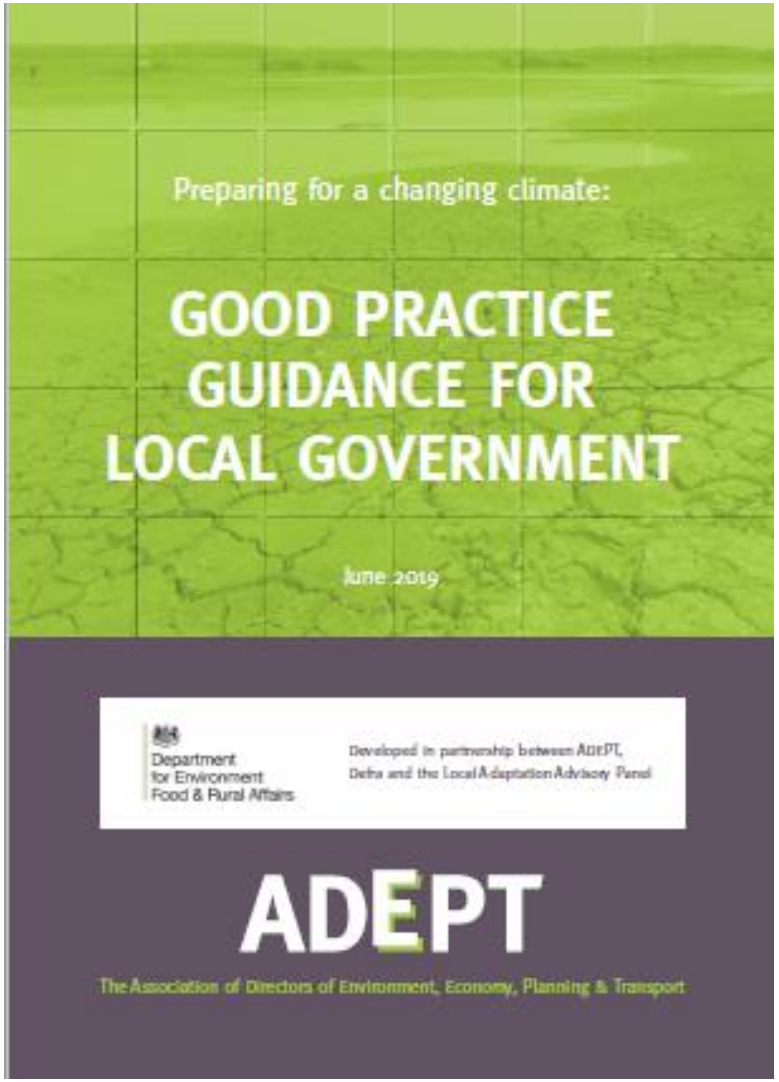
Which households emit the most carbon?

How can the transition to low carbon communities be made more equitable?

Tackling heat, social vulnerability, and climate change in London

- Communications, awareness raising for critical infrastructure
- Modelling heat/AQ/noise
- London Plan – cooling hierarchy
- Advice for retrofit
- GLA mapping: GI and Tree Cover

What you can do



- Heat health watch
- Map assets and people at flood risk
- Promote and partner on water efficiency
- SuDS opportunity mapping
- GI focus map
- Monitor resource impacts of severe weather events

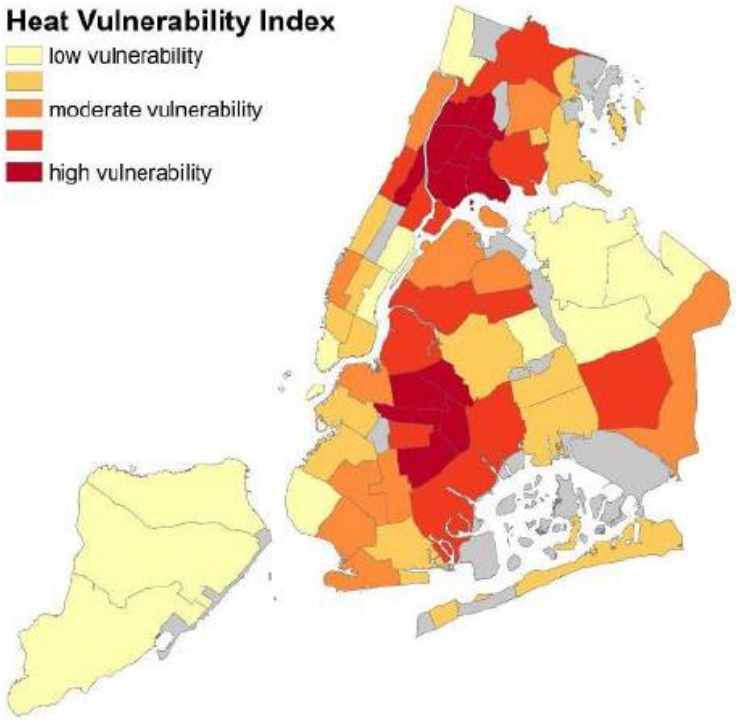
Learning from others…

Targeted Tree Planting

Be a Buddy NYC

NYC Cool Roofs Strategic Plan

Climate Risk Training for Home Health Aides



Thank you.

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