Integrated Vulnerability Analysis
SA Murray Darling Basin Region

Agribusiness Perspective

Murray Bridge Natural Resources Centre, Murray Bridge 24 July 2012
### Gross Value of Agricultural Production (GVAP)

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>SA</th>
<th>SA Murray Darling Basin</th>
<th>Percentage share of SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals for grain and seed</td>
<td>1,182.43</td>
<td>134.55</td>
<td>11%</td>
</tr>
<tr>
<td>Hay</td>
<td>179.98</td>
<td>23.96</td>
<td>13%</td>
</tr>
<tr>
<td>Other broadacre crops</td>
<td>320.74</td>
<td>24.47</td>
<td>8%</td>
</tr>
<tr>
<td>Fruit</td>
<td>287.01</td>
<td>187.88</td>
<td>65%</td>
</tr>
<tr>
<td>Grapes</td>
<td>385.36</td>
<td>217.64</td>
<td>56%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>480.12</td>
<td>200.86</td>
<td>42%</td>
</tr>
<tr>
<td>Nursery production</td>
<td>63.24</td>
<td>20.59</td>
<td>33%</td>
</tr>
<tr>
<td>Dairy production</td>
<td>209.60</td>
<td>67.60</td>
<td>32%</td>
</tr>
<tr>
<td>Production from meat cattle</td>
<td>308.15</td>
<td>38.82</td>
<td>13%</td>
</tr>
<tr>
<td>Production from sheep and other livestock</td>
<td>740.74</td>
<td>125.48</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,644.41</strong></td>
<td><strong>1,229.40</strong></td>
<td><strong>26%</strong></td>
</tr>
</tbody>
</table>

Agricultural production important to the region…

… but don’t forget the rest of Agribusiness
Regional Vulnerability

Relative community vulnerability with exposure to 2800 GL scenario (sensitivity analysis using updated prices)
Murray-Darling Basin

Ranked scores
- 0.81 - 1.00 (highest ranked)
- 0.61 - 0.80
- 0.41 - 0.60
- 0.21 - 0.40
- 0.00 - 0.20 (lowest ranked)

WTM scenario assumptions:
- percentage water use reductions to achieve 2,800 SDL
- relative to WTM baseline scenario
- after water buybacks to date and infrastructure savings
- with interregional water trade
- average of 06-07 to 10-11 commodity prices
  (SDL savings plus price change-BBtdate)/Base

Data sources:
- Australian Bureau of Statistics:
  - Analysis of 2005-06 Community profile data
  - Census districts 2006
  - Urban centre localities 2006
  - Agricultural Census 2000-01
- Murray-Darling Basin and Basin plan regions
- ABARES economic modelling data

Data not available due to:
- Census district or SLA lies largely outside the Basin boundary
- Census district is sparsely populated and ABS did not make the data available
A history of adaptive behavior...
3 Ps of climate change and Agriculture*

**Physical**
- Adjusting current practices
- Changing systems, products, markets
- Transformational change

**Policy**
- Clean Energy Futures
- Carbon Farming Initiative

**Peripheral**
- Market changes
- Societal expectations

*Richard Eckard, Director Primary Industries Climate Challenges Centre, University of Melbourne*
Farmers are already dealing with climate change - whether they believe in it or not....

W.A. farmer survey:

• 52% uncertain human-induced climate change happening
• 97% of climate scientists agree that it is
• 33% agreed that climate change was occurring
• 19% believed it was human induced
• 31% thought it was a major threat to their business

Government’ role:

• address equity concerns
• expedite change
• improve efficiency of the change process