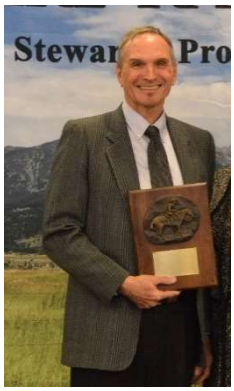
Presenters: Cutting Edge Science Symposium on developing a national ecosystem assessment and forecasting system for Australia



Dr Joel Brown

Joel Brown is a rangeland ecologist at the Jornada Experimental Range. He is currently the Leader of the USDA Natural Resources Conservation Service (NRCS) National Ecological Site Team. His professional interests include land description and classification systems, carbon sequestration on rangelands, and grazing land ecology. His professional experience includes 5 years as an NRCS Field and Area Range Conservationist in Kansas, 5 years as California NRCS State Rangeland Specialist, 5 years as CSIRO (Australia) Project Leader and Senior Principal Research Scientist, 5 years as NRCS Global Change Leader. His formal education includes a B.S. in Agriculture from Fort Hays State University (KS), a M.S. in Grazing Ecology from Texas A&M University and a Ph.D. in Shrubland Ecology from Texas A&M University. He is the 2019 Society for Range Management Frederic Renner Award recipient. http://usda-ars.nmsu.edu/brown.html



Dr Colin Daniel

Dr. Colin Daniel is a landscape ecologist and the president of ApexRMS, a Canadian company that specializes in delivering ecological forecasts to decision makers. As an ecological consultant for over 25 years, Colin has undertaken hundreds of projects for natural resource management agencies around the world focussed upon ecological modelling and decision support.



Dr Michael Dunlop

Michael Dunlop works on the intersection between the social, institutional and biophysical dimensions of climate adaptation and disaster risk reduction. Mike has a background in physics and ecology, and has evolved into an 'integration scientist', with *people* now his chosen study organism. His work focuses on helping policymakers and managers explore institutional changes to enable organisations and society prepare for significant but uncertain change.



Dr Daniel Falster

Associate Professor Daniel Falster is an ARC Future Fellow, based at the University of New South Wales, studying stand dynamics and community assembly of forests. Particular areas of interest include trait-based models of tree growth, the evolution of Australia's tall Eucalypts, and species diversity.



Dr Simon Ferrier

Simon Ferrier is a Chief Research Scientist with CSIRO Land & Water, joining the organisation in 2008 after spending over 20 years working in NSW state government agencies. He is also recognised as an Honorary Professor at the Australian National University, and an Honorary Fellow at the UNEP World Conservation Monitoring Centre. His work at CSIRO has focused largely on developing a new generation of macroecological approaches to biodiversity modelling, monitoring, scenario-analysis, and decision-support, and applying these techniques at regional, national and global scales. He also engages extensively with international initiatives promoting and guiding efforts in science-based biodiversity assessment, including recently co-chairing the IPBES Methodological Assessment of Scenarios and Models of Biodiversity and Ecosystem Services.



Dr Megan Good

Megan is an ecologist and post-doctoral researcher in the School of BioSciences at The University of Melbourne. Her research is focused on landscape-scale vegetation dynamics, particularly in temperate and semi-arid woodlands and grasslands.



Dr Nicky Grigg

Dr Nicky Grigg is a Senior Research Scientist and Team Leader for the Environmental Futures team at CSIRO Land and Water. She works on interdisciplinary projects concerned with anticipating, understanding and adapting to environmental and social change to meet diverse stakeholder values. She brings experience in mathematical modelling and quantitative and qualitative analysis methods for working in complex social-ecological systems.



