

ENGAGEMENT STREAM

Chair: Saskia Gerhardy

Empowering Eyre Peninsula Women on the Land

Megan Low, Lower Eyre Agricultural Development Association

The Understanding Crop Production for Women – Workshop Series is aimed at up skilling farming business partners by increasing knowledge and understanding of annual cropping systems. This will assist them to be more informed with the farming business planning and management.

Developing a greater understanding of the seasonal cropping program including crop agronomy, managing pests and diseases, harvesting and marketing, has increased their understanding and discussions relating to budgets, programs, crop options, time pressures, etc within the business.

The series of five workshops tailored to each location are held over a 12-month period. All workshops have a practical session including soil testing, weed identification, crop walks, visiting local businesses, such as bulk handling site, grain mill and bakery.

The workshops are funded through a grant from National Landcare Program through the Eyre Peninsula Natural Resources Management Board and sponsorship from local businesses. Speakers come from across the peninsula including local agronomists, researchers, machinery dealers and farmers many of whom give their time freely.

In 2016/17 two successful programs were conducted, one on Lower Eyre Peninsula and one on Upper Eyre Peninsula. In 2017/18 three programs are being run at Cummins, Wirrulla and Cleve.

Most of the women participating are in their 20s–40s often with young families who wish to have a better understanding of their farming systems so that they can partake in family discussions. These workshops have been particularly successful in remote locations where there is little opportunity to have off farm employment. These workshops have enabled these women to develop a network within their community as they are often new to the area. They have also taken the initiative to organise other workshops such as farm safety, fire safety and have a list of other activities they want to do.



Walking the South East Seasons with Nature in Mind

David New, Natural Resources South East

Throughout 2017, the South East Natural Resources Management Board, headspace Mount Gambier and Friends of Parks Inc. are providing ten young people the opportunity to experience the diverse benefits of connecting with nature.

‘Walking the South East Seasons with Nature in Mind’ is a unique year-long program based on the Weaving the South East Seasons Aboriginal calendar. It comprises 12 full day nature walks, activities and camps around the South East of South Australia.

The program aims to increase the mental health and wellbeing of the participants, promote environmental sustainability and leadership, and share local Aboriginal knowledge of nature. The program is endorsed by the South East Aboriginal Focus Group and supported by The Mount Gambier City Council and Friends of Parks Inc. Board funding.



Engaging Youth on Rewilding and Citizen Science Programs

Jacki Smith, Conservation Volunteers Australia

“The world now has the largest generation of young people in history. I place great hope in their power to shape our future” (United Nations Secretary-General Ban Ki-moon).

The mission of Conservation Volunteers is to inspire change by connecting people with nature, and this is especially important for our youth, who are by nature inquisitive and desire to experience the new and different in their world. Youth want to contribute to the positive, they are tired of hearing the negative and they want to have a part in shaping their future. Conservation Volunteers has engaged young people from across the world for more than 35 years on thousands of conservation projects, enabling them to make a positive difference for the Australian environment.

Looking into our future as an organisation, Conservation Volunteers is continually focused on staying relevant and

accessible to the community, with our ‘Citizen Science’ and ‘Rewilding’ programs in particular being developed with youth in mind. Citizen Science programs are appealing to young people as they provide the opportunity collect the invaluable data and information that is then used to understand the world around us and in many cases influence future conservation initiatives; while Rewilding programs are alluring because they afford the possibility of being able to correct some of the mistakes of the past by reintroducing native animals into their historical areas and hopefully ensure these species a more promising future.

The Rewilding the Desert program at Little Desert Nature Lodge is a partnership between Conservation Volunteers and FAUNA Research Alliance that ambitiously aims to bring back from the brink some of Australia’s most threatened wildlife and place Australia as a global leader in species conservation and research.

Science Alive – engaging young audiences and building partnerships

Brian Haddy, Managing Director, SciWorld

Science Alive utilises a wide range of engagement styles to engage all family members. Hands-on science and environmental-based fun and practical activities. Presentations and opportunities to discuss a wide range of careers and education with businesses and tertiary institutions.

Brian will share his experience in organizing science engagement activities for children and families in metro and regional locations. SciWorld’s science communicators give workshops and science shows in schools and community venues every day around the State – from the community hall in Ceduna’s main street to Roxby Downs Area School to the McCormick Centre in Renmark to the Main Corner complex in Mount Gambier and everywhere in between.

Brian will share practical tips on engaging young audiences and building partnerships with schools, industry, community, government and educational organisations.

Brian will also outline how Landcare can get involved in these ongoing science fairs and the potential benefits and will give some tips for effective engagement with younger audiences. Brian will also discuss some emerging programs that will provide a means for the longer-term engagement of young people in science.

SECURITY STREAM

Chair: Simon Goodhand

Paddock Tree Project – integrating science, production and nature conservation on farms

Andrew West, Natural Resources Adelaide and Mt Lofty Ranges, and Geoff Hodgson, Trees For Life

PART 1: ANDREW WEST

The landscapes of temperate South Australia have been fundamentally altered since European settlement and most of this part of the State is now privately owned and managed for production purposes. The success of nature conservation in this area will be reliant on the land use and management decisions of individual landholders.

Current approaches to landscape-scale conservation emerged from Island Biogeography in the 1960s and largely focus on formally setting aside and linking land dedicated to conservation (an approach known as 'land-sparing'). However, by itself, land-sparing has not been achieving the desired conservation outcomes in many parts of the State, partially because it frames nature conservation and production as mutually-exclusive land uses.

However, recent scientific developments, particularly the field of Intervention Ecology, are identifying new approaches that complement 'land-sparing' and are achieving landscape-scale conservation outcomes by integrating conservation into production systems (an approach known as 'land-sharing').

Analytical work has been completed to guide the design and delivery of a land-sharing approach to conservation in the production landscapes of the northern and eastern Mount Lofty Ranges. This work identified new delivery opportunities that maintain traditional production systems while supporting conservation. This model was subsequently delivered as a partnership between the Adelaide and Mount Lofty Ranges Natural Resources Management Board and Trees for Life, and has resulted in an unprecedented level of landholder patronage and very large-scale on-ground delivery. This work is on-track to achieve long-term conservation outcomes in production landscapes where traditional land-sparing approaches to conservation have been insufficient.



PART 2: GEOFF HODGSON

The Paddock Tree Project (PTP) is a collaboration between Trees For Life and AMLR NRM Board, with funding from the Federal Government. The project has been conceived, designed and implemented with the primary objective of conserving a suite of declining woodland birds in the Mount Lofty Ranges.

Baseline bird surveys will be used in future monitoring programs to detect any response from this intervention. As well as woodland bird conservation, there are a range of other outcomes emerging from the project, including:

- Increasing our knowledge about the distribution of woodland birds, and remnant vegetation in a poorly surveyed part of the region;
- Conducting surveys across participating properties which can inform land management priorities;
- Engaging with a range of primary production organisations and landholders with varying motivations to achieve mutual objectives;
- Developing and trialling new tree guards for the specific purpose of paddock trees; and
- Designing revegetation which is both fit for purpose (ie declining bird habitat) and tailored to individual properties.

The PTP has captured the imagination of landholders across a wide area. We have nearly 250 landholders in our PTP database, and have worked across over 60 properties during the first two phases of the project.

In total, we have planted 13,500 paddock trees and guarded 183 naturally regenerating seedlings across nearly 11,000 ha. This relatively small intervention to re-instate a critical habitat feature means that we can work across very large areas. The PTP is a new way of working for Trees For Life, but is strongly aligned with our broad approach of working across the landscape to improve productivity, biodiversity values and visual amenity.

Our presentation will outline the processes for planning, resourcing and delivering the two phases of the project so far, and lessons learnt and improvements made along the way.



Of life and land; the journey of Pinery fire recovery and the role of NRM

Taryn Mangelsdorf, Natural Resources Adelaide and Mt Lofty Ranges

The Pinery fire started on 25 November 2015. It burnt 85,000 hectares of prime cropping country, destroying at least 91 houses, 271 farm buildings, 17,986 sheep and numerous other livestock.

With a considerable disaster comes significant consideration to engaging people. Experiences show that multiple levels of engagement are required to cater to community demand for information and resources at different stages of their recovery journey. Following on from our learnings of the Eden Valley and Sampson Flat fires, a range of engagement strategies were employed, including media releases, fact sheets, web content, community events and individual property visits. Each method of engagement is designed to move landholders through stages of attitudinal change.

These engagement strategies are tailored to the different demographics within the fire scar including lifestyle farmers, industry and agricultural groups. The farmers affected are generally long-term farming families, highly skilled and well-connected. They are self-reliant and work within their trusted communities. Without our established relationships with the agricultural bureaus, our ability to provide assistance and be accepted by the farming community would have been limited.

Recovery is long-term and multi-faceted. One step to recovery for people and land is to see vegetation back in the landscape. Natural Resources are working with local councils and other organisations to provide 30,000+ native plants to fire affected landholders. These wind breaks and paddock trees will mitigate soil erosion by altering wind patterns, provide shelter for stock, and psychologically aid people's recovery by seeing 'green' across the plains.

Farmers have an intrinsic connection to the land, and their personal recovery from fire is deeply connected through the recovery of the land. We will discuss how successful partnership with landholders and groups has led to practice change, and provide an update on how the community is now focusing on building resilience across the region.

Securing crop pollination through revegetation: A project that stimulates engagement, security, enterprise and partnerships

Katja Hogendoorn, University of Adelaide

A major project is underway in South Australia to incentivise growers of pollination dependent crops to secure their crop pollination services through targeted revegetation.

In a unique approach, this project has comprised, from the planning stage, all main stakeholder groups, including primary industry associations, landcare organisations at state and federal level, NGOs and businesses specialising in revegetation.

The aim of the project is to design guidelines for plantings that are tailor-made for the region and the crop and formulate recommendations for plant species, planting strategies and landscape design that will optimise outcomes for growers and pollinator biodiversity.

