

Heat Risk in London Group
April 13, 2017, 13:00-16:00
Room G18, Defra Nobel House, London



Meeting notes

In attendance:

Briony Turner – UKCIP/ARCC
Giridharan Renganathan – University of Kent
Tim Reeder, LCCP
Bryn Davies, Islington Council
Daniel Navarro-Bermudez, Peabody Housing
Sue Grimmond, Reading University
Gianluca Pescaroli, UCL IRDR
Robert Wicks, UCL
Annette Figueiredo – GLA
Kristen Guida – London Climate Change Partnership
Matthew Hogan – London Resilience
Nick Jackson – Defra
Howard Frumkin, University of Washington School of Public Health

Apologies:

Angie Bone – PHE
Katherine Drayson – GLA
Rajat Gupta – Oxford Brookes University
Anna Mavrogianni – UCL
Nicola O'Connor – Mandarin Research
John Kolm-Murray – Islington Council
Helen Woolston – TFL
Kevin Burchell – Westminster University
Katherine Drayson – GLA
Anna Sexton – PHE
Helen MacIntyre, PHE
Charles Snead, TFL

Welcome and Introductions

Kristen welcomed attendees and led introductions.

Minutes of the last meeting

The group approved the minutes of the last meeting (November 14) with one amendment: Tim, having retired from the Environment Agency, is now working as an advisor to LCCP. Kristen will amend his affiliation in the notes. Action from the previous meeting was complete. See actions list at the end of this document.

URBAN FLUXES and DARE project updates

Sue presented an update of the URBAN FLUXES project, which is working out how to improve understanding of the urban heat island by using Copernicus Sentinels to improve how anthropogenic heat fluxes (changes in heat produced by human

activity) are factored into the modelling. Knowledge gained should prove helpful in evaluating adaptation measures like green cover, and to support the development tools and resources to better target energy efficiency and improve thermal comfort. The three study areas of the project are Heraklion, Basel, and London.

Sue also introduced the DARE (Data Assimilation for the REsilient City) project, which has recently started. Led by the University of Reading, the project comprises an interdisciplinary team of researchers and advisors including the universities of Leeds and Bremen, the Met Office, JBA, the Environment Agency, LCCP, and the Institute for Environmental Analytics. The purpose of the project is to combine satellite data with observations from weather stations and numerous other sources to make data more useful for predicting flooding and heat stress. The project is in its early stages and Sue will keep the group posted on progress.

Kristen will circulate Sue's presentation about both projects.

Extreme heat preparedness in the US: new resources and initiatives

Howard provided some background about the challenges around human health, extreme heat, and climate change in U.S. cities. These include urban demographic change, increasing projected temperatures, and recent political developments—including the anti-science stance of the current American government—and responses to these developments.

He described how extreme heat is addressed in the U.S. through public health infrastructure, the components of heat action plans (with cross-sectoral responsibilities), identification of high-risk people, and examples of how different cities communicate and engage with citizens to inform and advise about heat preparedness. He also provided some examples of evaluation of these interventions.

Longer-term adaptation addresses heat at the building and city scale through cool pavements, albedo, and urban greening—with active engagement from urban forestry.

Howard's presentation includes links to exemplary efforts by cities at communication, partnership working, vulnerability assessment, emergency plans, identification of heat thresholds, and heat response plans. There is also a local government tool kit for urban heat adaptation, produced by Georgetown University.

As a result of our request for Howard's update, he and colleagues from the Centers for Disease Control will be conducting a study into the status of heat plans across local health departments.

Discussion points:

- The American cities mentioned rely heavily on air conditioning, while the UK, where most homes are not (yet) air conditioned, is thinking about how to tackle increasing heat without it. Howard was asked whether there are exemplar cities using cooling strategies not based on air conditioning. He said that in many places efforts to reduce demand for air conditioning involve greening buildings and ensuring natural air flow.
- Are there any moves to tackle indoor air quality along with urban heat? There is the challenge of how to build energy efficient buildings with just the right air flow, but there are researchers looking into it. People might be interested to find out about the [Bullitt Center](#), which calls itself the greenest commercial building in the world.

