



MESSAGE FROM THE DIRECTOR

Welcome to spring!

At CEBRA we engage widely on risk thinking both domestically and internationally, with our government, other research groups, and our international partners. Our success is built on these sustained relationships. Presentations at local, national and international conferences are one important way we engage and sustain our relationships.

During the last quarter Prof. Tom Kompas has delivered a presentation titled *The 'Curse of Dimensionality' Resolved: The Effects of Climate Change and Trade Barriers in Large Dimensional Modelling* at the 5th International Symposium on Environment and Energy Finance Issues, Paris, at the 3rd International Workshop on Financial Markets and Nonlinear Dynamic, Paris and at the Imperial College, London, CAP Policy Seminar. He also presented at Emergency Management Australia – Attorney-General's Department and at the Clean Energy Regulator both in Canberra on *Three Great Myths in Risk Assessment*.

Dr Susie Hester accepted invitations to present at both the New England branch of AARES in Armidale and at the North American Plant Protection Organization (NAPPO), International Symposium for Risk-Based Sampling in Baltimore, USA on *What about the incentive properties inspection rules?* I also presented at NAPPO as a keynote speaker, where I discussed *Translating information into change*.

In our last newsletter, we highlighted Dr Richard Bradhurst's work on AADIS, the Australian Animal Disease Model. In July, Richard visited the United States Department of Agriculture in Fort Collins Colorado where he facilitated a disease modelling workshop for veterinary epidemiologists

and economists within the Center of Epidemiology and Animal Health (CEAH). The 5-day workshop was based on the Australian Animal Disease Model (AADIS) which he co-developed in close collaboration with the Australian Department of Agriculture and Water Resources. Workshop participants were trained on the use of AADIS as a decision support tool to better understand the spread and control of emergency animal diseases such as foot-and-mouth disease (FMD). Workshop topics included: defining outbreak scenarios, trialling different control strategies, analysis of model outputs, and technical details on the underlying software implementation. Of particular interest to CEAH staff were model enhancements arising from recently completed CEBRA projects on the post-outbreak management of FMD and vector-borne disease. Whilst there, Richard also provided a general overview and demonstration of AADIS in the form of a CEAH-wide seminar.

Dr Anca Hanea has also been busy engaging with our international colleagues. She was invited to talk at both The State of the Art in Expert Judgement Conference, organised by the European Cooperation in Science and Technology (COST) and at Delft, Netherlands on *The IDEA protocol: framework and recent applications*. In July, Anca accepted an invitation, together with Prof. Mark Burgman, to lecture at the Data Assimilation summer school, organised by Statoil & TNO, Sibiu, Romania on *Risk quantification, risk management, Expert Judgement and Safety issue*. She also accepted an invitation to talk in a special session about Bayesian Networks at the 12th International Conference on Structural Safety & Reliability, Vienna, Austria - *Integrating disparate information sources for equilibrium climate sensitivity with NPBNs*.

Our colleagues in Canberra held a launch of our book *Invasive Species: Risk Assessment and management* in August. The book presents a comprehensive review of risk-based techniques that help policy makers and regulators protect national interests from invasive pests and pathogens before, at, and inside national borders. Read about the book launch CEBRA is hosting in November later in the newsletter.



Book launch at DAWR (L to R)

Paul Pheloung, Aaron Dodd, Andrew Robinson, Tom Kompas, Karen Schneider, Matt Koval

Our new website is live and I encourage you all to explore it and find out more about the important work we do.

Andrew Robinson

Managing Director,

Centre of Excellence for Biosecurity Risk Analysis

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Edith Arndt - Research Fellow

"CEBRA challenges me in a good way! Biosecurity is such an interesting field to work in – it brings together different areas of research – e.g. ecology, economics and statistics," said Edith when asked about working at CEBRA.

"I have such interesting days. There are different projects to get involved in both short and long term. On one project, I can work with government staff in Canberra where I can use my understanding and experience in the machinery of government and policy development. On another, I can work directly with importers and custom brokers where I've learnt so much about semi-structured interviews. It's so interesting to meet people that I wouldn't normally and get glimpses into their lives and industry. It really brings new insights to my work."

Edith joined CEBRA in 2016 looking to get back to the University of Melbourne – fondly remembering how much she enjoyed her time as a PhD student and the academic thinking there.

Born in Vienna, Austria Edith did her Masters project in the Austrian Alps and her PhD project in the Australian Alps. You guessed it: Edith loves mountains!