The researchers will first identify the useful pollinators of apple, pear, canola and lucerne and, in collaboration with beekeepers, the local native plants they rely on in space and time.

Then, the suitability of these plants for revegetation and the costs and the value of plantings, will be assessed in collaboration with O'Connor NRM, Trees for Life and Greening Australia.

This information will subsequently be used to create regional demonstration sites and a user-friendly online decision support tool to assist in landscape planning and cost/benefit evaluation of the revegetation effort. Further extension will be directed through stakeholder primary industry organisations, sustainable agriculture officers at NRM boards and PIRSA, NGOs and local community groups.

The inclusive approach in this project encourages engagement of stakeholders of various backgrounds and fosters new partnerships between them.

It is a model for working across traditional sectors to achieve joint outcomes for conservation and primary productivity. This model can be built upon by including a wealth of other ecosystem services.

Concurrent sessions #1

Improving soil health and the profitability of our business by building our knowledge and skills and applying innovative practices

Tom Robinson, Anashka Farms,
Hoyleton South Australia

Our focus is on improving our soil health and the profitability of our business through building our knowledge and skills and applying innovative practices.

We grow a wide range of crops, including multi species cover crops and inter-row companion crops on our 4,000 acre business. This helps with building organic matter and soil biology in our 13 to 17 inch rainfall property. One sixth of the property area is leased and one sixth of the area is share farmed.

I am fortunate to receive strong support and encouragement from my partner and parents in applying new technologies and innovative techniques.

Through SANTFA I regularly interact with leading farmers across Australia and from the United States of America. I am also involved in the Mid North High Rainfall Zone Group, Crop Science Society and Hart Field Site Group.

We work in partnership with Gupta, Ben Fleet, Chris Preston and Glen McDonald from Adelaide University to host farm visits for third year Agricultural Students. We are also working closely with Tim Herrmann DEWNR to better understand soil microbiology and soil health.

The range of crops we are currently producing includes; wheat, barley, canola, faba beans, chickpeas, lentils, linseed, millet, sunflowers, corn, sorghum and mungbeans. Also growing both winter and summer cover crops. All crops are sown using machinery modified for controlled traffic on three-metre centres.

A key component of growing our diversified crops is the ability to retain standing stubbles to optimise seed placement and crop establishment through using a zero till disc on six-inch row spacings. Standing stubble, harvested with a stripper header reduces soil temperature over summer and optimises soil moisture.

ENTERPRISE STREAM

Chair: Gill Peacey

Partnerships and progress through Indigenous Protected Areas – Wardang Island and Yappala

John Chester, Aboriginal Lands Trust,
and Roger Rigney, Contractor

The Aboriginal Lands Trust currently manages two Department of Prime Minister and Cabinet funded Indigenous Protected Area projects – Wardang Island adjacent Point Pearce on the Yorke Peninsula, and Yappala adjacent Hawker in the Flinders Ranges.

Both IPAs have experienced unique circumstances over the past 12 months that are worthy of reflection and of sharing the experience and knowledge gained as a result.

WARDANG ISLAND

In March 2016, an inspection of the Island by Point Pearce Aboriginal Community (PPAC) and ALT members and asbestos specialists identified the presence of asbestos in buildings left behind from the previous Broken Hill Associated Smelters sand mining operation.

The presence of asbestos put in jeopardy planned activities on the Island including the ongoing IPA program, the 20 Million Trees project and a community-based fishing charter enterprise.

YAPPALA

During the first half of 2016/17 the Yappala Indigenous Protected Area lost a respected and important caretaker of the Yarta (Country or Land). This along with the sudden departure of the IPA Co-ordinator put the project into a period of uncertainty and vulnerability.

The presentation will outline the following elements as they relate to the key themes of 'Engagement, Communication and Community Development' and 'Partnerships and Planning'.



ENGAGEMENT, COMMUNICATION AND COMMUNITY DEVELOPMENT

- Activities that promote ownership and lead to positive change in behaviour and values;
- Local community empowerment strategies, building resilience through engaging community stakeholders and ensuring their participation to build commitment and attract target community members – particularly young people; and
- Getting out on Country to sustain traditional land management, knowledge and science.

PARTNERSHIPS AND PLANNING

- Adaptive leadership – succession planning, governance development, project design, co-ordination and management;
- Collaborative approaches – sharing resources and supporting projects/activities;
- Partnerships at the community and regional level – sharing expertise and experience, working across sectors, eg joint production, conservation and health outcomes; and
- Alternative approaches to funding, resourcing and achieving results.

Emeroo Station and the North West Indigenous Pastoral Program – from little things, big things grow

Gordon Dadleh, Bungala Aboriginal Corporation

Emeroo Station (Port Augusta) is owned by the Bungala Aboriginal Corporation. Since 2015 it has embarked on a program of pastoral re-development in partnership with the North West Indigenous Pastoral Program (NWIPP), a partnership between Primary Industries and Regions SA (PIRSA) and the Indigenous Land Corporation (ILC).

Bungala has now implemented a progressive Property Management Plan for Emeroo Station that maps out required works to bring lands back into sustainable production and transition back into a fully functional pastoral property. This initiative has had significant and unexpected outcomes. Large multinational solar power producers have jockeyed for position to develop solar power infrastructure on the now functioning Emeroo Station which has in turn led to alternative and substantial income generation, substantial Indigenous employment and enterprise opportunities and increased investment into Landcare. The Emeroo Station's engagement with the NWIPP Program is an inspiration and example to all Indigenous landowners aspiring to achieve effective Landcare in an often difficult and compromising commercial environment.

Concurrent sessions #1

Addressing feed supply and demand through total grazing pressure management in southern Australian rangelands: industry consultation

Dr Jodie Reseigh-O'Brien,
PIRSA-Rural Solutions SA

The management of the grazing intensity through alternative livestock grazing systems has had a long history of research with often inconsistent results. In part, this is due to a failure to account for additional grazing pressure from native and feral animal populations which can be substantial.

While considerable innovation and uptake of total grazing pressure (TGP) management has occurred in southern Australian rangelands (eg through partial exclusion and cluster fencing) an understanding of the impacts on livestock and pasture production, natural resource condition and animal welfare is lacking.

Where impacts of TGP are high and feed-base consumption is greater than what is desired within the livestock system, an imbalance between feed supply and demand may lead to negative and sometimes irreversible impacts.

This project is a partnership between four states (QLD, NSW, SA and WA) to deliver a review of the current information and a research investment plan for Meat & Livestock Australia (MLA). The cross-jurisdictional and cross-sector approach adopted, involves pastoralists, researchers, extension agencies, policy developers and NRM bodies with the potential to deliver production gains to more than 1.9 million km² of Australian rangelands. This approach will also allow information gaps and perspectives to be gathered at regional and national scales.

Here, we present the preliminary data from the industry consultation. The industry consultation will gauge regional differences in numbers of livestock, native and feral animals; capture issues that are important to pastoralists in the management of total grazing pressure, relative to the supply of feed. Industry consultation is a critical component of the project underpinning the development of a research, development and advisory investment plan for Meat and Livestock Australia.

Restoring soil pH through farming acid soils champions

David Pearson, Cockaleecheie
Landcare Group

Over the past two years, farmers from two groups, who are concerned about their falling productivity, lack of alternative break crops and declining chemical efficiency, have been involved in program that increases farmers understanding of declining soil pH and learnt how to 'read' their paddocks to identify areas of concern.

Technology in the form of a pH Mapper is used to map paddocks, develop lime prescription maps that are used to target lime applications using variable rates.

The two farming acid soils champions groups review their maps, discuss the management options, and undertake a cost analysis of the savings by spreading lime at variable rates.

Farmers were shown latest decision-making tools including Limecheque, Acid Costs and Maintenance Lime Rate Calculator to reduce the rate of acidification through crop and fertiliser selection, reverse the declining pH levels and liming applications needed to maintain a sustainable soil pH level.

Sixteen landholders were involved in the first year with over 1,000 ha mapped under the program. Farmers took the initiative to map a further 44 paddocks (2740 ha) while the pH mapper was in the district.

Feedback from the project was extremely positive with most farmers taking the opportunity to spread lime in 2016. It has been reported that lime sales on lower Eyre Peninsula in 2017 have doubled on last year's sales.

As a result of the success of the 2016 program, it has been expanded to mentor more landholders on lower Eyre Peninsula and expand the project to the Cleve Hills.

The presentation will highlight the partnerships that have developed between LEADA, Cockaleecheie Landcare Group, Rural Solutions SA, Eyre Peninsula NRM Board. Local agronomists take the research and awareness raising down to a practical paddock.

PARTNERSHIPS STREAM

Chair: Michael Richards

Trees For Life Regenerate Project

Samantha Buxton Stewart,
Trees For Life

What attracted you to working in a bushland environment? The smell of gum leaves, the warbling of Magpies, the croak of frogs or the peace that it provides. It is these details that connect us with country and inspire us to work to protect it. Recently, there has been a lot of conversation around 'Wellbeing in Nature'. At Trees For Life we have turned this into action with Regenerate, and have seen the results for ourselves!

Regenerate was established with a grant from Department for Communities & Social Inclusion (DCSI) through the Fund My Community program. Partnering with health and disability providers, this is targeted community engagement with partners and participants generally not exposed to environmental activities.