- As in the UK, there is a disconnect in the US between populations who are at risk and those who see themselves as vulnerable.
- Could do better on continuity between communications and engagement around heat and blackouts.
- Most attention is around communications, but it's not clear whether this is achieving behavior change. Some examples of evaluation given, but further evaluation would be good.
- Need a paradigm shift to account for changing climate. Possible "heat days" like snow days? Does not seem to be happening yet, but there is, for example, advice to sports coaches about heat risk, and advice about cancelling events.
- Are cooling centers mandatory? No, getting people to cool areas is for local decision-making. But US doesn't have specific cooling centers. People are advised to go to malls, shopping centers, etc. It's not so formal.
- How does preparedness work in tribal communities? Tribes have varied populations, about half urban and half in reservations (no UHI). Populations within reservations have bad indicators of health, and local health issues are governed within the tribes.

Kristen will circulate the presentation slides with relevant links.

Anytown update

Matthew reported that about 100 people from different sectors attended two Anytown workshops organized by London Resilience, along with TfL, LCCP, and the UCL IRDR on March 10. Participants considered a heat-related transport disruption scenario and identified direct and indirect impacts. The workshops followed London Resilience's Anytown methodology, which encourages decision-makers to think about potential extreme cases of cascading disasters, and about the longer-term (beyond the first 12-24 hours) impacts.

A report on the workshop findings will be circulated soon. Matt circulated a diagram that summarizes the cascading impacts identified in the workshops. He emphasized that this is a relatively linear depiction, meant to highlight the potential "pinch points" where failures might occur and impact sectors including water, energy, healthcare, businesses, local government, emergency services, and telecoms. He said that there is a gap in understanding about people's perceptions, and how people will act in response to disruption.

The diagram also depicts today's conditions, and it will be useful to link with the future, considering climate change and other pressures.

It will also be useful to:

- integrate the understanding from Anytown with tools that help predict how changes to one part of the system affect others
- use the approach to inform understanding of knowledge flows and improve communications
- quantify relationships between different parts of a system
- include under-represented sectors, like food and telecoms.

London Environment Strategy update

Annette provided background and introduction to the LES, which is currently being drafted. It will combine seven current statutory and non-statutory strategies into one document, which is intended to be relatively thin, uncomplicated, and public-friendly.

Its vision is for London in 2050 to be the cleanest and greenest city, with a strong emphasis on equality and fairness common to all new Mayoral strategies. .

The draft strategy will contain objectives, policies, proposals, and actions around heat risk. Stakeholders will have a chance to contribute their views when the strategy goes out to consultation in early summer. More information will follow.

Discussion points:

- The urban heat island is different in summer and winter – and not always a bad thing.
- Consider the role of the private sector (LCCP could support this).
- Note that the new Housing White Paper suggests changes to the National Planning Policy Framework to raise the profile of risks from high temperatures.
- Melbourne has published a [guide for planting](#) in hotter drier weather. RHS is also about to publish [a climate change guide for planting](#).

Other business

Briony mentioned that ARCC yesterday held an event with medical and built environment communities to explore effects of external air quality on indoor air quality. The ambitions of the Climate Change Act will change outdoor pollutants, and there are concerns that air filters may not be fit for purpose and cause air quality problems, particularly for vulnerable people. This could also have implications with regard to work on heat.

Nick reported that Defra published the Government Report of the UK Climate Change Risk Assessment in January, and has started to look ahead to producing the next National Adaptation Programme, which will be launched in 2018. Defra will welcome LCCP's involvement in the process, and will keep in touch with Kristen. It is intended that the NAP be integrated with the 25-Year Environment Plan and developments in food and farming. Sectoral workshops are planned (n.b. postponed due to the election).

Giridharan said that his Kent University project (presented to this group July 2016), aimed at developing an urban albedo calculator, will be starting in September. He will keep the group posted.

Robert asked about approaches to preventing overheating if you live in particular types of housing. While there has been advice and guidance written for developers and home owners, the overheating risk of housing will depend on geography, aspect, placement and operation of windows, and other factors, and is therefore difficult to standardize.

Matt reported that:

- The adverse weather plan is in the final stages of being drafted. Kristen will circulate to the group when it's published.
- Thames Water and London Resilience are holding a stakeholder workshop on April 25 looking at the impacts of extreme drought. This will inform water resource management planning.
- London Resilience, the Environment Agency, and the GLA are seeking ideas for London Flood Week in September. There will not be a national campaign this year, but if you have ideas or would like to be involved in London's campaign, get in touch with Matt.

Sue will send along page proofs of URBAN FLUXES outputs.

Actions

Who:	Action:
Kristen	Circulate presentations from Sue and Howard
Kristen/Matt	Circulate Adverse Weather Framework
All	Contact Matt for more information or to be involved with London Flood Week
Sue	Send page proofs to Kristen for distribution.