She is also a keen cyclist and runner which she juggles with working part-time and three young children.

"There is always something new to learn and encouragement and appreciation to do that!" said Edith.



Edith Arndt

Impact! - Intergovernmental Agreement on Biosecurity

Currently in Australia an independent panel is reviewing the Intergovernmental Agreement on Biosecurity (IGAB). On 31 March 2016 the Deputy Prime Minister and Minister for Agriculture and Water Resources, The Hon. Barnaby Joyce MP announced the review.

The IGAB was first introduced in 2012 to identify biosecurity roles and responsibilities across Australian Governments. It also outlined priorities for collaboration to minimise the impact of pests and disease on Australia's economy, environment and the community. Strong biosecurity relies on evidence-based processes and partnerships across all Australian governments and between industry,

natural resource managers and the broader community. The review will help ensure Australia's biosecurity system remains current, efficient and flexible.

The review panel has received more than 60 submissions. The work of CEBRA has been cited in one submission. Susan Hester, Chief Investigator CEBRA and Anthony Rossiter, Senior Economist and Research Affiliate with the Victorian Department of Treasury and Finance unpublished manuscript 19 May 2016 "Designing biosecurity inspection regimes to account for stakeholder incentives: An inspection game approach" provided an example of how incentive regulation principles can apply in the biosecurity context.

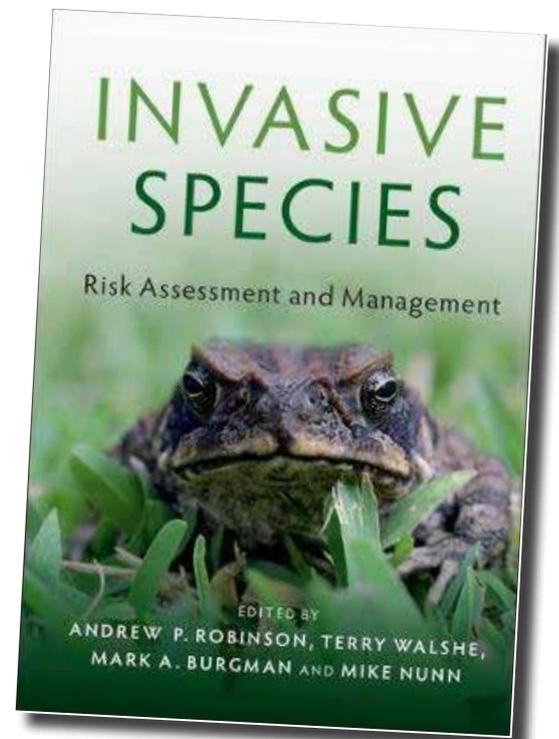
Tom Kompas, Chief Investigator CEBRA presentation at the ABARES Outlook Conference held in Canberra "Best investments in biosecurity and the limits to cost-benefit analysis" was also cited. He recommended that "the structured approach [in measuring the performance of the National Biosecurity system] would assist in prioritising areas of work using a risk-based approach to portfolio allocation".

Another example of CEBRA's work having impact!

Invasive species book launch

Invasive Species book will be launched by CEBRA director, Associate Professor Andrew Robinson at the welcome drinks of the SRA-ANZ Aus-NZ Conference 2017.

More about the book *Invasive Species*: *'With climate change and increasing globalisation of trade and travel, the risks presented by invasive pests and pathogens to natural environments, agriculture and economies have never been greater, and are only increasing with time. Governments world-wide are responding to these increased threats by strengthening quarantine and biosecurity. This book presents a comprehensive review of risk-based techniques that help policy makers and regulators protect national interests from invasive pests and pathogens before, at, and inside national borders. Selected from the research corpus of the Centre of Excellence for Biosecurity Risk Analysis at the University of Melbourne, this book provides solutions that reflect scientific rigour coupled with practical, hands-on applications. Focusing on surveillance, stochastic modelling, intelligence gathering, decision making and risk communication, the contents combine the strengths of risk analysts, mathematicians, economists, biologists and statisticians. The book presents tested scientific solutions to the greatest challenges faced by quarantine and biosecurity policy makers and regulators today.'*



AUS NZ conference- Risk in an Interconnected World

Our world is more interconnected than ever before.

