

## Conference on Risk and Uncertainty 8 March 2012

### Agenda

10:15 **ARRIVAL & COFFEE**

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10:45 **Welcome and Introduction:** Dr Chris Tyler, Executive Director, CSaP

**10:55 Session 1: The Precautionary Principle (Chair: Lord Willis of Knaresborough)**

- **Professor David Salisbury, Director of Immunisation, Department of Health**  
*Immunisation safety: Risks, benefits and precautions*  
Despite the overwhelming evidence of benefit from vaccination and the paucity of evidence for significant risk from vaccination, the perception of this balance does not represent the reality. The presentation will cover the real risks, the perceptions of risks, the media's representations of risks and the challenges ahead.
- **Mark Cantley, former OECD and DG Research, European Commission**  
*Biotechnology and the precautionary principle, in Europe and the OECD, from 1980 to date*  
Mark Cantley will provide historical context and a summary of the evolution of the precautionary principle in the European Commission, with particular reference to biotechnology, in the Research Directorate-General; and some reference to related work in the Management and Technology Directorate of the OECD, Paris, 1993-98. In particular, he will consider the impact of the EC's Feb 2000 Communication on the precautionary principle, and its (very limited) use in the regulation of agriculture and GM foods.
- **Professor Peter Sammonds, Director, UCL Institute for Risk & Disaster Reduction**  
*The precautionary principle: Natural hazards and critical infrastructure*  
The earthquake hazard assessment around Japan prior to the 11 March 2011 Tōhoku earthquake was based on historical seismicity and the concepts of fault segmentation. The 2011 Tōhoku earthquake, at  $M_w 9.0$ , was of far higher magnitude than had been forecast (EEFIT, 2011). The tsunami caused significant damage to several of the Fukushima Daiichi reactors, leading to a significant nuclear incident rated at International Nuclear Event Scale Level 7. In this talk Professor Sammonds will examine whether regulators had been sufficiently cautious in assessing the uncertainty in forecasting the size of the earthquake.
- **Q&A**

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12:30 **LUNCH**

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**13:30 Session 2: Resilience (Chair: Sir Richard Mottram)**

- **Professor Jon Crowcroft, Marconi Professor of Communications Systems, The Computer Laboratory, University of Cambridge**  
*The emergence of complex system behaviours and risks in the Internet*  
Professor Crowcroft will discuss the emergence of complex system behaviours in the Internet – as a system, it is extremely resilient to local faults, routing around failures, and spreading traffic around hot spots. However, the interactions between a large number of self-organising processes could have dire consequences in rare, but not infeasible, scenarios. What can we do to detect, avoid and learn from these?

- **Dr Dougal Goodman – Chairman, Lighthill Risk Network and Chief Executive, The Foundation for Science and Technology**

*Modelling low probability, high severity events in the insurance market to test resilience*

Insurance is an exchange of future cash flows between counter-parties. For some classes of insurance, e.g. motor insurance, there are good historical records of past claims that can be correlated with easily measured parameters, and therefore future motor claims can be modelled with confidence. However, insureds also seek cover for low probability, high severity events where the historical claims record is sparse and modelling is a challenge. This presentation will consider how the market is responding to these challenges and the importance of modelling in providing a framework for testing resilience.

- **Professor Andy Challinor, Professor of Climate Impacts; Programme Manager for MSc Climate System Science, University of Leeds**

*Food production and climate: risks and responses*

Efforts to understand the risks to food production posed by climate change fall, broadly speaking, into two camps. Research grounded primarily on agricultural systems, with climate playing an influencing role, tends to use detailed agricultural models for predictions. Research that takes a climate impacts assessment approach often uses less detailed models within a risk and/or uncertainty framework. This talk assesses the implications of these two approaches for the development of crop adaptation options.

- **Q&A**

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15:00 TEA

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**15:20 Keynote: Sir John Beddington (GCSA)**

*Findings from the Blackett Review of “High Impact, Low Probability Risks”*

**16:10 Session 3: Panel & discussion on Communication (Chair: Rowan Douglas)**

Contributors include:

- **Professor Sir John Beddington**, Government Chief Scientific Adviser
- **Fiona Fox**, Chief Executive, Science Media Centre
- **Professor David Spiegelhalter**, Professor of the Public Understanding of Risk, The Statistical Laboratory, University of Cambridge
- **Professor Andy Stirling**, Research Director, SPRU – science and technology policy research
- **Trevor Maynard**, Manager of the Emerging Risks Team, Lloyd’s

17:15 Conclusions

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17:30 DRINKS RECEPTION

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18:30 Close