



## Adaptation and Resilience in the Context of Change (ARCC) Network



### Achievements in 2014

The Adaptation and Resilience in the Context of Change (ARCC) network seeks to support resilient and sustainable buildings and infrastructure by enhancing the use, impact and potential benefits of evidence arising from UK research. By engaging with academics and a wide range of stakeholders, the network promotes opportunities to help expand and accelerate the exchange of information to address challenges at the local, regional and national levels.

Funded by the Engineering and Physical Sciences Research Council (EPSRC), the network provides a UK-wide focus for knowledge exchange and stakeholder engagement activities to better inform research, policy and practice. The ARCC network [website](#) provides a comprehensive summary of information and activities which focus on both cross-cutting themes (e.g. smart adapting cities) and specific skills development (e.g. for early career researchers). The best way of keeping in touch and getting involved is to [sign up for ARCCnews](#).

2014 was a busy year for the network as it broadened its remit beyond the initial focus on adaptation to climate change, and sought to share knowledge derived from both research and practical experience to generate new knowledge and solutions for the built environment and infrastructure sectors. By highlighting our 'top ten' achievements for 2014, this report aims to illustrate the wide range of activities being carried out by the network to enhance the overall impact of evidence and knowledge from across relevant research projects.

## Top ten highlights

### Meeting evidence requirements

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1. **Science-policy/practice dialogues** are aimed at stimulating broader understanding of scientific evidence and its implications in key areas. The first network Dialogue was initiated in 2014 on [Infrastructure dependencies and interdependencies](#). Working with the Environment Agency's Infrastructure Operators Adaptation Forum (IOAF), the network is engaging with central government and infrastructure practitioners to better understand the overall interdependencies landscape, and the challenges and opportunities from differing backgrounds and perspectives.
2. **Promoting co-production of outputs** through [joint working opportunities](#) between researchers and those looking to use academic outputs. This new initiative was launched to increase awareness, build capacity and develop skills in delivering and using evidence from research. Three short placements (for researchers from iBUILD and CREW) have been supported which are extending the use of existing outputs and providing valuable insights into the delivery of policy in areas such as transport resilience (with the Department for Transport), financing for sustainable infrastructure in Scotland (with ClimateXchange and Adaptation Scotland) and flooding and resilience planning for SMEs (with the Environment Agency and local authorities).
3. **Improved discovery and accessibility of research outputs**, including after the end of a project, will enable greater uptake and use of data and evidence. An initial strategy for a sustainable data and information management facility within the ARCC network has been established to help ensure long-term availability of research findings. [OpenARCC](#), a data management support tool, is now operational with links to over 250 articles, reports and datasets from relevant research projects, plus guidance from the ARCC network on managing research outputs. Further work will develop this strategy to build on existing external data repositories and knowledge portals to promote greater accessibility.

### Strengthening knowledge exchange

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4. **ARCC network Assembly**. The third [ARCC network Assembly](#) was held in June 2014 to emphasise the latest research, stimulate networking and advance contributions to policy and practice. This major 2-day knowledge exchange event attracted over 130 stakeholders and researchers to discuss recent progress in eight themes: Powering the cities, Adapting urban lives, Smart adapting cities (with the [Core Cities Group](#)), Transport sustainability and resilience, Infrastructure interdependencies (with EA/IOAF), Buildings within cities (with The [Chartered Institution of Building Services Engineers](#), CIBSE), Understanding flood risk (with [FCERM](#), [Net](#)), and Overheating and indoor air quality in the urban environment. Key messages were summarised in 7 blogs, and identified research and knowledge gaps will help focus future KE and research funding opportunities.
5. **A central evidence and knowledge exchange hub** provides users with information on recent and on-going research activities. During 2014, a comprehensive and up-to-date [ARCC network website](#) was refreshed and a monthly e-newsletter and [Twitter feed](#) were established to inform the wider community of network activities, EPSRC-funded research outputs plus relevant external events, reports and funding opportunities. Over 600 newsletter recipients, 200 Twitter followers and over 2000 hits per month on the website confirm that this approach is building engagement and enhancing visibility to inform policy and practice.
6. **Contributions to specialist publications** help identify and synthesise key messages from research to inform specific audiences.
  - Working with CIBSE, the network is leading a Building Services Engineering Research and Technology Special issue on Overheating and indoor air quality. 9 papers from a number of research projects have been commissioned to inform adaptation strategies for CIBSE's 20,000 professional members.
  - Contributions have been made to the [Living with Environmental Change](#) (LWEC) Policy and Practice Notes. Two PPNs looking at resilience for older people (BIOPICCC, [PPN6](#)) and at overheating in hospitals (DeDerHECC, [PPN7](#)) draw out conclusions emerging from projects within the ARCC network for national and local health and emergency planning sectors.

## Developing the community

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7. **Skills development for early career researchers.** A new series of events has been established to support the EPSRC strategic aim of developing the leaders of the future, skilled in multidisciplinary research and capable of engaging effectively with stakeholders to realise the impact of their research. Two very successful 2-day residential workshops and two webinars were held in 2014 with a total of 57 early career researchers hearing contributions from the [Climate Outreach and Information Network \(COIN\)](#), [Reuters Institute for Journalism](#), the [Alliance for Useful Evidence](#), Cabinet Office, Newcastle City Council and the LWEC programme. Further events are planned for 2015.
8. **Promoting engagement across the community.** Building on existing links and partnerships with a wide range of research projects, delivery networks and professional bodies, the network has collaborated with various organisations to facilitate and/or contribute to knowledge exchange and co-production activities. Specific examples in 2014 include:
  - Seminars with [ClimateNI](#) to inform industry stakeholders and policymakers in Northern Ireland of UK research on resilient infrastructure
  - Participation in [Zero Carbon Hub](#) working group to tackle overheating in homes
  - Working with the Defra Climate Ready programme to draw on research to inform the [National Adaptation Programme](#)
9. **Contributions to national and international events** help raise awareness of the work of the ARCC network and enable broader engagement with, and learning from, related initiatives. Throughout 2014, the network was invited to participate in a variety of academic conferences (e.g. EU CIRCLE-II conference: Adaptation Frontiers), regional and local events (e.g. presentations to Local Authority planning officers) and activities focussed on key stakeholder groups (e.g. InnovateUK Design for Future Climate final event and hosting of [case studies](#)). Such opportunities were used to strengthen partnerships and facilitate potential future collaborative work.

### And for the future...

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10. **Recognition and forward looking.** The 2014 [EPSRC review](#) of the ARCC and Sustainable Urban Environment research programmes provided independent advice on the effectiveness and impact of the research. The Review reflected very positively on the added value of having a dedicated coordination network within the ARCC programme to build interdisciplinary research capacity and to pursue engagement with stakeholders. Future ARCC network activities will build on recommendations to capture and promote learning from within the network to guide future programmes.

For 2015, the ARCC network has a series of knowledge exchange events planned to respond to current policy and practice requirements. However, the work programme is deliberately flexible to allow the network to respond to emerging needs, and the team at [UKCIP](#) welcomes suggestions from stakeholders and researchers for additional coordination and engagement activities.



UKCIP at the University of Oxford provides the central coordination and management role for the ARCC network. Roger Street, UKCIP Director, is the Principal Investigator.

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