FITZROY BASIN: WATER QUALITY IMPROVEMENT PLAN

Megan Star, Terry Beutel, Kev McCosker, Peggy Schrobback, Rov Ellis, Tom Coughlin, John Rolfe

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FITZROY BASIN
WATER QUALITY IMPROVEMENT PLAN

Megan Star, Terry Beutel, Kev McCosker, Peggy Schrobback, Rov Ellis, Tom Coughlin, John Rolfe
Past NRM programs

• Focused on inputs not achieving outcomes

• Lack of biophysical integration

• “Vegemiting” funds

• Policy mechanism not suiting
Targeted Neighbourhood catchments =

\[
\text{loads (t per ha)} \times (N.\text{Cover} \times N.\text{Mgt} \times N.\text{Del}) \div N.\text{Costs}
\]

\(N.\text{Cover}\) residual ground cover data

\(N.\text{Mgt}\), the level of adoption for B

\(N.\text{Del}\) the delivery ratio

\(N.\text{Costs}\) the cost for intervention incentives and opportunity cost
Data layers used in catchment water quality modelling:

1. 10 x 10 metre grid
2. Rainfall Erosivity
3. Soil Erodibility
4. Slope Steepness
5. Slope Length
6. Cover
7. Practice
8. Land Surface
9. Annual average soil loss (t/ha/yr)
## Current Levels of Best Management 13-14

<table>
<thead>
<tr>
<th>% land manager</th>
<th>Hillslope</th>
<th>Stream bank</th>
<th>Gully</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitzroy</td>
<td>22%</td>
<td>35%</td>
<td>20%</td>
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</table>
COSTS

- Time
- Property size
- Sediment load
- Cost of FTE & op
- Remediation
- Landholder
<table>
<thead>
<tr>
<th>NC</th>
<th>Sediment loads (t/ha)</th>
<th>N. ground cover</th>
<th>N. Best management practice</th>
<th>N. cost</th>
<th>Export delivery ratio</th>
<th>Grazing priority</th>
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<tbody>
<tr>
<td>T33</td>
<td>475.66</td>
<td>0.45</td>
<td>0.61</td>
<td>0.39</td>
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<td>375.38</td>
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<td>138.20</td>
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<td>B9</td>
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Future work

• Integrate land condition to estimate costs
• Temporal periods
• Mechanisms – Mutual exclusivity
• Landholder heterogeneity