Mr Barry Hunter

Barry J Hunter is a descendant from the Djabugay speaking people of Cairns hinterland. He grew up beside the Barron River in the rainforest near Kuranda. Barry's experience includes employment in Government conservation agencies, mining and exploration industry, community and not–for-profit NGO's, and recently as a consultant working around Aboriginal Land management, Carbon Industry and community economic development. With over 30 years experience in Aboriginal affairs particular in areas of land, natural and cultural resource management. Barry has a Bachelor of Applied Science from Charles Sturt University and has a keen interest in the work community rangers do in looking after land, fire management and cultural heritage. Also having a real passion building community capacity and planning that deliver sustainable social, cultural and economic outcomes within our communities.



Dr David Keith

David Keith is Professor of Botany in the Centre for Ecosystem Science at the University of NSW. His research interests include the dynamics and management of species populations and ecological communities, risk assessment for biodiversity conservation and fire ecology. He is a serving member of the Australian Threatened Species Scientific Committee and standards committees for the IUCN Red List of Threatened Species and IUCN Red List of Ecosystems



Dr Adam Liedloff

Dr Adam Liedloff is an ecologist with CSIRO Land and Water. He has 18 years' experience in ecological modelling in northern Australia. His research includes modelling the impact of rainfall and fire on native savanna tree stands, modelling habitat of the Gouldian Finch, modelling agricultural farming systems including beef grazing enterprises to modelling indigenous ecological knowledge of wetland health in Kakadu National Park and bush foods in the Fitzroy River of Western Australia. Adam is currently working to create a whole of farm enterprise model (Crop Livestock Enterprise Mode, CLEM) with a wide range of anticipated users from researchers investigating family farms in developing countries to expansive beef enterprises of northern Australia.



Dr Belinda Medlyn

Dr Belinda Medlyn is a distinguished professor and theme leader – Ecosystem function and Integration, at the Hawkesbury Institute for the Environment, University of Western Sydney. Her research focuses on how plants, especially forests, respond to increasing atmospheric carbon dioxide and climate change. She works at the interface between experiments and models: aiming to develop evidence-based models of how ecosystem productivity, water use and species composition will be affected by global change, and to do so she works closely with a number of experimental teams world-wide to test and improve ecosystem models.



Dr Beryl Morris

Dr Beryl Morris is Director of the Terrestrial Ecosystem Research Network (TERN), Australia's national research infrastructure capability. Based on its sensors, field surveys, remote sensing and aggregation of other data sets, TERN provides openly available time series data about ecosystem change from site to continental scale. Beryl has been CEO and Director of several science-related companies and maintains an active research program on the ecology and behaviour of carrion flies.



Dr Norman Mueller

Norman Mueller is a Director of Product Development for Digital Earth Australia, at Geoscience Australia. Norman heads a team of Earth observation scientists in the analysis of satellite imagery to create national datasets that describe the environment and how it changes. His major work includes the creation of the Water Observations from Space product and the recent DEA Land Cover dataset of Australia.



Mr Martin Nolan

Martin Nolan is a spatial data analyst working across a range of areas including land use change modelling, ecosystem services assessment and data visualisation. Martin seeks to transform data into information to improve our understanding of the complex world we live in, aid decision making and help navigate a sustainable pathway to the future.



Dr Louis Provencher

Louis Provencher has been the Director of Conservation Ecology of The Nature Conservancy (TNC) in Nevada (USA) since January 2002, TNC's Project Ecologist for the Kissimmee River Conservation Area in Florida in 2001, and TNC's Research Ecologist for the Longleaf Pine Restoration Project at Eglin Air Force Base, Florida from 1994 to 2001. He earned his BSc and MSc in Biology at the Université du Québec à Montréal, and his PhD in Ecology at the University of Tennessee. Currently, some of his responsibilities include Nevada and cross-boundary remote sensing of vegetation, state-and-transition simulation modeling to achieve cost-effective natural resources management, and interviews of candidates for the David H. Smith Postdoctoral Fellowship (USA) and Canada's Liber Ero Postdoctoral Fellowship since the inception of both programs.



