Table for Adelaide Workshop

What are the main impacts / vulnerability in your sector / area / ecosystem?

Sector	Geographic Area	Ecosystem	Impacts	Ideas to manage	Adaptation Research	Impediment
	• South East	• Temperate	<ul> <li>Fragmentation</li> <li>Water/drainage</li> <li>Salinity</li> </ul>	<ul> <li>Corridors</li> <li>Revegetation</li> <li>Water reconnection/ reinstating</li> </ul>	<ul> <li>Research</li> <li>Adaptive management</li> </ul>	• High productivity agriculture
	• Murray • Mallee		<ul> <li>Fragmentation(s)</li> <li>Fire (n)</li> </ul>	<ul> <li>Connectivity matrix</li> <li>Regime management</li> </ul>	<ul> <li>Permeability of matrix</li> <li>Key species</li> <li>Adaptive management</li> </ul>	<ul> <li>State of degradation (condition)</li> <li>Priority for life and species</li> </ul>
Restoration	All State	All	<ul> <li>Triage</li> <li>Landscape management</li> </ul>	• Cultural-socio needs	<ul> <li>Decision</li> <li>Framework</li> <li>Social Science</li> </ul>	<ul> <li>SA is city centric</li> <li>Biodiversity vs development</li> </ul>
	• MLR • Fleurieu • KI		<ul> <li>Fragmentation</li> <li>Biogeographical boundary</li> </ul>	<ul> <li>Connectivity</li> <li>Translocation ex- situ</li> </ul>	<ul><li>Permeability</li><li>ID refugia</li></ul>	

	Sth EP     Sth Yorke					
	<ul> <li>MLR</li> <li>Fleurieu</li> <li>KI</li> <li>Sth EP</li> <li>Sth Yorke</li> </ul>		<ul><li>Fire</li><li>Invasives</li></ul>	<ul> <li>Regime Management</li> <li>Risk Management</li> <li>Direct volunteer/ targeted work</li> </ul>	• Key Species	<ul> <li>Small patch size</li> <li>Poor benchmark/ historical</li> </ul>
	• Pastoral	• Semi arid	<ul><li>Feral fauna</li><li>Invasive plants</li><li>Stock management</li></ul>			• Viability
	Outback	• Arid	• Water			
	<ul><li>Mid-North</li><li>Central EP</li></ul>		<ul> <li>Fragmentation</li> <li>Soil</li> <li>Drought</li> </ul>			
Reserves & Private Lands	<ul><li>Cleve</li><li>Lincoln Uplands</li></ul>	• Woodlands ecosystems	<ul><li> Mining</li><li> Climate/drying</li></ul>	<ul> <li>Transect monitoring</li> <li>Refugia ID</li> </ul>	• EPs highest richness species and threatened species	<ul> <li>Outside of nature links cooridor</li> <li>Therefore</li> </ul>

						difficult to attract \$ and coordination
Marine	• Sea Shelf	<ul> <li>Macro algal species</li> </ul>	<ul> <li>Warming</li> <li>Acidification</li> <li>Pollution/disease</li> </ul>	• Identify refuge areas		
	• Arid lands		<ul><li> Invasive species</li><li> Camels</li></ul>	• Judas camels?	• Decision framework – when cost effective to control	• Declining profits of pastoral zone
Research - regulation	• Woodland/ cleared regions	• Terrestrial	<ul> <li>Habitat fragmentation</li> <li>Inbreeding &amp; plants mating patterns</li> <li>Genetic resource reduction</li> </ul>	• Assess fitness impacts of plant mating patterns and local adaptation	• Assess fitness impacts of plant mating patterns and local adaptation	<ul> <li>Research funding and time- lag to observable impacts</li> <li>Seed collecting guideline restrictions</li> </ul>
					• Identifying refugia	• May be in productive

						agricultural land benefit: cost analysis
NRM – off reserve	• Dryland cropping zone	• Multiple	• Agricultural Native vegetation interface	• If benefit – reveg within cropping zones	• Do the experiments	<ul> <li>Lack of experimental evidence to demonstrate value of native veg to production agriculture</li> <li>Eg. pollination</li> </ul>
State Government	• Peri-urban zone		<ul> <li>Fire control</li> <li>Biodiversity</li> <li>Human life and assets</li> </ul>		• Perception of bushland areas	• Lack of integration between social and quantitative sciences
All of government					• More fire research in how it affects biodiversity vs catastrophic human effects	• Lack of NRM integration with town planning