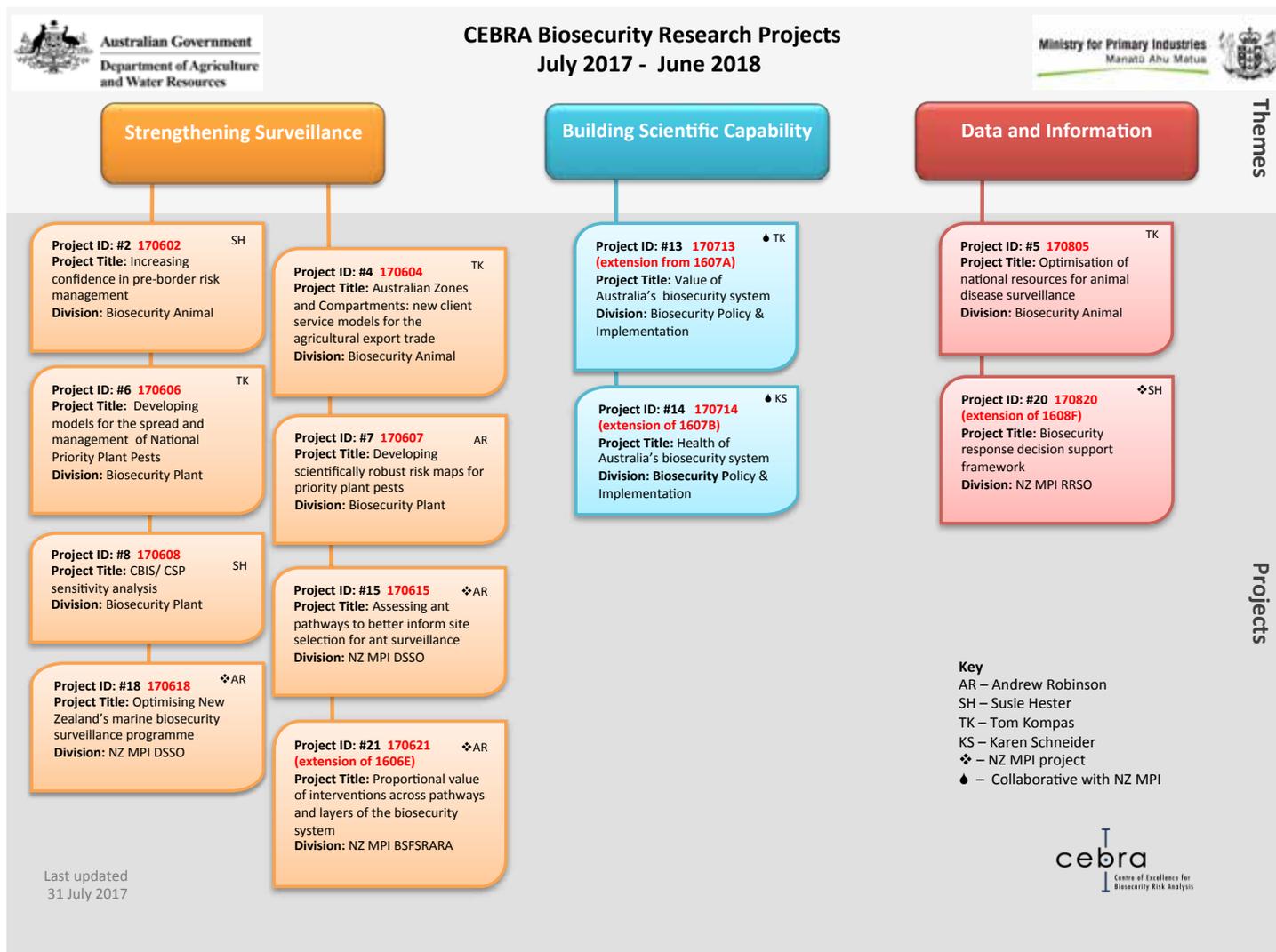
From transport and technology, to trade and the environment, increasing interconnectedness presents significant challenges to government, industry and the individual. What emergent risks are we likely to face and how can we manage them?

The Society of Risk Analysis - Australia and New Zealand (SRA-ANZ) have this year joined with the Australasian Bayesian Network Modelling Society (ABNMS) to bring you their 10th annual conference which will be hosted by CEBRA at the University of Melbourne from November 20-23. Speakers include members of academia, industry and government, and there will be a keynote address by Mark Burgman.

To register, visit: <http://www.sraanzconference.org.nz/>



Approved projects 2017-2018



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