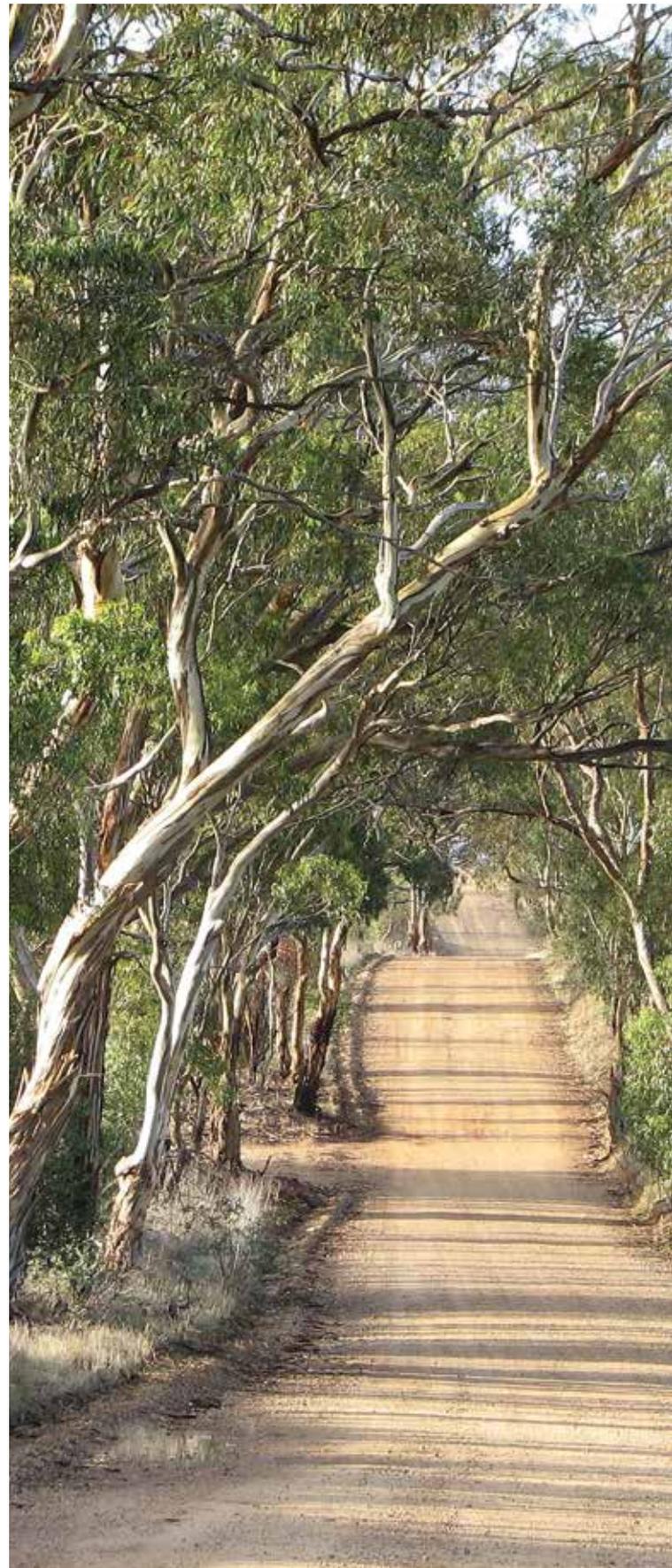
This has connected a much wider section of the community to nature and could potentially lead to new long-term volunteers, or new advocates for the environment. It has also provided us with access to a new funding stream to achieve our on-ground aims.

Implementation was co-designed with project partners and tailored along the way using participant feedback to fully address their needs. We have had to adapt fluidly to the logistics of each of the project partners, and more importantly provide sensitive support to the daily requirements of each participant to allow them to have a positive environmental experience.

We have had to shift our expectations. Mid-way, I questioned the achievement of on-ground aims, but when I saw how positively participants were responding, it changed my thinking. Once we got to know participants, we noticed subtle changes in their behaviour throughout each activity and on subsequent activities.

At a mid-project meeting with the partners their feedback was enthusiastic, "participants were more calm, relaxed and engaged after attending an activity; even a day or two later".

Regenerate is achieving on-ground outcomes of a different kind!



Concurrent sessions #1

The Fleurieu Forward Farming Group – Driving Sustainable Agriculture on the Fleurieu

Melissa Rebbeck – Climate & Agricultural Support Pty Ltd

The Fleurieu Forward Farming (FFF) began out of a need to do more farming systems work on the Fleurieu region. A collection of volunteers and consultants from farm groups on the Fleurieu joined forces to look at issues facing agriculture in the Fleurieu region and at the heart of this is soil health. Soil health issues continue to emerge in all many southern Australian regions including declining fertility, growing acidity, sodicity, salinity and soil structural issues.

The FFF group meet as the need arises to look at issues facing agriculture in the region and finds funds to explore some options to implement and overcome these issues. To date the FFF have conducted a review of historical soil trials that have occurred and are relevant to the Fleurieu, dating back to the 1960s. The review found some gaps in soils research and in response to the gaps the FFF have been successful in obtaining additional funds from Adelaide and Mount Lofty Ranges Natural Resources Management Board to:

- Review the benefit of long term alternative soil amelioration techniques, using six farm case studies in the region and a replicated soil health field trial;
- Review the benefit of biochar under pasture using a replicated trial;
- Conduct some pH mapping and develop a plan to monitor and control pH;
- Implement soil moisture probes on the case study sites and replicates sites;
- Develop a web site and community of practice; and
- Conduct a range of field days and walks.

The FFF have also obtained some funds from the Alexandrina Council to expand the work and applications into the SAMDB region.

The FFF developed just over a year ago and in a short space of time have achieved a lot. The benefit of farmers driving the research and demonstration sites means faster uptake and implementation of results. The FFF have already had additional farmers implement alternative soil treatments and have a wide range of interest from other farmers, community groups and research bodies.



To date they have conducted three successful field days and have grown a large data base to deliver results. Anyone can register to receive project updates, access to newsletters, and invitations to field days and events.

They are pursuing other projects to develop an ongoing strategic plan, and look at the structure options and communication techniques for our group and applied outputs going forward. For more information, you can contact the FFF through the website fleurieuforwardfarming.com/

WildEyre: Conservation through Collaboration – 10 years of successful landscape-scale restoration

Andrew Freeman, Natural Resources Eyre Peninsula, and Stuart Collard, Greening Australia

WildEyre is a landscape-scale conservation program involving individuals and local, regional and national groups who are working together to restore and conserve the unique and diverse ecosystems of central northwest Eyre Peninsula. Five key organisations came together in 2007 to form the WildEyre Working Group (WEWG), including Eyre Peninsula Natural Resources Management Board, Department for Environment, Water and Natural Resources, Nature Conservation Society of SA, The Wilderness Society South Australia and Greening Australia (GA).

The WildEyre landscape covers over 1.2 million hectares and contains some of the largest, intact and connected areas of bushland in the state's agricultural districts. This mosaic of agricultural land combined with significant areas of native habitat makes it an ideal focus for landscape-scale conservation work.

Using the Nature Conservancy's Conservation Action Planning (CAP) process, the WEWG identified and implemented strategic priorities which aim to maintain, protect and enhance priority ecological assets through strategic restoration and threat-abatement activities.

WEWG reflects on 10 years of successfully delivering conservation outcomes together. WildEyre is unique because local community, non-government and government organisations are working together to deliver a shared ecological vision for this part of Eyre Peninsula. Through the WildEyre aspirational vision, good governance and CAP planning, the model has attracted significant funding whilst at the same time always remained committed to delivering on ground outcomes with local community.

Over the last 10 years on-ground successes include significant support, investment and capacity building with local Aboriginal work teams and businesses, rotational grazing trials, planting 1,300 hectares (with 11,700 hectares due for completion by June 2018) of revegetation with 13 landholders, protecting 17,000 hectares of remnant vegetation over nine private properties and controlling over 44,000 hectares of African boxthorn through innovative aerial herbicide treatment.

Kokatha and the North West Indigenous Pastoral Project – key partnerships and careful planning are integral to effective Landcare

Glen Wingfield, Kokatha Aboriginal Corporation

In 2014 the Kokatha people were granted a Native Title determination over Roxby Downs, Andamooka and Purple Downs stations, a group of pastoral leases in the far north held by BHP Billiton Olympic Dam Corporation (Olympic Dam). Olympic Dam subsequently entered into a sub-lease arrangement with Kokatha to return the properties to sustainable pastoral operation.

Olympic Dam was joined by the South Australian Government and the Indigenous Land Corporation's North West Indigenous Pastoral Project, which has invested in the development of an achievable Kokatha Pastoral Development Plan, pastoral worker training, an infrastructure repairs and maintenance program and the procurement of required plant and infrastructure. This partnership has seen Kokatha emerge in 2017 with real and substantive opportunities. Kokatha is building a strong foundation for its future which combines responsible Landcare, sustainable pastoral land use, real employment opportunities and importantly, a reconnection of Kokatha people with their traditional lands.

The Awards dinner will be held at the Golf Club with guests asked to commence arriving at 5:50pm, with festivities concluding at 10:30pm.

The 2017 State & Territory Landcare Awards and the Premier's NRM Excellence Award recognise the outstanding contributions made by volunteers to the sustainable management of South Australia's natural resources.

These awards recognise individual people, groups and community networks in tackling environmental issues, so as to make our environment a better and more sustainable place for us all to enjoy.

His Excellency the Honourable Hieu Van Le AC Governor of South Australia and Mrs Lan Le will be special guests at the Conference Landcare Awards dinner.

AWARD CATEGORIES INCLUDE:

- Rio Tinto Indigenous Land Management Award;
- Fairfax Landcare Community Group Award;
- Austcover Young Landcare Leader Award;
- Junior Landcare Team Award;
- The Premier's NRM Excellence Award;
- SureGro Coastcare Award;
- Australian Government Partnerships for Landcare Award;
- Australian Government Excellence in Sustainable Farm Practices Award;
- Australian Government Innovation in Agriculture Land Management Award; and
- Australian Government Individual Landcarer Award.



**2017
STATE & TERRITORY
LANDCARE AWARDS**



Government of South Australia
Department of Environment,
Water and Natural Resources

Keynote speakers



Paul Ryan

Director, Australian Resilience Centre

Future ready Landcare – how we can prepare for uncertain futures

ABOUT PAUL

Paul Ryan is the Director of the Australian Resilience Centre, an organisation that builds the capacity of regional communities and agencies facing uncertain futures. His primary focus has been on putting resilience science into practice. He does this through training, facilitation, mentoring, research and developing and supporting a national community of practitioners.

