



### Aims

Our topic this year is 'Risk, resilience and response'. As in previous years, a panel of three expert 'witnesses' from across and beyond Cambridge will join us each month. They will be a rich mixture of policy- and decision-makers from governments and businesses, and technical experts and each of them will provide their perspective on the gaps in our knowledge and burning questions for future research.

This term, we are focusing on food and water security and supply chain resilience. This is the first meeting in the series and we will be taking a global view and starting to explore new ways to bring together 'big' datasets from different sources to assess risk and resilience in food supply chains.

We are jointly hosting these three meetings with the Joint Research Centre (JRC) of the European Commission and we are hoping to co-produce a brief white paper for EC policy makers identifying future research gaps and opportunities in this area.

### Agenda

All the witnesses will give a 10 minute introduction and their perspective on the two core questions followed a general discussion:

- 5:00pm Welcome by the Chair and an introduction to the topic  
Each witness gives a short introduction and thoughts about the questions (10 mins)  
Questions and beginning the open discussion
- 6:00pm Coffee break  
Continue the discussion
- 7:15pm Reception and dinner, which will include a working session

### Witnesses

This month, the three witnesses are:

<b>Steve Peedell</b>	Senior Scientific Officer in the Land Resource Management Unit at the Joint Research Centre (JRC) of the European Commission (based in Ispra, Italy)
<b>Dr Mukesh Kumar</b>	Research Associate in the International Manufacturing group at the Institute for Manufacturing, University of Cambridge
<b>Professor Alan O'Neill</b>	Emeritus Professor of Meteorology and former Director of Research in the School of Mathematical and Physical Sciences at the University of Reading, and currently a visiting professor in the Cavendish Laboratory and a visiting fellow at Clare Hall

### Questions

The witnesses have all been asked two core questions:

- 1) What do you perceive as being the main gaps in our knowledge?
- 2) What would you include in the 'next generation' of research questions?

Each of these questions will be posed to everyone and their answers will then be used as a springboard for further discussion. The main points raised will then sent to everyone to use as a starting point for the next meeting.

### Witness profiles

#### Stephen Peedell

Senior Scientific Officer in the Land Resource Management Unit at the Joint Research Centre (JRC) of the European Commission (based in Ispra, Italy)

Steven Peedell is a multi-lingual specialist in geospatial information technology with 25 years experience working with maps and mapping technology, the last 18 of which have been at the Joint Research Centre (JRC) in Italy.

He has an MSc in Natural Resource Management from the University of Leicester in the UK. Prior to 2005 he was very much involved in technical developments supporting EU environmental legislation (Natura2000, Water Framework Directive), and then led a research team working on development and implementation of specifications for a European Spatial Data Infrastructure (INSPIRE).

He joined the Land Resource Management Unit 2009 where he focuses on projects in the African, Caribbean, Pacific (ACP) regions and developing spatial databases, catalogues and interoperable web services for geoinformation. He is also the JRC project leader of the Biodiversity and Protected Areas Management Programme (BIOPAMA) which aims to address threats to biodiversity in African, Caribbean and Pacific (ACP) countries, while reducing poverty in communities in and around protected areas.

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#### Dr Mukesh Kumar

Research Associate in the International Manufacturing group at the Institute for Manufacturing, University of Cambridge

Mukesh Kumar is leading research in the areas of risk and resilience in international manufacturing and supply networks. Mukesh's main research and practice interests are in the areas of risk and resilience in emerging and developed industrial systems. He has developed risk management processes for global manufacturing investment decisions and supply networks. Before joining the University of Cambridge, Mukesh's previous roles were in the financial sector as a senior analyst and corporate finance consultant. He holds a PhD from the University of Cambridge in the area of Manufacturing Investment Risk.

He is currently working on various projects related to supply chain risk and resilience and involved in masters' thesis supervisions and teaching (DTC cohorts, teaching involvement in ISMM, MET and CPSL courses / seminars for industrial executive). Additionally, he is member of the CUED PostDoc- academic committee and the faculty board.

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#### Professor Alan O'Neill

Emeritus Professor of Meteorology and former Director of Research in the School of Mathematical and Physical Sciences at the University of Reading, and currently a visiting professor in the Cavendish Laboratory and a visiting fellow at Clare Hall

Alan O'Neill's early research career when employed at the Met Office was in the area of large-scale dynamics of the stratosphere and its relevance to the formation of the ozone hole. On moving to the University of Reading, he ran large national collaborative programmes in climate science and, as founding Director of NERC's National Centre for Earth Observation, collaborative programmes on the use of satellites in environmental science. He has been heavily involved in developing strategies for Earth Observation from space both nationally and with the European Space Agency, the latter in his capacity as chair (till end 2014) of its Earth Sciences Advisory Committee.

One of his prime objectives while at the Cavendish, and soon to be in its new Maxwell Centre, is to build capability in the use of satellite data and "big data" analytical methods (e.g. machine learning) for diverse applications in the environmental and climate sectors, in particular in the area of agri-food and sustainable production. He aims to do this in collaboration with external partners in both the public and private sectors.

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