



Institute of Hazard,
Risk and Resilience

Shaped by the past, creating the future

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Every effort has been made to ensure that all information is accurate at the time of going to press in November 2010. However, changes may occur and Durham University reserves the right to amend or change any information contained in this brochure at any time.

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BIOPICCC

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Introduction

BIOPICCC (Built Infrastructure for Older People's Care in Conditions of Climate Change) is a 3-year research project funded by the Engineering and Physical Sciences Research Council (EPSRC), as part of a major research network on 'Adaptation and Resilience in a Changing Climate' (ARCC). The project is developing strategies to help ensure that the infrastructures and systems supporting the health and social care for older

people (aged 65 and over) will be sufficiently resilient to withstand harmful impacts of climate change in the future, up to 2050.

The research is being conducted by a multidisciplinary team in two institutions based at Durham University (Institute of Hazard, Risk and Resilience) and Heriot-Watt University with expertise in engineering, climate modelling, social and geographical science and health and health care research.



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Objectives

- Identify locations within the UK that are most at risk from weather-related hazards including heat waves, cold waves and floods; and areas likely to experience the greatest increase in the occurrence of these events by the 2050s.
- Within the zones at greatest risk from climate change, identify 'case study' communities (neighbourhoods or small settlements) in urban and rural settings with high concentrations of older people and with a range of socio-economic conditions.
- Engage stakeholders within the selected 'case study' communities and also at national and international levels. With their help, determine crucial aspects of living conditions, which sustain well-being of older people, and identify the key elements of health and social care systems and related infrastructures important for maintaining these conditions in the case of weather hazards.

- Identify different design and management solutions, including a probabilistic evaluation of their life-cycle costs, to improve resilience of health/social care systems and related infrastructures with emphasis on the previously identified key elements.
- In collaboration with providers and users of services and other expert informants, develop strategies to integrate these design options into wider procedures and policies and disseminate knowledge about how to adapt built infrastructure to support older people's health and well-being under changing climatic conditions.

Stakeholders and beneficiaries include:

- Older people and their carers
- Health and social care agencies
- Planners and engineers
- European Health Property Network (EuHPN)
- National Health Service Management
- The Commission for Architecture and the Built Environment (CABE)
- Age UK
- Local emergency planning units



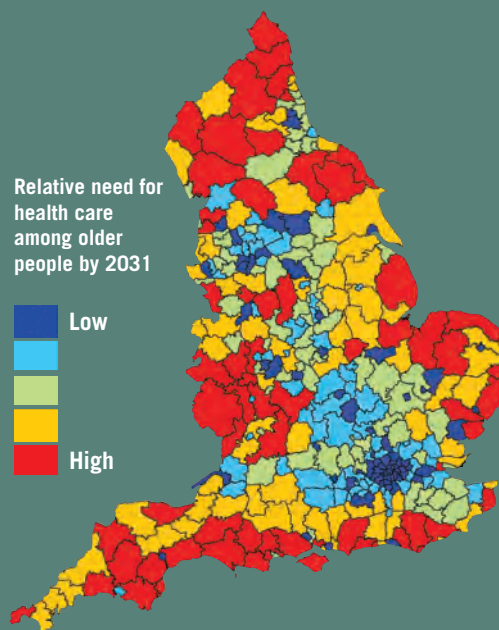
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Products and dissemination – The 'BIOPICCC Toolkit'

The BIOPICCC Toolkit will include practical information on the objectives and the consultation process, as well as nationally mapped data to inform similar consultations elsewhere in the UK. Possible dissemination strategies include publications for

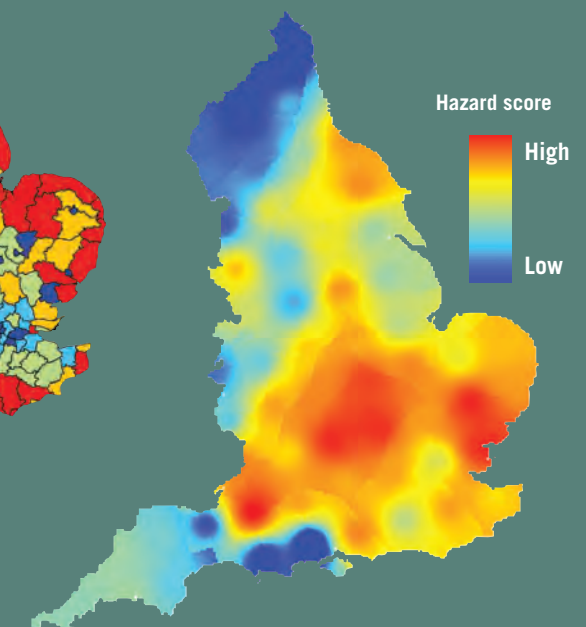
professional groups and in professional and academic journals; materials for mass consumption (TV and radio appearances and newspaper materials; video/DVD for use in social care settings; web-based materials). We also plan to present the findings from our research at international conferences. Participation in ARCC network activities is another important route for dissemination.

Map of local authorities in England showing relative need for health care among older people by 2031



Note: Relative need for health care calculated from 2006-based subnational population projections by age group at local authority level (Office for National Statistics, 2008) and adjusted using weights derived from the 'needs element' of the UK Department of Health Weighted Capitation Formula (2008).

Preliminary mapping work showing the change in heat wave hazard across England (baseline 1961-1990) - 2030s)



Note: Analysis based on daily temperature data derived from the UKCP09 Weather Generator