More recently Paul has worked internationally to develop and apply resilience concepts in developing nations. Paul was recently appointed to the IUCN Taskforce on Resilience, has previously worked for the Resilience Alliance – the international network responsible for the development of resilience theory, and with CSIRO coordinating ecological and multi-disciplinary research.

He has previously worked on-ground for regional and state agencies, including the Goulburn Broken Catchment Management Authority in Victoria where he was involved in the development and implementation of regional catchment strategies, programs and incentive schemes. Paul grew up on a farm in northern Victoria where his family has been farming continuously for 150 years.

ABSTRACT

Landcare has been at the forefront of change in rural landscapes for more than 30 years. An emerging set of powerful 'mega-drivers' is now shaping rural landscapes and communities in ways we have never experienced. These mega-drivers will impact rural landscapes and communities dramatically over the next 30 years. Some landscapes and communities will be transformed, others will adapt, while others still will lurch through cycles of decline and renewal.

How these changes play out in different landscapes depends on a range of factors such as proximity to larger centres and

transport networks, temperature and rainfall trends and production potential. It is easy to feel powerless or daunted by the type and rate of change we are now experiencing. How we think about, prepare for and respond to change has a critical influence on how these mega drivers will influence our landscapes, livelihoods and lifestyles.

From changing the way we think and communicate about issues, to changing the way we plan and implement actions on the ground, how we learn and how we create innovative partnerships and build networks there are many small practical ways we can develop 'future-ready' thinking and doing.

I will present concepts, case studies and practical suggestions for how we can adopt a 'future-ready' approach.



Melanie Malig-Spranz

Quality Control Manager, B.-d. Farm Paris Creek

B.-d. Farm Paris Creek

ABOUT MELANIE

Melanie Malig-Spranz is a highly valued member of B.-d. Farm Paris Creek's management team and the Spranz family. With a background in Medical-Science and Food-Quality, Melanie heads the Quality Control Department. Melanie's pride is B.-d. Farm Paris Creek's continuing high level of Quality Accreditations.

ABSTRACT

B.-d. Farm Paris Creek is a multi-award winning certified biodynamic-organic family business in the Adelaide Hills. The B.-d. Farm Paris Creek manufacturing facility in the Adelaide Hills produces premium dairy products: milks, yogurts, quark, butter, handcrafted French-style soft and European style hard cheeses. These products are made from highest quality milk from free ranging dairy cows. They have recently added the Adelaide Hills Dairies to their range to support Adelaide Hills Farmers ethically farming efforts. In her presentation Melanie will examine the application of the conference streams across all aspects of their business and its future development and management.

Concurrent sessions #2

ENGAGEMENT STREAM

Chair: John Osborne

Constantly evolving: SURLG's community engagement activities –what's worked and why? And what next?

Jenny Deans, Sturt Upper Reaches Landcare Group

Extension and capacity building – successful activities that lead to positive change in behaviour and values.

Local empowerment, resilience, group cycles, building the passion, attracting and retaining group members.

Strategies and activities to engage schools, students, youth and under 30s.

Sturt Upper Reaches Landcare Group (SURLG) is a peri-urban Landcare group with a conservation focus, concerned with connecting local landholders and raising awareness about the local environment, in particular the existence of the nationally endangered southern brown bandicoot and what landholders can do to provide habitat for it. The group has operated for 20 years with a range of different activities consistent with its aims which are currently encapsulated as:

To promote a landcare ethic in the local community through:

- Public awareness;
- Practical activities; and
- Connecting people with nature and each other.

The presentation will outline projects and activities undertaken by the group, which include:

- Establishing a demonstration site showing how bandicoot habitat provided by woody weeds and blackberry can be successively replaced by native plants whilst retaining habitat value;
- Maintaining the demonstration site, including hosting corporate and school groups for planting days;
- Publication of a booklet 'Frogs, Mammals and Reptiles and How to Restore their Habitat';
- Long term public talk series; and
- Links with local schools, including in-school and on-ground work, and educational resources.
- Representation at local events.

The talk will include members' observations about:

- What has driven the choice of activities undertaken by the group;
- How activities have been funded;
- What 'success' looks like for the group's community engagement activities;
- What has worked best for community engagement; and
- The effectiveness (or otherwise) of activities for the resources invested, both volunteer time and funding.

SURLG's current projects and ambitions for future community engagement activities will be summarised.

The presentation will conclude with some 'top-tips', being the group's observations about the balancing act that is needed in community-driven community engagement.

SURLG was awarded the Premier's Community Engagement Award at the 2015 South Australian Community Landcare Conference.

To be successful Landcare needs to be adaptable to changes to the structures in which it operates and is part of

Helen Rapp Bourne, South Para Biodiversity Project

The South Para Biodiversity Project Inc. (SPBP) formalised in 1999 covers the largest contiguous native vegetation in the Mount Lofty Ranges. The members are representative of various volunteer groups, agencies, councils and community representatives.

People with passion and involvement, willing to share ideas and discuss what is happening in their patch whilst taking on board what others are doing. Often having diverse objectives requiring members to focus on what is happening in their immediate territory, but mindful of what others are doing and why. The interaction and discussion around sharing ideas, solutions, issues and the group synergies enhance the overall outcomes. One size doesn't fit all but it can be blended and together achieves more.

As funding and local issues change, the SPBP has changed over the years, but has always focused on the priority of preserving our biodiversity. The information flow, across public and private landscapes is one of the most important achievements of the SPBP, because it enhances everyone's knowledge, improves outcomes, reinforcing that we are all part of the bigger picture.

Concurrent sessions #2



With changes to governance and funding the group has been responsive and shown flexibility through change by incorporating and accessing other funding and grant sources over the years. For example, the Australian Government Green Corps and Green Army schemes over the years have enabled Landcare activities to be delivered across tenures and landscapes, whilst also leading to positive change and local empowerment of individuals in the general community. Lots of lessons have been learnt over the years.

Social activities are important. They reinforce the relationships and connections which are made in meetings. Over the years The Feral Feast, included all that were involved, in any way with the SPBP: landholders, staff, volunteers, etc. It's amazing what gets discussed during a relaxed evening.

SPBP 18 Years and still going strong!

Our Place – nature is a place for everyone

Jodie Sommerville and Jacqui Wilson, Goolwa to Wellington Local Action Planning Association

Over the past two years, Goolwa to Wellington LAP has been working to develop partnerships between schools and environmental community groups.

The Our Place project, funded through the SAMDB NRM Board's Connecting Communities program has facilitated relationships between local Primary Schools and Volunteer groups through the shared connection of a special place. The special place (Our Place) is a publicly accessible site, often a conservation park, and students and their families can visit at any time.

Four schools and three community groups are currently involved in the project:

- Goolwa Primary School with Goolwa Coastcare;
- Eastern Fleurieu School, Strathalbyn with Angas River Catchment Group;
- Eastern Fleurieu School, Ashbourne with Friends of Cox Scrub; and
- Mount Compass Area School with each of the above groups.

Classes involved with the Our Place project are hosted at their special place by GWLAP and the partner community group once each term.

On each excursion students learn about the site, the plants and animals that live there and how it needs to be cared for. This is done through activities with volunteers and hands-on works such as weeding or planting. The students also gain valuable time outside in nature.

Benefits of the Our Place project:

- Students develop a connection with natural places in their local area;
- Students learn about volunteering and gain an appreciation of how volunteers care for the environment;
- Community volunteers share their vast knowledge with the next generation; and
- Volunteer groups have a chance to expand their membership through shared family days with schools.

The presentation will include a short film including interviews with students and volunteers involved in the project, photos and discussion on what has been learned and what we hope the project will lead to in the future.

The Young Environmental Leaders Program; engaging young people in the environment and building capacity to achieve positive long-term environmental outcomes for regional schools and communities

Bonnie Maynard, Natural Resources Northern and Yorke

Natural Resources Northern and Yorke's Young Environmental Leaders (YEL) program is an exciting, dynamic education program engaging youth in the environment. From humble beginnings, the program now engages 30 primary schools across the region and effectively builds the capacity of young people to achieve positive, long-term environmental outcomes for their schools and local rural communities.

The YEL program fosters student leadership in regional primary schools and communities. District educators deliver the program through a series of outdoor forums, sustainable projects and activities that connect young people to nature and local spaces, and encourage young people to be responsible and accountable for their environmental actions and impact. Community partners, Landcare groups, farming groups, volunteers and professionals discuss their experiences, and students are encouraged to think holistically about this region's unique, diverse and productive landscapes.

As a direct result of the YEL program, 20 sustainable projects have been initiated by Young Environmental Leaders within schools throughout the Mid North District since July 2015. On-going projects include waste and recycling initiatives, chicken houses, aquaponics, vegetable beds, native food gardens, butterfly attracting gardens and back-to-nature play spaces.

In 2017, the YEL program inspires young people to learn and value their local environment through 'kids teaching kids' where students conduct their own research about a local issue and collaborate with local people in the community. This model empowers young people to voice their ideas, and share their learnings with peers, classmates and the schooling community through a student-run workshop.

District educators in the Northern and Yorke Region demonstrate an on-going commitment to the development and excellence of the Young Environmental Leaders Program. Young people are the future leaders of our landscapes and the YEL program helps to drive positive change and build passion and value for our natural resource assets.

SECURITY STREAM

Chair: David Pritchard

Taking the problem of environmental funding to the community – an innovative approach

Katherine Hill, Natural Resources Adelaide and Mt Lofty Ranges, Peter Watton and John Wamsley, Friends of Scott Creek Conservation Park

The Friends of Scott Creek Conservation Park are a thriving volunteer group with a 26-year history of contribution to conserving remnant vegetation in one of the largest intact areas of native vegetation in the Mount Lofty Ranges region. With the loss of some large environmental grant schemes the group put their heads together to come up with a way of securing funding that was independent of government grants and budgets and to truly become a community project and the Almanda Project was born.