Dr Anna Richards

Anna Richards is a plant and soil ecologist and senior research scientist at CSIRO Land and Water in Darwin. She has a broad interest in ecosystem management; particularly, how the science of vegetation and soil dynamics, along with land management practices, can be used to better monitor, evaluate and manage ecosystem condition and the flow of ecosystem services. Together with Fiona Dickson (DAWE) she leads the Australian Ecosystem Models Framework project.



Dr Libby Rumpff

Libby is a Senior Research Fellow in the School of BioSciences at the University of Melbourne. Her research and teaching draw upon the practices of structured decision-making, adaptive management, and risk assessment. She works closely with government agencies to develop qualitative and quantitative models, facilitate expert elicitation workshops, and apply structured decision making to various environmental management decision contexts.



Dr Rebecca Spindler

Dr Rebecca Spindler is the executive manager for Science and Conservation at Bush Heritage Australia. She oversees an extensive Conservation Science Program. She has over 20 years' conservation science experience, working to improve the reproduction, health and conservation of rare and endangered species. Dr Spindler has managed extensive science programs in China, Brazil and the United States through the Smithsonian Institution and led an active, multi-disciplinary team at Taronga Conservation Society for 10 years.



Dr Brian Walker

Born in Zimbabwe Brian has a B.Sc. in agriculture (South Africa) and a Ph.D. in ecology (Saskatchewan). He worked as a tribal lands development officer, a research scientist and a University lecturer in Zimbabwe before moving to the University of the Witwatersrand in Johannesburg for 10 years as Professor of Ecology in the Dept. of Botany. He was Chief of Australia's CSIRO Division of Wildlife and Ecology for 15 years and is now a Fellow in their Land and Water business unit. He has a long list of scientific publications, edited/ co-edited 10 books, co-authored with science writer David Salt, two semi-popular books about resilience – "Resilience Thinking" and "Resilience Practice", and recently authored "Finding Resilience", a book about how the scientific discoveries of resilience were made.



Dr Mark Westoby

Mark Westoby's research interests include vegetation dynamics, range management, arid zone ecology, seed dispersal, and plant ecological strategies via species traits. He has been elected a fellow of the Australian Academy of Science and the American Academy of Arts and Science



Dr Stuart Whitten

Stuart Whitten is a Principal Economist at CSIRO Land and Water. He is an expert in environmental and institutional economics with particular specialisation in the design and delivery of environmental markets including auctions and tenders, biodiversity offsets and cap and trade approaches. He has worked on the design and implementation of environmental markets for the Australian Government (Reef Tender, Environmental Stewardship Program, Forest Conservation Fund) and for several regional natural resource management groups. At a policy level his economic expertise has supported the Great Barrier Reef water quality policy responses and biodiversity policy across three states and at the national level.



Dr Kristen Williams

Dr Kristen Williams is a principal research scientist at CSIRO Land and Water with extensive experience in research management, coordination and delivery. As an Ecological Geographer, she specialises in the integration of ecosystem and landscape sciences through multi-disciplinary team collaborations to generate data and knowledge products informing systems of ecologically sustainable land management, where biodiversity prospers, ecosystems function and adapt, and ecosystem services meet the needs of all people. She has extensive experience co-designing research with end users to ensure outputs meet their needs with a focus on biodiversity conservation, vegetation management policies, NRM planning and prioritising conservation investment strategies.



Mr Jebediah Williamson

Jeb Williamson is a software developer and ecologist at New Mexico State University, Jornada Experimental Range. He builds and maintains natural resource-focused web applications, including the information system used in the U.S. to house ecological site descriptions and state-transition models.



Dr Emma Woodward

Emma Woodward is a research scientist (geographer) with CSIRO Land & Water. Dr Woodward partners with diverse stakeholders to reveal multiple knowledges and values in environmental decision-making, concurrently exploring mechanisms (methods, tools, protocols and guidelines) to strengthen understanding, and inclusion, of diversity in natural resource management and related enterprise development.