Public Health England

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Met Office

UNIVERSITY OF EXETER

NHS National Institute for Health Research

Public Health and Land Cover workshop

Met Office 21st March 2016

A BIG WARM WELCOME!

Overarching aim: Improve pull-through of research on land cover and health to better inform public health policy in the UK.

Aims of workshop:

- Increase engagement/collaboration between public health scientists and land cover experts.
- Identify key relationships between public health and land cover.
- Identify current and future potential capabilities of land cover datasets/information to inform public health research.
- Identify current public health and land cover activities and key research gaps.
- Define priority projects and valuation activities (both national and local), and potential funding to support these.

National Institute for Health Research (NIHR) Health Protection Research Unit (HPRU) in **Environmental Change and Health**

NIHR HPRU's are research partnerships between universities and PHE

Centres of excellence in multidisciplinary health protection research in UK

Environmental Change and Health is 1 of 13 different NIHR HPRU's

Who we are...

London School of Hygiene and Tropical Medicine (LSHTM)

- Lead Academic Institution (Dr Sari Kovats – Lead)

Public Health England (PHE)

University Exeter (UoE)

UK Met Office

University College London (UCL)

Environmental Change and Health HPRU Strategic Vision

To ensure that decision makers concerned with health protection have the knowledge, foresight and tools to mitigate, adapt to and benefit from environmental change

- *National Adaptation Programme (NAP) to reduce the risks of climate change*
- *PHE Sustainability Strategy*
- *Sustainable Development Strategy for Health & Social Care System 2014 - 2020*
- *PHE Climate Change and Extreme Events Programme*
- *National Planning Policy Framework, Natural Environment White Paper*

Methodological development and empirical research to underpin evidence-based policy for adaptation and mitigation (co-benefits)

New collaborations and academic opportunities

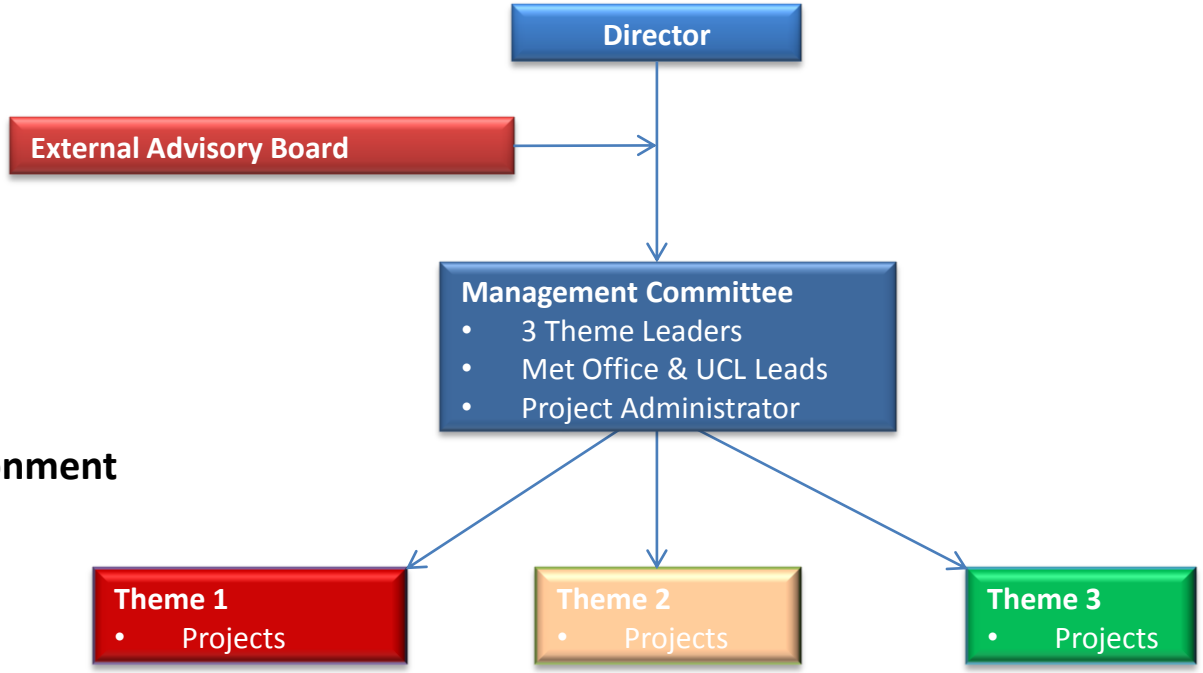
Development of high quality datasets, linkage between health, environmental and earth systems (climate, land use) data

Environmental Change and Health HPRU Strategic Vision

1. **Climate resilience**
   Dr Shakoor Hajat, LSHTM

2. **Healthy sustainable cities**
   Dr Sotiris Vardoulakis, PHE

3. **Health and the natural environment**
   Prof Lora Fleming, UoE



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Session 1 *11:00-12:45*: **State of science in the UK**

Aim: Provide overview of the state of science relating to Public Health and Land Cover

(Chair: Dr Debbie Hemming, Met Office Hadley Centre)

Session 2 *14:00-15:30*: **Improving evidence for public health**

Aim: Identify key relationships between Public Health and Land Cover

(Chair: Dr Sari Kovats, London School of Hygiene and Tropical Medicine)