The group's aim was 'to restore threatened wetlands at Scott Creek Conservation Park by rehabilitating degraded upland swamps, bogs, spring-fed gullies and seasonal creek lines' over 10 years. With this aim in mind, the Friends came up with a number of strategies to gain funding.

The first was the brain-child of long-time volunteer, John Wamsley, to utilise crowd-funding. The first round of fund-raising occurred in October 2014 with \$10,409 raised – a great start. The momentum was maintained throughout, with thousands of emails and letters being sent out by John.

To build on their success Tom Hands, the group's President of 25 years, and John put together the first Almanda Report. This 78-page book summarises the objectives, project deliverables and methods to carry out the project. It is intended that the group will compile a similar report on the project each year. This can be used to raise even more funds and allow transparency for project outcomes.

So far the project has been successful at leveraging over \$45,000 through a variety of funding sources and activities including open garden days, native plant sales, Almanda Report sales and park open days.

The project wouldn't be possible without the partnerships with the Natural Resources Adelaide and Mount Lofty Ranges staff and neighbouring landholders.

Concurrent sessions #2

Saving our swamps – whole community engagement at Mount Compass

John Gitsham, Goolwa to Wellington Local Action Planning Association

The Fleurieu Swamps Recovery Project was a partnership project funded by the Australian Government, managed by Natural Resources SA MD, with the on-ground works coordinated by Goolwa to Wellington LAP.

The project aimed to restore and rehabilitate the EPBC endangered floral ecosystem of SA Fleurieu swamps. The project worked with local communities on the importance of preserving and rehabilitating this endangered ecosystem, which is important in managing local water flows, springs and filtration of the water system and all the endangered plants and animals that live in this environment.

The main icon species was the threatened Mt Lofty Southern Emu wren which the locals and the Mt Compass School embraced as the totem for the project along with rare orchids, frogs, bats, etc.

Over 47 local Swamp Properties, businesses and landholders involved in the project included Dairy Farmers, Beef Farmers, Alpaca farm, Vineyards, and Fruit Growers, Lifestyle blocks, Government Conservation Parks, Alexandrina Council, Nature Foundation SA and the Mt Compass Area School Swamp, which also included the restoration of the school swamp boardwalk.

The restoration of the boardwalk through other community grants, gave all the local community and the school children access to the swamp area for environmental education.

Over the five years of the project 15,000 habitat plants/trees were planted in 23 swamps to supplement the existing swamp vegetation. Ongoing weed control on 47 properties totalling 950 ha to help landholders manage their weeds into the future.

Over 33 km of stock fencing was constructed on 25 properties to keep stock from wandering into the swamps, trampling the rare plants and also protecting the stock from becoming bogged, a win-win for farmers.

All the community and landholders embraced the project and it has changed the look and emphasis of Mt Compass into a green enviro-friendly town and community.

The local Mt Compass School children have regular swamp training days learning about all the animals that use the swamp and how ecosystems work.



Frahn's Farm – Great partnerships lead to actions and outcomes

Kylie Moritz, Natural Resources SA Murray-Darling Basin

Frahn's Farm is an area of 570 ha at Monarto, South Australia. Natural Resources SAMDB and the community have a long-term plan for the ecological restoration of this special property.

Frahn's Farm contains critical habitat for a suite of declining woodland birds, along with refuge for several nationally threatened flora species. The property also provides the opportunity to undertake large scale restoration of grassy woodland ecosystems.

The journey to restoration began with an extensive community consultation process. The resounding response from the community was for the land to be managed for conservation and recreation. It is towards this end that the Frahn's Farm restoration project was born.

A partnership was formed with BioR, a not-for-profit community group, and NR SAMDB to deliver restoration and management works across the property. This partnership will enable actions to be supported and built upon into the future.

Works across the property have also drawn upon the skills and knowledge of other groups including University of SA,



Aboriginal Learning on Country, Local Action Planning groups, Zoological Society of SA, Green Army and private contractors.

For the past three years a great deal of activity has occurred across Frahn's Farm including revegetation of 120 ha, experimental plantings, reintroduction of threatened plants, extensive woody weed control, fencing, flora and small vertebrate surveys, community planting events, installation of nest boxes, bird banding and the realignment of a walking trail to bring walkers into the property.

The Frahn's Farm project highlights how great results can be achieved over a short period of time when there is a shared vision to the future and strong partnerships are formed – leading to action and great outcomes.

Native grassland trial at Tailem Bend

Nicola Barnes, Natural Resources SA Murray-Darling Basin

A new trial has been set up at Poonthie Ruwe Conservation Park, located to the south east of Tailem Bend and managed by Natural Resources SAMDB. The northern half of the park supports Iron-grass Natural Temperate Grassland of SA and is in poor to moderate condition.

The current trial has two aims:

1. To document long term changes in native grassland condition in these low rainfall grasslands; and

2. To implement and compare some management strategies to improve the biodiversity value and resilience within the park.

Vegetation monitoring commenced in spring 2016 and management interventions to be implemented include pulse grazing with sheep, timed slashing and addition of C4 (summer-growing) native grass seed.

Our aims are to gain a greater understanding of how this system changes naturally over time, particularly in relation to seasonal and annual fluctuations in rainfall. In addition, the project design will allow robust comparison of the results of the different management interventions and their relative influence on grassland health, in terms of species diversity and cover.

The outcomes of this project will be relevant to both conservation and production outcomes for native grasslands. The trial site can be used as a demonstration site in future field days and farm walks. In addition, if this method proves useful it can be applied in other types of native grasslands to build on the knowledge we have gained and apply it more widely.

Our partners working towards improving outcomes for native grassland management include Eastern Hills and Murray Plains Catchment Group, Mid Murray Landcare Group, SA Regenerative Farming group and Barossa Improved Grazing Group. We will be working closely with these groups and others to promote the project and down the track to provide practical advice from our learnings to land managers.



ENTERPRISE STREAM

Chair: Natalie Sommerville

PIRSA Fisheries and Aquaculture – Compliance Support Officer Program

Deryck Donovan, Cobi Lovett,
Joshua Smith, Delahay Miller,
Bronson Laughton, PIRSA

South Australia's Aboriginal Nations have long been interested in the management of recreational, commercial and traditional fishing, however they have had limited opportunities to directly engage and contribute to the management of the state's aquatic resources.

Aboriginal recruits are in the process of being trained to become authorized Fisheries Officers, as part of the State Government's Aboriginal Career Pathways Program. The program provides the opportunity for Aboriginal men and women to be recruited, trained and mentored by experienced Fisheries Officers to gain the skills and qualifications required for appointment as an authorised Fisheries Officer.

To date, four Aboriginal people from the Far West Coast, Eyre Peninsula, Yorke Peninsula and Limestone Coast have been recruited through the program.

Recruits will receive two years on the job training as Compliance Support Officers and upon completion of their training will work in partnership with their communities as Fisheries Officers.

We are proud to develop the only current program in Australia of its type to recruit, train and employ Aboriginal Fisheries Officers. The program will bolster regional employment, improve Fisheries and Aquaculture compliance efforts across the state and provide young Aboriginal people with not only a job, but a meaningful career pathway.

Ngarrindjeri Regional Authority – Sustainable production and economic development

Luke Trevorrow, Ngarrindjeri Regional Authority and Ngarrindjeri Ruwe Contracting

This presentation will discuss the sustainable production and economic development projects that have been established by the Ngarrindjeri Regional Authority and Ngarrindjeri Ruwe Contracting through a partnership with PIRSA.

The enterprise development projects include Wild Eats, Native Foods, Natural Resources Contracts and the Seafood sector. The presentation will focus on the progress, outcomes and benefits from a Ngarrindjeri perspective.

Building acceptance of new information that challenges accepted practices

Peter Treloar, Precision Ag Services and YP Alkaline Soils Group

Presenting data developed in new generation farming systems which contradicts the plethora of widespread information based on traditional methods of fertiliser use comes with its challenges.

Trials conducted by the YP Alkaline Soils Group have clearly shown there is no significant yield increase from applying high rates of nitrogen fertiliser on soil that has a long history of farming with No Till and stubble retention.

Despite the fact that reducing the excessive amount of applied nitrogen fertiliser is a game breaker in better managing farm and environmental risk, building business security, improving soil health and reducing the rate of soil acidification, there is a lot of ingrained resistance to reducing the use of nitrogen fertiliser.

Many farmers and advisors are afraid to break ranks, and run the risk of not achieving maximum yield and grain protein, if they achieve a reasonable yield with a high rate of nitrogen then that is seen as validation.

Just as encouraging the adoption of NoTill started with very small numbers of farmers, adapting to the improvements in soil health has also began with encouraging small numbers of farmers to trial lower inputs of nitrogen fertiliser on small areas on their farms. Using precision agriculture, it has never been easier for farmers to manage on farm trial strips and this has formed the basis to encourage adoption of farming to improved soil health. But this is a very slow process as it can take multiple seasons for farmers to trust the results, depending on their situation.

As with adoption of NoTill, sighting the experiences of leading farmers who have improved farm returns and grain quality through reducing nitrogen rates is assisting with building acceptance of new data as more farmers achieve similar results.

Employing social media has helped spread the message, as well as providing a way to by-pass some road blocks within the industry. Using imagery on Twitter and Facebook, is much more effective in building awareness and knowledge than relying on text alone.

Acceptance of information is steadily building as data has been extended through working with a range of groups and

organisations. Although some gatekeepers have denied their members access to proven and relevant data.

This presentation will discuss the barriers that the YP Alkaline Soils Group must address to get the message out to the farming community and the role of champions and social media in overcoming them.

Understanding energy usage on-farm to make good choices

Jeremy Nelson, Natural Resources SA Murray-Darling Basin

In today's energy supply and retail marketplace people needing energy to operate pumping and associated systems to support irrigated agricultural production are faced with scenarios of likely increased cost to their business arising from energy supply and consumption.

On top of this considerable mystery still prevails with many landholders as to how they can optimise their systems to firstly save energy on-farm before contemplating what energy supply mix may provide them with the best and most cost-effective solution into the future.

