The Cambridge Forum for Sustainability and the Environment

Meeting 3: 8th December 2015 in Downing College

Aims

At our meetings in October and November, we focused on new ways to bring together 'big' datasets, such as the environmental information flowing from the Sentinel family of satellites, with socio-economic data and other kinds of models to assess risk and resilience in food supplies and changes in biodiversity.

This month, the three witnesses will help us to explore how information from these data sets and the scenarios they generate can be applied in a policy and business context.

We are jointly hosting these 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
	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:

Thierry Nègre	Head of the Food Security Assessment Team in the Monitoring Agricultural Resources Unit (MARS), Institute for the Environment and Sustainability (IES), Joint Research Centre (JRC) of the European Commission
Professor Jaideep Prabhu	Jawaharlal Nehru Professor of Indian Business & Enterprise and Director of the Centre for India & Global Business (CIGB) in the Judge Business School, University of Cambridge
Dr Drew Purves	Research Scientist at Google DeepMind, based in London

Questions

The witnesses have all been asked about what they perceive as being the main gaps in our knowledge and what they would include in the 'next generation' of research questions. This month, we are asking everyone to choose a particular example from a project or a challenge that sparks their interest and then to give a bird's eye view of:

1) The problem
2) What we know already
3) What we need to know

These ideas then act as a springboard for a round table discussion until 7pm, which continues over dinner.

UNIVERSITY OF CAMBRIDGE

Witness profiles

Thierry Nègre

Head of the Food Security Assessment Team in the Monitoring Agricultural Resources Unit (MARS), Institute for the Environment and Sustainability, Joint Research Centre (JRC) of the European Commission (based in Ispra, Italy)

Thierry Negre is Head of the Food Security Group in the Monitoring Agricultural Resources Unit of the European Commission Joint Research Centre (JRC). A French national, Thierry was born in Limoges in 1963. After graduating from the Institut National Agronomique Paris-Grignon in 1987, he worked for the Food and Agriculture Organization of the United Nations on the development of national food security information systems in Africa and Asia. He joined the European Commission in 1997 and was the initiator of food security information activities in JRC in 2001. Subsequently, Thierry served as scientific counsellor in the European Union Delegation to the Holy See, the Order and Malta and the United Nations Organisations in Rome, such as the Food and Agriculture Organization (FAO).

e-mail: Thierry.NEGRE@ec.europa.eu

Professor Jaideep Prabhu

Jawaharlal Nehru Professor of Indian Business & Enterprise and Director of the Centre for India & Global Business (CIGB) in the Judge Business School, University of Cambridge

Jaideep Parbhu is Jawaharlal Nehru Professor of Indian Business & Enterprise and Director of the Centre for India & Global Business (CIGB). His research focuses on international business, marketing, strategy and innovation. Specific interests include: cross-national issues concerning the antecedents and consequences of radical innovation in high-technology contexts such as banking, pharmaceuticals and biotechnology; the role of firm culture in driving innovation in firms across nations; how multinational firms organise their innovation activities worldwide; the forces that drive R&D location decisions and the factors that influence the performance implications of these decisions; the internationalisation of firms from emerging markets; and innovation in emerging markets.

Prior to his current position, Jaideep Prabhu was Professor of Marketing and Director of Research at the Tanaka Business School, Imperial College London; University Lecturer and University Senior Lecturer in Marketing, Cambridge Judge Business School (at the time the Judge Institute of Management), University of Cambridge; Assistant Professor and Fellow at the Center for Economic Research, Tilburg University, the Netherlands; and Visiting Assistant Professor at the Anderson School of Management, UCLA.

e-mail: j.prabhu@jbs.cam.ac.uk

Drew Purves

Research Scientist at Google DeepMind, based in London

Drew has 16 years' experience in ecological and environmental modelling, data analysis and data visualization and he has just started working for Google DeepMind.

Between 2007 and October this year, he was the head of the Computational Ecology and Environmental Science group (CEES), a unique group of ecologists sitting within Microsoft Research in Cambridge. Under his leadership, CEES adopted a mission to develop new predictive models of different aspects of the Earth System, and create new algorithms, methods and prototype software tools to enable this kind of modelling. The group carried out a wide variety of original ecological research, focussing on predictive modelling of global-scale environmental phenomena (e.g. the carbon cycle, biodiversity, agriculture); and packaged these results into software tools which they shared, freely.
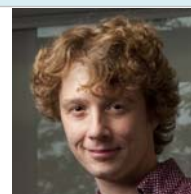
While he was there, his research spanned many questions, taxa and scales, ranging from studies of the growth and development of small plants measured over a few days, through studies of how the continental-scale geographical distributions of tree species emerge over timescales of centuries; to global-scale models of carbon, biodiversity, and ecosystem function. However, this otherwise broad research 'programme' is united by an insistence on adopting a 'joined up' approach to ecology -- marrying models, with data, via comptutational statistics, in order to provide defensible, believeable models of ecological phenomena. At Microsoft, he had a green light to pursue this research agenda, whilst packaging up the various novel software that it requires into reuseable tools in order to allow other scientists to more easily adopt the same joined up approach to ecological modelling.

e-mail: Dwpurves@google.com

UNIVERSITY OF CAMBRIDGE