Invasive species	• Fleuriew peninsular	<ul> <li>Eucalypt forests</li> <li>Grassy Woodlands</li> </ul>	<ul> <li>Change fire regimes</li> <li>Dormant species that become more invasive</li> <li>Reduced ecosystem health/resilience</li> </ul>	<ul> <li>Fire management</li> <li>Capacity of species to be invasive aggressively</li> <li>Eradication of aggressive invasive species</li> <li>New emerging weeds</li> </ul>	<ul> <li>Identify emerging weeds?</li> <li>How do we rank the importance of weeds?</li> <li>How do the weeds respond to climate change?</li> </ul>	<ul> <li>Lack of long- term support for invasive species</li> <li>Don't know enough about life history of "dormant" weeds</li> </ul>
Invasive species	• Arid zones	<ul> <li>N/NW summer rainfall areas</li> <li>Arid rivers</li> </ul>	<ul> <li>Change fire regimes</li> <li>Dormant species that become more invasive</li> <li>Reduced ecosystem health/resilience</li> </ul>	<ul> <li>Fire management</li> <li>Capacity of species to be invasive aggressively</li> <li>Eradication of aggressive invasive species</li> <li>New emerging weeds</li> </ul>	<ul> <li>Identify emerging weeds?</li> <li>How do we rank the importance of weeds?</li> <li>How do the weeds respond to climate change?</li> </ul>	<ul> <li>Lack of long- term support for invasive species</li> <li>Don't know enough about life history of "dormant" weeds</li> </ul>
Current Ecosystem Health	• Mt Lofty Ranges	<ul> <li>Eucalypt forests</li> <li>Woodlands</li> </ul>	• Tree death (old & young trees) from factors including	<ul> <li>Need to manage other stressors</li> <li>Ground water</li> </ul>	• What are the changes & rates of change?	<ul> <li>Lack of long- term monitoring</li> <li>Lack of money</li> </ul>

			rain, slope, soil	management	• What is affecting the change?	for revegetation
Refugia	• Both species and ecosystem refuge areas (Statewide)	<ul> <li>Species         <ul> <li>Area to maintain genetic diverse population</li> </ul> </li> <li>Ecosystem</li> <li>Maintain a number of key ecosystem species diversity to maintain function</li> </ul>	• Climate and other stressors	<ul> <li>Identify refugia</li> <li>Management policies</li> </ul>	<ul> <li>How do we select priority areas?</li> <li>How do we define key ecosystem species?</li> </ul>	<ul> <li>Need long-term records</li> <li>Land tenure</li> </ul>
Benchmarking & Reporting	• All areas	• All ecosystems	• All impacts	<ul> <li>Managing resource condition</li> <li>Evaluating ecosystem changes</li> <li>Huge ecological diversity is complex</li> </ul>	<ul> <li>How do we define and measure refugia, adaptation, resilience?</li> <li>What are the early indicators</li> </ul>	

				of change? • What are the indicator species? • What index of permeability/ fragmentation?	
Fire	• Fragmented and vulnerable habitats	<ul><li>Arid</li><li>Others</li></ul>	<ul> <li>Temp/fire rainfall relationships</li> <li>Impact s on species that can't migrate</li> </ul>	<ul> <li>Which fragments are most vulnerable to Climate Change &amp; fire risks?</li> <li>What are the key species that are likely to be affected?</li> </ul>	