There is a popular misconception generally that whilst it is true retail electricity costs continue to rise – this is not the only issue, we need to better understand how we use this energy to identify what we may be able to change.

With the support of NLP funding, Natural Resources SAMDB has undertaken several projects with irrigators across the SAMDB region to identify what their issues are with their on-farm electricity and diesel energy usage for irrigation and dairying. Through the project irrigators and primary producers have identified several key areas for training and development that would enable them to better understand how their own systems and practices can change.

A basic methodology has been developed through this project to assist farmers/irrigators to undertake their own assessments and to improve their confidence in understanding where their energy \$\$ are going each time they switch on.

Ongoing components of the project are examining optimising diesel usage in primary production (centre-pivots) using telemetric diesel fuel flow meters and telemetric centre-pivot tower control systems and diesel/solar or total off grid solar power supply systems for centre-pivot production systems in potato production and dairying enterprises.

The findings of these projects will be available in August 2017.

Concurrent sessions #2

PARTNERSHIPS STREAM

Chair: Jess Henderson

Back to Basics – Native grass and horses; A Case Study on engaging horse owners

Kim Thompson, Upper Torrens Land Management Project

Its common knowledge that buying the horse is the cheap part! Most horse owners spend significant dollars keeping their horses healthy with products/supplements purchased from a fodder store, in fact many horse owners weekly feed budgets exceeds their own. Coupled with the rising number of horses affected with dietary issues including laminitis, metabolic syndrome and obesity, concerned horse owners in the upper Torrens started asking for help.

On most horse properties in the Adelaide Hills, there is either:

- Too much pasture grass – exotic/introduced grasses which produce higher levels of non-structural carbohydrates (NSC); or
- No grass at all – horse owners have utilised 'set stocking' and sacrifice paddocks which results in serious land degradation problems including soil erosion, soil compaction, loss of soil fertility and weed infestations.

The 'Back to Basics' programme aimed to demonstrate to horse owners that the single most important thing you can do for your horses' health and diet is to provide the ability to constantly graze HORSE QUALITY pasture. Through a series of workshops, field days and feed tests, we have demonstrated that native grass pastures can provide 365 days of healthier grazing including the provision of green grass (utilising native C3 and C4 species) all year round.

With improved land management strategies, horse owners can maintain good ground cover whilst reducing the risks of health issues in their horses. With partners in Horse SA and funding through the Sustainable Agriculture Team, Natural Resources AMLR, the Upper Torrens Land Management Project engaged Equine Nutritionist, Tracy Whiter and local native grass grower (and expert), Robert Myers, Native Grass Resources Group, to develop a project that has seen a significant number of horse owners participate and be engaged in natural resource management. By focusing on the benefits to horses, 'Back to Basics' is changing behaviour in horse owners.



Washpool Feral Deer Control

Ann Hammat, Yacka Moorundie Landcare Group and Paul O'Leary, Natural Resources Northern and Yorke

Populations of feral deer, including red deer and fallow deer have been well established in the Bundaleer Forest, Water Reservoir and surrounding agricultural lands for many years. Impacts of feral deer on agricultural crops, native vegetation, planted trees as well as risks to motorists have resulted in the formation of the Washpool Feral Deer Project Group, which consists of local landholders and aims to mitigate the impacts of feral deer on their properties and the wider community. The focus is on reducing deer numbers in the project area with a collaborative approach to management recognising and involving a wide range of stakeholders in planning, implementation and monitoring.

The landholder group has initiated control and monitoring programs across more than 40 properties with support from Natural Resources Northern and Yorke, volunteers from the Sporting Shooters Association of Australia, SA Water, DEWNR Aerial Marksman, local landholders, Biosecurity SA, University of Adelaide and Forestry SA. Ground-base and aerial shooting programs have been implemented during 2017 and several monitoring projects were also developed including deployment of motion sensing cameras throughout the project area that will be used to estimate deer populations and determine effectiveness of control.

The Project is also contributing to a wider South Australian state project to help determine the financial cost of feral deer by sampling stomach contents using DNA sequencing technology. The diet analysis will determine the impact of feral deer on agricultural crops, pastures and threatened plant species and the potential of wild deer to be vectors of weeds. The achievements of the Washpool Feral Deer Control Project would not have been possible without the help and coordination from Ann Hammat from the Yacka Moorundie Landcare Group, as well as the volunteers from the Sporting Shooters Association Australia and local landholders.



Creating opportunity – Sustainable production and regional economic development through Aboriginal Partnerships at PIRSA

Brett Bartel, Jamaica Agius, and Jordan Tonkin, PIRSA

At Primary Industries and Regions SA (PIRSA) we recognise that Aboriginal people continue to maintain a unique and irreplaceable contribution to the sustainable management of our vast natural resources and our regions.

As an agency, we are committed to developing respectful partnerships and creating sustainable opportunities with Aboriginal South Australians to participate and benefit from South Australia's economic prosperity at both a regional and local level.

As part of our commitment, in 2016 PIRSA established a dedicated Aboriginal Partnerships Unit (APU). The APU is a central point of contact, supporting all PIRSA divisions to leverage tangible economic, employment and engagement opportunities aligned with Aboriginal needs and aspirations within our everyday business.

Since its establishment, the unit has successfully supported the creation of new opportunities and strengthened existing partnerships with Aboriginal communities, business and individuals across South Australia.

Some examples of PIRSA recent partnerships include: the expansion of the North-West Indigenous Pastoral Program, advancing the development of native foods, pursuing opportunities for Aboriginal communities and business within the South Australian River Murray Sustainability Program; and providing strategic advice for the implementation of the Traditional Fisheries Career Pathway Program and entry level career pathway program (First Steps).

In the course of our everyday business, we are proud to have created several short and long-term benefits for Aboriginal communities, business and individuals across South Australia.

Community Landcare in the Campbelltown City Council, South Australia

Gerry Butler, The Gums Landcare Group

Community Landcare Groups and Friends of Council reserves have enjoyed a supportive and beneficial partnership with the Campbelltown City Council, in the eastern suburbs of Adelaide, South Australia. Community volunteers, often ratepayers, take responsibility for their local environment and join with friends and colleagues from further afield to implement approved actions in Council reserves.

The Campbelltown City Council has a number of staff associated with the role of biodiversity planning and interaction with community volunteers.

The Council's biodiversity planning focus is to conserve the small fragments of native species largely restricted to Council reserves and roadsides. Conserving and enhancing areas of indigenous vegetation in association with community landcare volunteers is an important component of this strategy.

The principal Biodiversity asset is Wadmore Park/ Pulyonna Wirra, where Campbelltown Landcare Group has been working since 1994 and more recently under the auspices of the Management Plan for Wadmore Park.

There are many other places in the Council area where groups such as the newly formed The Gums Landcare Group, Friends of Lochiel Park and many others enjoy working together and protecting the environment for future generations.

The presentation will discuss the strengths, barriers to engagement and partnership development that Campbelltown Landcare Group, The Gums Landcare Group and other community groups have in working with Council.

The alignment of groups such as Friends of Lochiel Park to the Lochiel Park Community Garden and The Gums Landcare Group to The Gums Recreation Reserve are examples of the community need and spirit that is the foundation of Landcare.

Concurrent sessions #3

ENGAGEMENT STREAM

Chair: Sandy Edwards

Citizen Science on a shoestring: The Eyre Peninsula goannas project

Grant Lomman, Natural Resources
Eyre Peninsula

What do you get when you combine threatened goannas, a lack of data, a limited budget and the need to make sense of a rising number of anecdotal reports? An opportunity for innovative engagement.

Natural Resources Eyre Peninsula had their work cut out for them recently when they set out to spot, identify and report on an important local goanna species as part of the citizen science project 'EP (Eyre Peninsula) Goannas'.

Rosenberg's goanna (*Varanus rosenbergi*) were once common across southern Australia. However, their distribution is now limited to isolated populations in south west Western Australia, coastal regions of South Australia, Victoria, Canberra and the sandstone country of New South Wales.

Kangaroo Island is thought to be the species' last stronghold, although anecdotal evidence suggests that Eyre Peninsula may sustain a larger than expected mainland population, despite less than ten recorded in the Biological Database of South Australia prior to 2011 and their vulnerable classification.

With conservation methods such as 1080 fox baiting programs well established in the region for approximately two decades, this project aimed to gain a greater understanding of the distribution of these scavenger/predators, both inside and outside of National Parks.

The project team knew they wouldn't have the funding to launch the ultimate goanna monitoring project, but put their heads together to come up with innovative ideas to encourage community participation.

Two years later, their minor financial investment has paid off with over 1000 goanna sightings recorded through the website EPgoannas.com.au

To date, community engagement has been a key component to the success of this project. The next step will involve finding a PhD student(s) to undertake more detailed studies of this species and hopefully determine the size of Eyre Peninsula's *V. rosenbergi* population, our understanding of their breeding areas and determine factors that affect trophic interplay.

The changing face of Waterwatch

Sylvia Clarke, Natural Resources SA
Murray-Darling Basin and Sherie Bain,
Goolwa to Wellington Local Action
Planning Association

Community water monitoring programs like Waterwatch can provide good quality monitoring data and increased engagement in catchment management issues. The national Waterwatch program began in the 1990s and was a popular way of getting landholders and members of the public monitoring the health of their local waterways. When funding for the program ceased, so did the data collection and community involvement in water monitoring in many areas of SA.

The SA Murray-Darling Basin (SAMDB) region kept up their support for their community water monitoring program, accumulating over 20 years of data, predominantly from catchments in the Eastern Mt Lofty Ranges.

However, a recent review of the SAMDB Waterwatch program highlighted discrepancies between the data that was being collected and what the state government scientists thought was the information needed to assess the health of the catchments.

