

# UMCCC FORUM 2016

MANAGING YOUR LAND FOR THE FUTURE  
RESILIENCE AND ADAPTATION FOR CLIMATE CHANGE



Friday 18th March—Saturday 19th March 2016

On behalf of the Upper Murrumbidgee Catchment Coordinating Committee (UMCCC) I am pleased to welcome you to our 2016 forum on managing land as the climate changes. The UMCCC is a community-based network made up of individuals and representatives from agencies and groups that are responsible for natural resource management in the upper Murrumbidgee catchment. We cover the catchment upstream of the Burrinjuck Dam wall. Our aim is to enhance communication between individuals, agencies and groups in NSW and the ACT on natural resource management issues that do not stop at borders. To do this, we provide people with opportunities to network, share ideas, and collaborate on natural resource management issues and activities in the Upper Murrumbidgee catchment.

The 2016 forum is one way in which we are providing opportunities for people to network and share ideas on natural resource management issues and activities. We have brought together a diverse group of speakers who will present practical information about managing for extremes and managing for resilience. We will also showcase some of the ways in which people in our region are adapting to hotter summers, warmer winters and managing to generate outcomes both for farm productivity and the environment. People in our region are already adapting with positive outcomes. The forum provides an opportunity for those attending to receive information, discuss their challenges and have wide ranging conversations about how they can manage their land for the future.

The forum has been supported by the ACT Government through the ACT and Region Catchment Management Coordination Group. The Coordination Group is an inter-jurisdictional coordination body that was established to advise the ACT Minister for the Environment on regional collaboration and coordination; opportunities to align national, regional and territory investment in the contexts of integrated catchment management through information sharing and building partnerships; and opportunities for joint/coordinated activities, including investment across borders. As part of these activities, the Coordination Group have been overseeing the development of an Integrated Catchment Management Strategy which includes a focus on the community as managers of land. Forums such as this make an important contribution toward helping the our community improve their knowledge base and share information.

We hope you enjoy the forum and encourage you to continue the conversation well beyond the two days of our meeting.



Dr Fiona Dyer  
March 18<sup>th</sup> 2016  
Chair – Upper Murrumbidgee Catchment Coordinating Committee



# UMCCC FORUM 2016 PROGRAM

MANAGING YOUR LAND FOR THE FUTURE: RESILIENCE AND ADAPTATION FOR CLIMATE CHANGE

## DAY 1 — MURRUMBATEMAN RECREATION HALL

- 8:30am Registration opens  
9:00am Welcome to Country  
9:20am Opening address—Dr Fiona Dyer Chair of the UMCCC

### Introduction to Climate Adaptation

- 9:30am Dr Mark Stafford Smith (CSIRO)

### Session 1: Climate Change in the ACT and Region

- 10:00am Future climate extremes and the NARClIM modeling project (Dr Jason Evans UNSW)  
10:20am Climate Change and Extreme bush fire (Dr Malcolm Gill ANU)  
10:40am Morning Tea  
11:00am Impact on pastures and livestock systems in 2030 (Phil Graham NSW DPI)  
11:20am Q&A panel for Session 1 speakers

### Session 2: Managing the risks to business: Socio-economic Adaptation

- 11:45am ACT and Region Catchment Strategy (Dr Annie Lane, ACT EPD)  
11:55am Climate Change Planning (Kirsty Moyle, NSW Office. Of Environment)  
12:05pm How landholders manage business risks (Richard Taylor, Monaro Farming Systems)  
12:15pm Managing business risk in a hanging climate (Michelle Jacobs, Agribusiness)  
12:25pm Moderated Panel for Session 2 speakers  
1:00pm Lunch  
1:45pm Tour of Gunning Property: Management for resilience in light of changing climate conditions.  
4:00pm Return to Murrumbateman

## DAY 2—JERRABOMBERRA COMMUNITY CENTRE

- 9:00am Welcome and Introduction

### Session 3: Building Resilience into the Landscape

- 9:10am Winners and Losers—biodiversity, climate and habitat (Dr David Freudenberger ANU)  
9:30am Insect diversity for resilient pollination (Dr Saul Cunningham CSIRO)  
9:50am Connectivity in the landscape (David Tongway, Landscape Ecologist)  
10:10am Q&A panel for Session 3 speakers  
10:30am Morning Tea

