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 is the second in a series of three meetings, and the aim of it is to use examples provided by the witnesses to explore ways in which overlaying big data sets and remote sensing can assess and communicate risk and resilience in food supplies and changes in biodiversity.

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:

Dr Francois Kayitakire	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 (based in Ispra, Italy)
Dr Matthew Smith	Scientist in the Computational Science Lab at Microsoft Research
Craig Mills	CEO of Vizzuality

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

Dr Francois Kayitakire

A senior scientist in 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)

Francois leads a team working on resilience and on food and nutrition security assessment within the Food Security (FOODSEC) Group. His current activities focus on resilience for food and nutrition security, in particular the resilience measurement issues, food security assessment and classification methods and on agricultural risk management in developing countries. His team provides early warning on food security crisis using various data types and in particular satellite imagery and meteorological data, and they conduct research on modeling food security indicators. His area of interest is mainly Africa but also other developing countries.

Francois' first assignment at the European Commission was within the Unit for Global Security and Crisis Management at the JRC. His work focused on building pieces of an armed conflict early-warning system and understanding their root causes. He worked also on monitoring natural resources that are susceptible to fuel armed conflicts, and on the use of satellite imagery to support post-disaster needs assessments.

Francois holds a Ph.D. degree in Agricultural Sciences received in 2006 from the Université catholique de Louvain (UCL), Belgium. While working as researcher at the UCL, from 1998 to 2004, he focused on forest mapping and urban green area management using satellite imagery.

e-mail: francois.kayitakire@jrc.ec.europa.eu

Dr Matthew Smith

Scientist in the Computational Science Lab at Microsoft Research

Matthew works in the Computational Science Lab at Microsoft Research, and is committed to improving societies (people, businesses, governments) abilities to predict geotemporal phenomena (properties and processes that can be associated with geographical space and time). He has worked in both theoretical and applied ecological science since he left high-school and has come to realise the enormous untapped value in predictive models of ecological and environmental systems and aims to unleash that potential on the world. In recent years he has also discovered so many other geotemporal phenomena that we can predict, anticipate and make decisions about much better than we have done to date, especially in the domains of agriculture, utilities and energy, to name some major business sectors.

He is currently working on some research projects with UK companies to investigate the value of predictive models of geotemporal phenomena to their businesses. While doing that, he maintains research interests in predicting crop dynamics, carbon and vegetation, human responses to climate change, and ecosystem structure and function.

e-mail: mattsmi@microsoft.com

Craig Mills

CEO of Vizzuality

Vizzuality is a science and technology company focused on data visualization, web-GIS and tool development and committed to working on projects related to conservation, the environment and sustainable development. As CEO, Craig is responsible for figuring out what problems they should be trying to solve, guiding the company towards important world improving projects and working with NGOs to help them tell their stories.

Before joining Vizzuality, he spent 7 years working with the UNEP World Conservation Monitoring Centre. As Head of Infomatics, he led a team of software engineers, geospatial developers, designers and product managers to help scientists and government/non-government organisations share their knowledge and data on the web and reduce the time it takes to get from raw environmental data to useful knowledge for policy decisions. These projects ranged from applications mapping every national park on the planet, ipad apps for scientists to monitor mangrove forests and tools for governments to monitor the trade of endangered species. Previously, he spent 7 years with the UK government at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) undertaking marine geospatial research.

e-mail: craig.mills@vizzuality.com

UNIVERSITY OF CAMBRIDGE