This led to the development of a citizen science partnership between the Angas River and Finniss Catchment Groups, Goolwa to Wellington Local Action Planning Association, the Natural Resources SAMDB Citizen Science and Water Allocation Planning teams, and DEWNR Science and EPA staff. Data is divided into two categories:

1. Information community members are equipped to collect themselves in their own time (photo points, water depth readings from gauge boards, obvious water quality issues, salinity measurements etc); and
2. Data that collected alongside scientists twice a year in 'Bioblitz' events (macroinvertebrate (waterbug) diversity and more detailed water quality measurements). This model has enabled more sites to be accurately assessed throughout the catchments, engaging the community whilst providing useful data for government monitoring requirements.

This process is constantly being evaluated by all partners to ensure the method provides for the needs of scientists and community members alike. In the future, this model could be expanded to other catchments in the SAMDB and why not beyond?



Innovation in mapping: a project where on-ground experience and youthful innovation come together

Rick Coyte and David Phillips, Friends of Sturt Gorge Recreation Park

In the age of electronic record keeping and the desire to access data 24/7 by the click of a button it only seems natural that we start utilising online platforms to keep records, right? Think of all the information and knowledge that resides with environmental volunteer groups. How can other practitioners access this knowledge? The Friends of Sturt Gorge have been recording data on flora and fauna for over 10 years. This data largely resides on paper and is not easily shared or utilised by the wider group, nor is it easily accessible to practitioners planning works in the park.

The Friends of Sturt Gorge have developed a web-based mapping tool to record information about the gorge and the group's priorities that will assist decision making.

Volunteers of the group are now using their smart devices such as phones and tablets while in the field to GPS and spatially record things such as flora and fauna records, plant populations and data and plan future working bees.

With support from DEWNR staff the data fields of the online tool were aligned to the fields collected in the Biological Database of SA to allow for a direct and easy transfer of information directly into state records. In July 2016, the group conducted their first transfer of 206 records into the Biological Database of SA. This data is now easily accessible by the public, other members of the group, researchers and DEWNR staff responsible for activities such as planning for prescribed burns and weed control. The data collected will also be important over time by demonstrating trends in native populations of flora and fauna and the spread or reduction of invasive plants.

The data collected and the layers in the tool are helping volunteers make printable maps, navigate the gorge, and keep track of data for reporting. It may eventually enable a move from paper-based records to geospatial record keeping.

Concurrent sessions #3

Natural Resource Management and Landcare working together to help conserve a nationally endangered marsupial

Dr Elisa Sparrow, Natural Resources Adelaide and Mount Lofty Ranges and Sue Duigan, Kangarilla Landcare Group

Within the peri-urban environment of the Mount Lofty Ranges, resides a population of the last remaining bandicoot species in South Australia; the southern brown bandicoot (*Isoodon obesulus obesulus*). Prior to European settlement there were eight bandicoot species recorded in South Australia, however now there is only one. People do not often know that these nationally endangered marsupials are living in their backyards or local area, because they prefer the protection of thick dense cover, and if they are seen they can sometimes be mistaken for a rat!

We are incredibly fortunate to still have this species in our region, as everything similar has disappeared. They provide important ecosystem services such as soil improvement, and promotion of native plant germination. The species' continued persistence in the Mount Lofty Ranges may therefore play a significant role in maintaining the function and health of some of our remaining bushland ecosystems.

Long-term conservation of bandicoots in the peri-urban environment will rely on the knowledge and capacity of the local community. Natural Resources Adelaide and Mount Lofty Ranges' staff are working with local Landcare groups, on a variety of onground projects. The groups are involved in protecting and restoring bandicoot habitat, determining extent of local populations, creating connectivity between populations through wildlife corridors, propagation of native plants for use in habitat restoration, educating local communities on threats to bandicoots, and confirming bandicoot presence on properties. Knowledge of bandicoot presence is particularly important in blackberry management. Blackberry is a Weed of National Significance, however dense infestations can provide important habitat for bandicoots, particularly where native vegetation is lacking. In addition, the Landcare group's leadership within the community is invaluable for driving onground recovery actions.

Collaboration between Natural Resource Management staff, local Landcare groups and the broader community has been fantastic for knowledge and resource sharing. This presentation will share some of the 'wins' and our experiences with you on our quest to conserve South Australia's last bandicoot species.

SECURITY STREAM

Chair: Katrina Hewitt

Felixing feral cats: field trials of a new automated control and monitoring tool

Liz McTaggart, Natural Resources Eyre Peninsula

Feral cat eradication, deemed necessary for persistence of confined populations of several threatened species, is problematic, particularly in large areas where cats have access to abundant prey and are reluctant to take baits or enter baited traps. Furthermore, many feral cats are wary and unlikely to enter novel confined spaces, which renders close-proximity and containment traps ineffective.

Felixer grooming traps have been designed to distinguish feral cats (and foxes) from non-targets and automatically administer toxins to them without requiring target animals to investigate lures or enter confined spaces. Felixers also photograph target and non-target animals walking past them using a novel sensor and camera array that may prove to be more sensitive and reliable than contemporary camera traps.

We present images and data from the initial field trial of Felixer grooming traps at Venus Bay Conservation Park where feral cats are being controlled to protect woylies and bilbies in an integrated project using several innovative control techniques.

Building capacity to undertake landscape-scale control of weeds and rabbits

Dr Ross Meffin, Biosecurity SA, PIRSA

Introduced pest plants and animals damage agricultural industries, with a combined annual cost of almost \$1 billion for pest birds, rabbits, wild dogs, mice, foxes and feral pigs; and over \$4 billion for the wide range of weed species. Environmental damage is more difficult to quantify but the impacts are substantial.

Biological controls provide considerable benefits by reducing recurrent management costs and slowing the rate of pest and

weed re-establishment and spread after conventional control. New biological controls include the recently released K5-RHDV and proposed Eimeria intestinal parasites for rabbits and a North American leaf-eating beetle shows great promise for control of silverleaf nightshade.

The Landcare and NRM communities have local on-ground knowledge and well developed networks, which make them ideally placed to promote best practice control methods amongst land managers who may be unaware of the full range of biological controls, or unconvinced of their efficacy.

This presentation will provide an update on new biological controls and outline a two-year trial to provide landholders with locally-tailored and integrated advice on weeds and rabbits, to ensure they get maximum value from biological controls and the complementary use of conventional techniques.

This program will leverage stakeholder groups, which aim to reduce the extent and impact of weeds and rabbits, but that lack technical and logistical support.

The project will raise awareness of the impacts and costs of weeds and rabbits; foster connections among groups and individuals; promote shared responsibility for weed and rabbit management; provide individualised support including technical best practice management information and training in prioritisation, strategic control and how to identify funding opportunities for on-ground management.

The project will focus on achieving economic and environmental outcomes, and activities will be delivered across SA with a focus on agricultural districts.

Carp herpesvirus – could it be the solution to the carp problem? Possibly but there are risks...

Alex Chalupa, Biosecurity SA, PIRSA

European carp (Common Carp) are considered the worst aquatic pest in south-eastern Australia, particularly within the Murray-Darling Basin where they make up more than 80 per cent of fish biomass in some areas.

CyHV-3 is a carp herpesvirus that offers a potential option for the biological control of common carp in Australia. The Australian Government has committed \$15 million dollars to develop the National Carp Control Plan (NCCP) with the aim of assessing whether the virus should be released. However, there is considerable research, assessment, consultation and planning yet to be done before an informed decision is made nationally on whether to release the virus in Australia.

Although the virus can have up to 100% mortality in some areas, it should be noted that the virus will not eradicate carp. Modelling predicts that carp herpesvirus will result in an initial carp knockdown of 70-80%, with slow recovery to 30-40% of pre-release population (if not complemented with further strategic biocontrol technologies to drive carp numbers down even further).

There are several areas of high concern for South Australia, specifically surrounding issues such as drinking water quality and water infrastructure impacts of a large fish kill; environmental impacts of large fish kills on aquatic ecosystems and the issue of logistics and costs involved in such a large clean-up effort.

A comprehensive risk assessment of all possible impacts is therefore crucial for any release before the decision is made to release and possibly see waterways where common carp aren't the only fish on the menu!

Innovative disease control in vines

Presented by a representative of the Clare Grape Growers Association

The Clare Grape Growers Association are successfully working in partnership with Viticultural Researcher Peter Magarey to improve wine grape quality and reduce vine disease. Three weather stations strategically placed across the Clare Valley have assisted growers and researchers with managing disease pressure in grape vines.

A blend of scientific knowledge, practical observations and experience are utilised to formulate and issue timely disease alerts when weather and vine conditions are suited for the build-up disease.

Weather conditions are monitored by Peter Magarey and discussed with leading grape growers, capturing in field observations of vine condition.

Grow Care disease alerts are issued to grape growers when required, and then followed by ongoing monitoring of disease levels, reassessment of disease risk, and provision of further recommendations.

Project activities have increased disease management skills, improved vine health, and reduced chemical use. Improving environmental condition, and increasing grape quality and grower returns.

Concurrent sessions #3

ENTERPRISE STREAM

Chair: Bruce Macpherson

DEWNR Caring for Country: Partnering with Aboriginal nations to manage South Australia's environment, water and natural resources

Bruce MacPherson, Natural Resources Alinytjara Wilurara

The Aboriginal nations of South Australia have intrinsic cultural links to, and knowledge of, their Country that helps them to meet their customary obligation to Care for Country. This creates an imperative for DEWNR to establish effective partnerships with South Australia's Aboriginal nations to effectively manage the water and natural resources of the State.

The current partnership arrangements are largely locally designed and driven, primarily through co-management of public lands; regional Aboriginal partnerships programs, principally through NRM Boards; and delivery of water planning and infrastructure projects. This localised approach gives respect to the diversity of Aboriginal nations, their interests and their capacity to engage with DEWNR.

This presentation reflects on the changing nature of the relationships between DEWNR and the Aboriginal nations of South Australia and will include case studies highlighting the practical natural resource management work being done by Aboriginal people and the impact of the work on country, culture, community and individuals.