### Session 4: Managing for the Future : Actions that have multiple benefits

- 10:50am Soil carbon changes and carbon farming (David Marsh, Holistic Farmer)  
11:10am Native Pastures—Natural Adapters (Alison Elvin, Natural Capital)  
11:30am Wetland values and associated biodiversity (Donna Hazell SELLS)  
11:50pm Q&A panel for Session 4 speakers  
12:10pm Wrap up (Professor Ian Falconer, Chair of Coordination Group, NRM Council member)  
12:30pm Lunch  
1:30pm Site visit to river paddock  
4:00pm Return to Jerrabomberra



## Dr Mark Stafford Smith

Chief Coordinating Scientist, Adaptation, CSIRO

Dr Mark Stafford Smith is based in Canberra, Australia, and looks after coordinating Adaptation Research across CSIRO. He interacts regularly with national and international policy issues around adaptation. In 2013 he was appointed Chair of the inaugural Science Committee for *Future Earth*, which aims to help coordinate research towards global sustainability worldwide. By background, he lived in Alice Springs for 20 years and, as a desert systems ecologist and past CEO of the Desert Knowledge Cooperative Research Centre (CRC), focusing on the science of desert living and sustainable management of outback environments.

## Dr Jason Evans

Associate Professor, Climate Change Research Centre

Jason did his PhD on regional climate and water resources at the ANU before working at Yale University for several years. He is currently an Associate Professor in the Climate Change Research Centre at UNSW. Jason is an expert in the science of the climate system particularly in regards to land-atmosphere interactions, the water cycle and climate change. His research involves general issues of water cycle processes over land, and how we can change them, largely through changes in land use and changes in climate. He focuses at the regional (or watershed) scale and studies processes including river flow, evaporation/transpiration, water vapor transport and precipitation.

## Dr Malcolm Gill

Visiting Fellow, Fenner School of Environment and Biology,  
ANU

After graduating from Melbourne University and spending nearly five years in USA, Malcolm joined CSIRO in 1971 as a fire ecologist. Now at ANU, his interests include fire weather, fire behavior, fire management and fires' effects on biodiversity, water supply, people and houses. In Australia, his study areas have included tropical savannas, deserts and a range of ecosystems in south-eastern Australia but especially forests. He was a member of the 2003 Victorian Bushfire Inquiry and an expert witness to the 2009 Victorian Bushfires Royal Commission. He was personally, socially and professionally involved in the 2003 Canberra bushfires. He has published widely.

## Mr Phil Graham

NSW Department of Primary Industries, Livestock and Technical Specialist.

Phil has been in agricultural extension in the livestock industries for 35 years, with the last 28 at Yass working for NSW agriculture. He managed the NSW component of the Southern Livestock Adaptation 2030 program for NSW.

## Dr Annie Lane

ACT Conservator of Flora and Fauna, Executive Director Environment and Planning Directorate, ACT.

Annie Lane is Executive Director for Environment with the ACT Government's Environment and Planning Directorate as well as the Conservator of Flora and Fauna. Prior to this role she was Regional Director for Eyre Peninsula, South Australia. She has a background in ecology and has worked across governments and internationally in the areas of conservation and agriculture. Annie has a keen interest in building resilience of the environment and communities by working together in an integrated way across the landscape.

## Ms Kristy Moyle

NSW Office of Environment and Heritage

Kristy Moyle is an urban and regional planner with particular interests in human capitals, social and community capacity and investment planning policy. Kristy has worked for over a decade in roles across local, state and commonwealth government agencies and has recently completed the Climate Adaptation Plan for South East Local Land Services as part of the Regional NRM Planning for Climate Change program. Kristy now works for NSW Office of Environment and Heritage, where she continues to develop spatial prioritisation products to guide investment in NRM across NSW.

## Mr Richard Taylor

Monaro Farming Systems

Richard Taylor graduated from Sydney University with a 1st class honours degree in Veterinary Science in 1987. He then spent two years working with the Mackinnon Project, a farm advisory service based at Melbourne University, during which time he completed a Masters in Veterinary Studies, with a focus on live-stock production and genetics.