Session 3 *16:00-18:00*: **Priority research projects and potential funding**

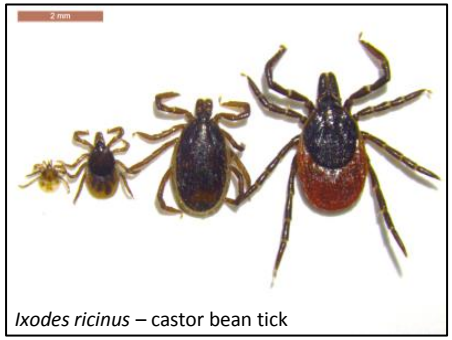
Aim: Identify priority joint research projects and potential funding sources

(Chair: Prof Lora Fleming, University of Exeter)

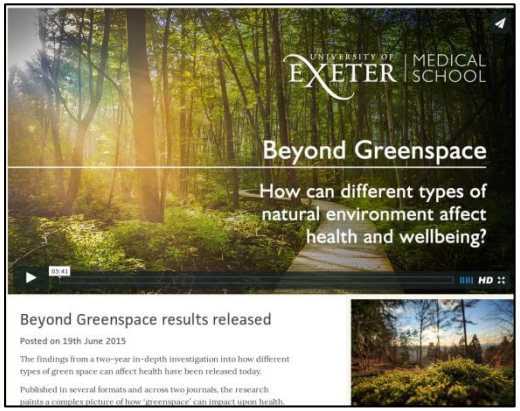
18:30 – 21:00: *Dinner and posters in the 'street' (Met Office)*

Land cover and public health interactions

Land cover (the physical characteristics of the land surface, including natural, agricultural and urban environments), and the activities taking place on the land, can influence public health in a wide variety of ways.



Ixodes ricinus – castor bean tick



Ecology, 97(2), 2016, pp. 536–546
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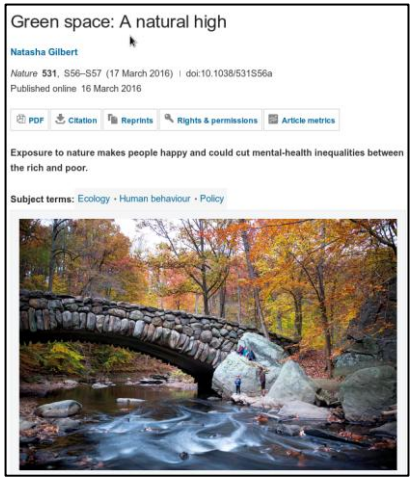
Does biodiversity protect humans against infectious disease? Comment

Taal Levi,[1,6] Aimee L. Massey,[1] Robert D. Holt,[2] Felicia Keesing,[3] Richard S. Ostfeld,[4] and Carlos A. Peres[5]

Identifying how changes in biodiversity alter infectious disease dynamics is important for both basic science and policy. Biodiversity, broadly conceived, denotes "the variety of life in all its manifestations" (Loreau and Kinne 2010), and encompasses not only species richness, but also phylogenetic diversity, trait and functional distinctions among taxa, and indeed the complexity of community organization, such as food web interactions. Wood et al. (2014) note that an increase in biodiversity can at times amplify disease risk in a focal host species existing across a gradient in biodiversity, and some empirical examples do seem to demonstrate amplification (Young et al. 2013).



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Please take a couple of minutes to introduce yourselves on your table!

Session 1: State of science in the UK

Aim: Provide overview of the state of science relating to Public Health and Land Cover

(Chair: Dr Debbie Hemming, Met Office Hadley Centre)

11:00 – 11:15:	Mapping vegetation for assessing allergen exposures (**Rachel McInnes**, Met Office Hadley Centre)
11:15 – 11:30:	Importance of Land Cover in determining vector-borne disease risk (**Jolyon Medlock**, Public Health England)
11:45 – 12:00:	Spatial distribution of Shiga-toxin producing E.coli O157 in relation to agricultural land use in England (**Richard Elson**, Public Health England)
12:00 –12:15:	Measures and indicators of greenspace for health and wellbeing (**Sahran Higgins**, Exeter University)
12:15 –12:45:	Discussions: How to improve linkages and collaborations, and identify the priority science gaps

Session 2: Improving evidence for public health

Aim: Identify key relationships between Public Health and Land Cover

(Chair: Dr Sari Kovats, London School of Hygiene and Tropical Medicine)

14:00 – 14:15:	National public health policy and land cover (**Sotiris Vardoulakis**, Public Health England)
14:15 – 14:30:	Local public health policy and the natural environment (**Tina Henry**, Public Health Devon)
14:30 – 14:45:	Quantifying the ecosystem services that underpin health and wellbeing: a research summary from the NERC-BESS programme (**Tom Oliver**, Reading University)
14:45 – 15:00:	Valuing green space: considering the health and environmental benefits in planning (**Tim Taylor**, Exeter University)
15:00 – 15:30:	Discussions: How to focus the science for public health decision making

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Session 3: Priority research projects and potential funding

Aim: Identify priority joint research projects and potential funding sources

(Chair: Prof Lora Fleming, University of Exeter)

Small break out groups with mixed health and land cover expertise (6-8 people)

1 hour: develop and discuss 2-3 research project ideas/group

- Responsive to prior Workshop discussions
- Address Health and Land Cover research gaps with Interdisciplinary vision
- Other collaborators; ongoing research on which to leverage
- Possible funding sources
- Select Rapporteur to feedback/note taker
- Write 2-3 ideas clearly

30 minutes: Feedback to entire group

- 5 min feedback/group by Rapporteurs

10 min: Vote on top 3 research idea

- Each person with 3 stickers
- Priority areas in terms of research gap, feasibility, funding, importance

20 Min: Discuss how to move forward, funding, other issues


Thank you