The four speakers will include:

- **Walter Tjami** from Anangu Pitjantjatjara Lands will present his work as a Regional Landcare facilitator with the APY Pastoral Sustainable Grazing Program
- **Jeffrey Newchurch** will present on the recent establishment of the Kaurna co-management of the Adelaide Bird Sanctuary and the broader relationships with DEWNR
- **Luke Trevorrow** will present on the Kungun Ngarrindjeri Yunnan Agreement (KNYA) and its establishment to commit and guide DEWNR in engagement with Ngarrindjeri

- **Isobelle Campbell** will present how the Mannum Aboriginal Community Association Incorporated (MACAI) is partnering with DEWNR to manage wetlands along the River Murray

The presentations will be followed by a 30-minute panel discussion with the four presenters to explore the nuances of these partnership arrangements and identify some key components of successful engagement with Aboriginal nations.

PARTNERSHIPS STREAM

Chair: Jill Woodlands

Community Action Planning in Northern and Yorke Region: an application of the Open Standards for the Practice of Conservation

Andy Sharp, Natural Resources Northern and Yorke

Over the past 10 years, the Northern and Yorke Region has incrementally applied the 'Open Standards for the Practice of Conservation' methodology (OS) to prioritise its actions and develop integrated natural resource management programs.

Based on the principles of adaptive management, OS follows a standardised multi-step process to:

1. Build a conceptual model of the system (social, political, economic, cultural, and environmental factors);
2. Identify the actions required to address the issues;
3. Link specific actions to outcomes; and
4. Iteratively monitor and evaluate the success of the actions.

Although initially developed as a tool for biodiversity management, the approach has been adapted to enable its application within the region's soil and water resource management programs; delivered under the brand 'Community Action Planning' (CAP).

Based on socio-ecological-production landscapes, the region has developed three biodiversity CAPs, three soil CAPs, one regional water CAP, one regional marine biodiversity CAP, and will soon be initiating 'Healthy Country Planning' across the region; a variant of OS that focusses on the aspirations and priorities of Aboriginal communities.

One of the significant benefits of the OS/CAP approach is that it proactively seeks the participation of stakeholders and the community in the planning process, aligning it with the goals of the International Association for Public Participation (IAP2). The ongoing inclusion of all interested parties at the discussion table provides for; a significant level of ownership by all participants, an across-the-board agreement on the priority issues and actions, and a high level of transparency in the allocation of resources. OS/CAP is delivered in the region through a series of ongoing planning and project development workshops, attended by stakeholders, technical experts, and key members of the community. Following preliminary project development, the broader public within the project footprint are actively engaged in the process, to incorporate local perspectives and gauge the viability and appetite for the project. The CAP planning teams also provide the structure on which the region's investment delivery mechanism is based, with funding spread across partner groups and working under distinct program brands – *Living Flinders* and *Naturally Yorke*.

With all planning processes built on a common OS/CAP framework, the region can concurrently compare and prioritise its actions across all natural resource assets, providing direction for investment at multiple scales (local, landscape, regional). This foundation of OS/CAP plans has also enabled the aggregation of similar assets into higher-level resource groupings at a regional scale, providing the basis for Australia's first community-driven Regional NRM Plan, constructed collaboratively from the bottom-up.

Partnerships in Projects; examining a collaborative approach to conservation and sustainable land management in nationally threatened ecological communities

Anne Brown, Greening Australia, and Denni Russell, Natural Resources Northern and Yorke.

The Mid North Community Action Planning (CAP) process identified a series of prominent north-south running ranges within the northern Mount Lofty Ranges as a priority landscape for biodiversity conservation. The area lies at the transitional boundary of the temperate grassy systems of the west and the arid systems of the east. This has resulted in novel vegetation associations retaining significant remnant EPBC listed vegetation associations including



Peppermint Box (*Eucalyptus odorata*) Grassy Woodlands and Iron-grass (*Lomandra multiflora*) Grasslands and one strongly endemic species. The area is important for a suite of 'declining woodland bird' species and the threatened Pygmy Bluetongue Lizard (*Tiliqua adelaidensis*).

The Burra to Kapunda Landscape Project aims to connect and restore habitat through sustainable grazing practices, the protection of existing high quality vegetation, and strategic revegetation to reconnect areas affected by historic land clearance and overgrazing. The project area encompasses three Natural Resource Management regions, requiring a high degree of collaboration between agencies and stakeholders. Private landholders, NGOs, community groups, and local and state government have all worked together to provide positive land management outcomes. Over the last two years the project has achieved: 360 hectares of land managed through sustainable grazing, the formal protection of 1,096 hectares of high quality woodlands and grassland, the establishment of a seed and cutting bank, and over 30 hectares of revegetation undertaken to connect patches of remnant vegetation.

Concurrent sessions #3

Restoring the Southern Flinders Ranges' Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands – Funding and Empowering Landholders to deliver Conservation Outcomes

James McGregor and Anne Brown, Greening Australia

The Grey Box Grassy Woodlands of the Southern Flinders Ranges are an outlier of an EPBC listed (Endangered) community. The Native Vegetation Council of South Australia funded Greening Australia to run a ten-year Stewardship project to improve and conserve these woodlands.

This project is an excellent example of what is possible using detailed collaborative planning, locally tailored engagement and educational programs with continued technical support. The Living Flinders Conservation Action Plan was developed by a broad spectrum of landowners, planners, scientists and conservationists. The plan identified the conservation of these woodlands as a high priority.

Managed grazing was a vital tool to maintain and improve the ecosystem health in a productive landscape. Landowners loved their Grey Box but they didn't understand what an ecological community was, or how to manage them appropriately and conserve them. A key component of the project was an education program of workshops, field visits and information packs.

Management plans were developed for 17 properties. Landholders were invited to submit a 'bid' to deliver their management plan. A metric was developed to evaluate the relative return on investment of each 'bid'. This led to over 1,000 ha being conserved across seven landowners.

On-going technical support has provided land managers with advice on vegetation matters, grazing patterns and monitoring. This was especially important after 4 properties were impacted by the Bangor fire and the management strategies had to change to aid recovery.

The project is now five years on and monitoring has shown an improvement in tree regeneration, grass health and species diversity.

This project will aid development of long term grazing strategies for the region and give vital lessons on the issues that arise with management changes. One lesson already learnt is that no property is exactly the same as another and no single prescription fits all.

Rewilding Yorke Peninsula

Andy Sharp, Natural Resources Northern and Yorke

Although a well-established conservation management practice world-wide, 'rewilding' remains a novel concept in Australia. Rewilding projects seek to restore the natural balance within systems, through the reinstatement of vital processes such as; predation, pollination, and fire. In Australia, much discussion is currently focussed on the reintroduction of apex predators to manage feral animal and over-abundant herbivore populations (trophic rewilding), enabling the recovery of habitat and threatened species populations.

Extensive land clearance on upper Yorke Peninsula for agriculture, has left the remnant high-quality vegetation on the foot of the peninsula effectively functioning as a 250,000 ha 'mainland island'. The quality of these vegetation associations is slowly deteriorating, due to the absence of essential ecological processes that were once provided by the 27 (of 30) terrestrial mammal species now locally extinct. Envisaged as a 20-year project, the Rewilding Yorke Peninsula project will reintroduce keystone species to reinstate the required ecological processes to ensure the long-term conservation of southern Yorke Peninsula's unique ecosystems.

The project has been developed with an emphasis on ensuring cross-sector outcomes for agricultural productivity and the local tourism industry. The re-establishment of terrestrial native carnivores into remnant vegetation and the enhancement of native avian predator populations across the agricultural lands is expected to reduce vertebrate pest abundance (rabbits, rodents), thereby decreasing crop damage and increasing pasture availability.

Southern Yorke Peninsula will be transformed into a landscape-scale, open-range sanctuary for some of Australia's most iconic and endangered wildlife, providing the base for the development of an international ecotourism industry and enhancing local economies. Initial priorities for reintroduction include the woylie (soil engineer) and western quoll (native predator), but subsequent reintroductions may include the numbat, greater bilby and another eight EPBC listed fauna species.

The project is built on the foundation of a six-year landscape-scale community fox baiting program (Baiting for Biodiversity), and will derive long-term cost-efficiencies through the construction of a 24-kilometre-long strategic fence across the foot of the peninsula, to mitigate against compensatory immigration by foxes and feral cats.

Conference poster display

Conference posters will be on display in the Golf Club throughout the Conference and the lunch session on Tuesday 12 September has been allocated specifically for poster viewing. During lunch the authors will be attending their posters to discuss them with Conference delegates and to answer questions.

| CONFERENCE POSTERS | | |
|--------------------|---|--|
| NO | AUTHOR | POSTER TITLE |
| 1 | David Farlam, Team Leader Aboriginal Partnerships, Natural Resources Eyre Peninsula | Growing Indigenous Natural Resource Management on Eyre Peninsula |
| 2 | Grant Lomman, Landscapes Program Coordinator, Natural Resources Eyre Peninsula | A citizen science community bird monitoring project on Eyre Peninsula |
| 3 | Marc Ó'Conaill, Campbelltown Landcare Group | How Can Smart City Technologies Assist Biodiversity Management? |
| 4 | Jenny Deans, Sturt Upper Reaches Landcare Group and Conservation Volunteers Australia Green Army Bandicoot Project 1 team | Southern Brown Bandicoot Habitat Restoration |
| 5 | Jenny Deans, Sturt Upper Reaches Landcare Group and Conservation Volunteers Australia Green Army Bandicoot Project 2 team | Awareness of Endemic and Threatened Species |
| 6 | Jenny Deans, Sturt Upper Reaches Landcare Group | Building on the Buzz: a case study on Native Bee Awareness |
| 7 | Jenny Deans, Sturt Upper Reaches Landcare Group | Native Bees: general information |





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**2017 State Community
Landcare Conference**



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Photos of Clare Valley and surrounds courtesy
of local photographer and bush philosopher
Dave Clarke, and appear with his permission.
<http://ramblingsdc.net/>

Additional photos courtesy of DEWNR.