Rolling out the national water quality improvement programme for dairying

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Rolling out the national water quality improvement programme for dairy

Dr Brian Bell, Director, Nimmo-Bell, Wellington
and
Dr Garry McDonald, Director, Market Economics, Auckland
Outline

• Tortuous/Torturous Horizons One Plan
• Implementing the One Plan
• Benefits of the collaborative process
• National roll out
• National Benefits
• Conclusions
Tortuous/Torturous Horizons One Plan

• Yes! Long, complicated and painful
• RMA adversarial polar positions
• Media fuels the public’s paranoia
  – Trotter’s toxic ditches, Morgan’s fetid future
• Farmers and rural community mobilise
Time to forestall a fetid future

New Zealand needs to move on from destroying the environment to make milk, write Gareth Morgan, Susan Guthrie and Geoff Simmons.

The purity and cleanliness of our waterways now possess much, much more than mere aesthetic value.

The board of Tukituki Farms, Ltd.

Farmer Ivon Hurst takes issue with Chris Trotter's claims of "toxic streams".

CHRIS Trotter's syndicated column week-to-week is spoiled by his obsequiousness to the wealthy minority. His most recent instalment, "Toxic streams", is no exception.

His memory of a youth, swimming in a clear Wanganui River, is clouded by a perception of "revenged and ruined (farm) lands", and "streams...rapidly becoming toxic ditches". His perception is not unique among Concerned New Zealanders so far this year. His comments are valuable. The question is, is he right?

River quality is monitored by regulatory councils on a week-by-week basis. Unfortuantely, this is not up to date. For example, the Tukituki River is not monitored by the Environment Agency.

Hurst's comments are based on opinion, not data. The E. coli levels monitored in the Tukituki River are below 5000, which is reasonable for a rural environment.

perspectives, based on opinion do not stand scrutiny

Farmer's view - toxic streams.

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Implementing the One Plan for dairy

• Issue: Surface water quality degradation in priority catchments

• Limits policy
  – Under Overseer 5.4 80% comply
  – Under Overseer 6 20% comply

• Collaborative analysis of options
  – GMP, Within system, System change, Limits
Changing from Overseer™ 5.4 to 6
(NL kg/ha/yr)
## Benefits of the collaborative process

<table>
<thead>
<tr>
<th>Category</th>
<th>Expected</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment (NL)</td>
<td>-18%</td>
<td>-32%</td>
</tr>
<tr>
<td>Farmers (NP)</td>
<td>-4%</td>
<td>-28%</td>
</tr>
<tr>
<td>Communities (jobs/yr)</td>
<td>+45</td>
<td>-1,207</td>
</tr>
<tr>
<td>Region (Value added)</td>
<td>-$1m</td>
<td>-$84m</td>
</tr>
</tbody>
</table>
CBA: N Leached, Rev, Exp. and Profit under 3 scenarios
### One Plan, Horizons (2013)

#### Direct Impacts

<table>
<thead>
<tr>
<th>Region</th>
<th>Cumulative Net</th>
<th>Average Net</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value Added</td>
<td>Jobs</td>
</tr>
<tr>
<td></td>
<td>2012 m</td>
<td>MEC^3 Years</td>
</tr>
<tr>
<td><strong>Tararua</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scenario 1 Limits</td>
<td>-1,290</td>
<td>-18,620</td>
</tr>
<tr>
<td>Scenario 2 System change</td>
<td>-272</td>
<td>-6,224</td>
</tr>
<tr>
<td>Scenario 3 Within system</td>
<td>-13</td>
<td>57</td>
</tr>
<tr>
<td><strong>West Coast</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scenario 1 Limits</td>
<td>-203</td>
<td>-3,792</td>
</tr>
<tr>
<td>Scenario 2 System change</td>
<td>-145</td>
<td>-2,843</td>
</tr>
<tr>
<td>Scenario 3 Within system</td>
<td>-3</td>
<td>877</td>
</tr>
<tr>
<td><strong>Rest of Manawatu-Wanganui Region</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scenario 1 Limits</td>
<td>-180</td>
<td>-1,714</td>
</tr>
<tr>
<td>Scenario 2 System change</td>
<td>-62</td>
<td>-621</td>
</tr>
<tr>
<td>Scenario 3 Within system</td>
<td>-4</td>
<td>-38</td>
</tr>
<tr>
<td><strong>Rest of New Zealand</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scenario 1 Limits</td>
<td>-118</td>
<td>-1,416</td>
</tr>
<tr>
<td>Scenario 2 System change</td>
<td>-54</td>
<td>0</td>
</tr>
<tr>
<td>Scenario 3 Within system</td>
<td>13</td>
<td>145</td>
</tr>
</tbody>
</table>

**Notes**
1. Modified Employment Count. This includes both employment counts and working proprietors.

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![Image of graphs and data visualizations](image-url)
One Plan, Horizons (2013)

Scenario 1: Employment Impact for Tararua Towns

- Norsewood-Herbertville
- Dannevirke
- Woodville
- Mangatainoka
- Pahiatua
- Eketahuna

Scenario 2: Employment Impact for Tararua Towns

- Norsewood-Herbertville
- Dannevirke
- Woodville
- Mangatainoka
- Pahiatua
- Eketahuna
## National Roll-out

<table>
<thead>
<tr>
<th>Region</th>
<th>Farms impacted</th>
<th>Year of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waikato</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Waikato</td>
<td>700</td>
<td>2012</td>
</tr>
<tr>
<td>Waipa</td>
<td>900</td>
<td>2015</td>
</tr>
<tr>
<td>Waihou-Piako</td>
<td>1,500</td>
<td>2018</td>
</tr>
<tr>
<td>Lower Waikato</td>
<td>700</td>
<td>2018</td>
</tr>
<tr>
<td>Bay of Plenty</td>
<td>600</td>
<td>2014</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>70</td>
<td>2015</td>
</tr>
<tr>
<td>Horizons</td>
<td>440</td>
<td>2014</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>460</td>
<td>2013</td>
</tr>
<tr>
<td>Canterbury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hurunui</td>
<td>60</td>
<td>2013</td>
</tr>
<tr>
<td>Selwyn</td>
<td>200</td>
<td>2015</td>
</tr>
<tr>
<td>Hinds</td>
<td>200</td>
<td>2016</td>
</tr>
<tr>
<td>South Canterbury streams</td>
<td>70</td>
<td>2016</td>
</tr>
<tr>
<td>Opihi, Orari, Pareora</td>
<td>100</td>
<td>2017</td>
</tr>
<tr>
<td>Otago</td>
<td>390</td>
<td>2014</td>
</tr>
<tr>
<td>Southland</td>
<td>900</td>
<td>2015</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,290</strong></td>
<td></td>
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</table>
Benefits of National Roll-out

• Likely to be affected 1.2m ha, 8,400 farms
• Representing 71% of the total area in dairy.
• Environment (t NL/yr) -6,200 (-18%)
• NPV/farm $138,000
• Expected NPV $760m
• Benefit/Cost ratio 32
• Expected return ($/ha/yr) $40
Conclusions

• CBA highlights the risks of getting the policy wrong
• EIA shows impacts on communities at the district and regional level
• The collaborative process needs to be embodied in implementation
• Roll-out will impact on 71% of area in dairy
• A positive future for the environment and dairy