Since 1990 he has been managing the family agricultural business in southern NSW, in conjunction with his father and brother. Richard is also a founding director of Growth Farms, a farm management company which manages \$400 million of rural properties in NSW, Victoria and Queensland. In 2007 he was one of the founding directors of Monaro farming Systems (MFS), and is the current Chairman of the group. MFS was set up to increase the profitability and sustainability of Monaro farmers, by focusing on regionally relevant research, development and extension.

## Ms Michelle Jacobs

Agribusiness, NRM consultant

Michelle Jacobs is a private agribusiness and natural resource consultant specialising in small to medium enterprises (SMEs). In 1997 she embarked on a commercial farming career in south-east NSW during a period of unprecedented climate conditions. Michelle earned her Bachelors and Graduate Diploma qualifications in Agriculture before entering farming and most recently has undertaken a Bachelor of Laws. In 2012 she was awarded Fellow of the Peter Cullen Trust Science to Policy Leadership program. Experienced across the breadth of agribusiness Michelle works to provide decision making tools to manage climate risk in the business context. and risk management.

## Dr David Freudenberger

Senior Lecturer, Fenner School of Environment & Society,  
ANU College of Medicine, Biology and Environment

David Freudenberger, PhD, is a Senior Lecturer at the ANU Fenner School of Environment and Society. He lectures in environmental forestry and has a research specialisation in ecological restoration. His career includes 15 years with the CSIRO and 5 years as Chief Scientist for Greening Australia.

## Dr Saul Cunningham

Research Scientist, CSIRO Ecosystem Sciences

Saul Cunningham has worked on pollination for more than 20 years. His work has ranged from native species to cropping systems. Along with a global network of researchers he has been compiling and analysing data from around the world to help understand general patterns of pollinator diversity, their importance to food production, and the role of land managers in supporting better outcomes.



## Dr David Tongway

Landscape Ecologist

David Tongway had a 48 year association with CSIRO, beginning as an analytical chemist and retiring as a landscape ecologist. He was mainly interested in soil science in the land management context, studying agricultural, rangelands, forested and mined lands on sites all over Australia as well as a number of overseas countries. His research had a highly practical output called “Landscape Function Analysis” or the rapid assessment of soil health, for which he was admitted a Member of the Order of Australia in 2015.

His presentation today will outline how to recognise resilience in landscapes and the effects of a range of stress and disturbance regimes, including GCC.

## Mr David Marsh

Holistic Farmer

David Marsh, Master of Sustainable Agriculture is an award winning farmer, conservationist and change agent from Boorowa in the South West Slopes of NSW. Since 1980 he has been managing a family farm whilst searching for a way of farming that leads to improved landscape function and allows the self organizing, self repairing living community to become more diverse.

Over the last 34 years he has actively questioned conventional farming practice, and engaged in change at both the farm level and through a process of life long learning. This process of action and thought has led to Allendale being managed holistically since 1999.

Since 1989 he has used the knowledge he has gained and the practical experience of innovative change, to work in many organisations to try and influence and inform farmers, school and university students, government agencies, CSIRO, of ethical landuse that will be necessary for a society that has a future.

## Ms Alison Elvin

Director, Natural Capital Pty Ltd

Alison Elvin has been passionately involved, both personally and professionally, with the interface between sustainable agricultural production and biodiversity conservation for many decades. Working as an environmental consultant and rural educator, Alison is in awe of the complexities and innate resilience of our landscapes, and recognizes that her lifetimes' work in this field barely scratches the surface of what needs to be understood. Focusing on our local native pasture grasses, this talk outlines both the strategies these remarkable plants have evolved to ensure their survival through changing environmental conditions, and their invaluable contribution to biodiversity and agricultural production.

## Ms Donna Hazell

South East Local Land Services NSW

Donna Hazell has a PhD in Landscape Ecology from the ANU on frog conservation in agricultural landscapes. She has worked in the university and private sector, with the Victorian government, Australian government and is now with South East Local Land Services, NSW. Her work focuses on biodiversity conservation on private land, particularly through policy, legislation and incentive programs.