



Profitability. Sustainability. Competitiveness.

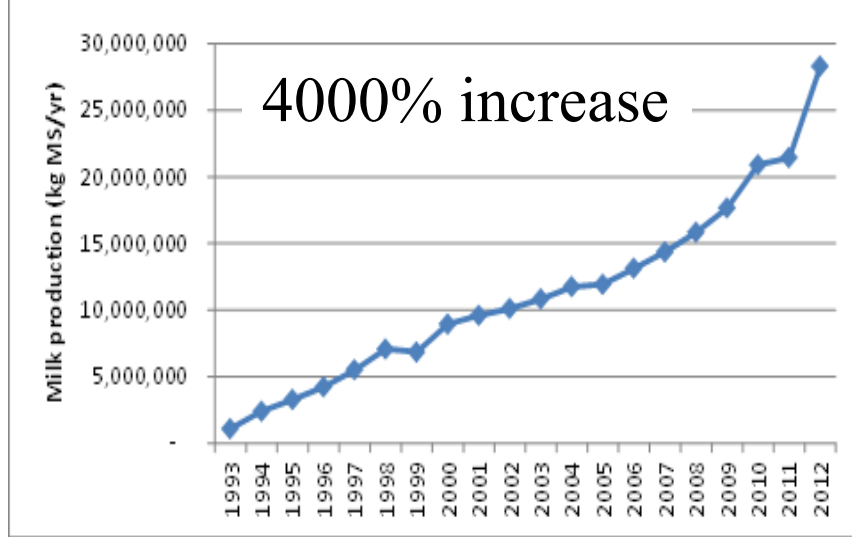
# Takaka

**Mike Scarsbrook**

**22 May 2015**

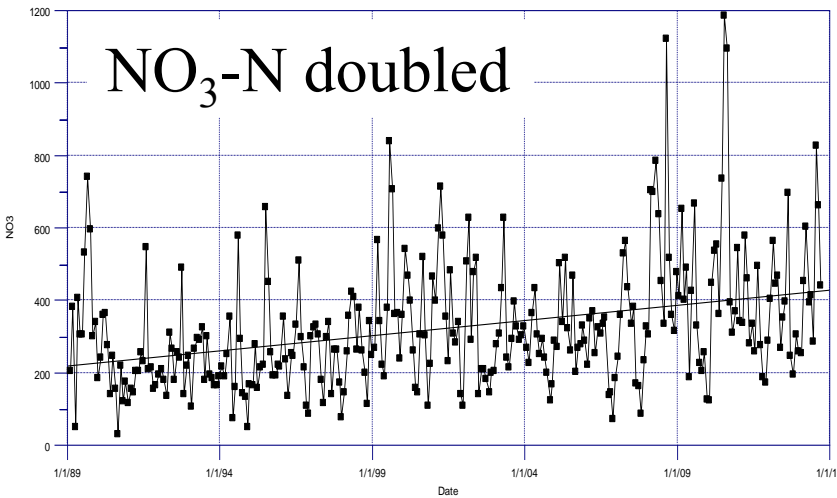
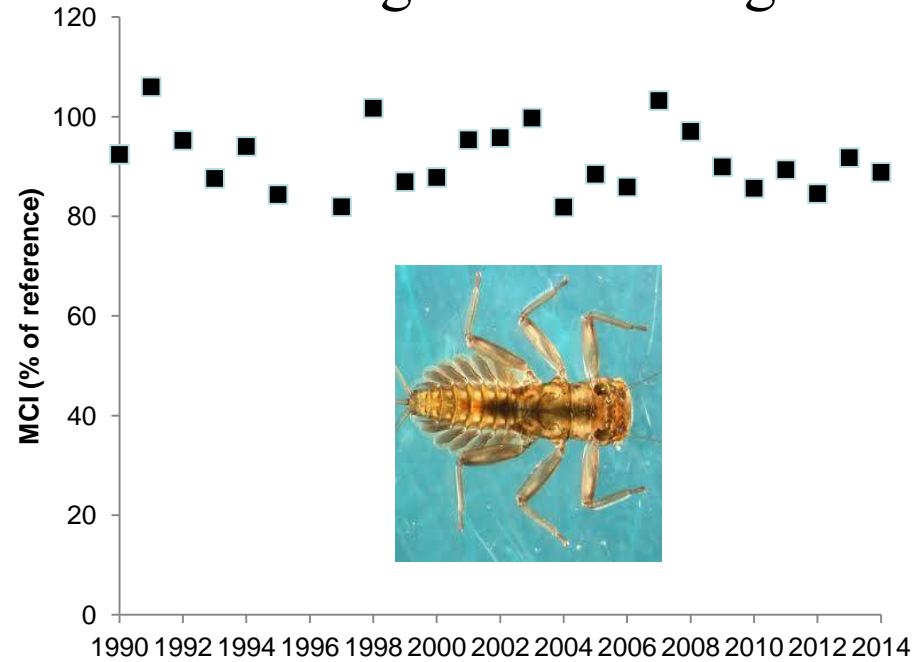


## Hurunui District



# Hurunui River

No significant change



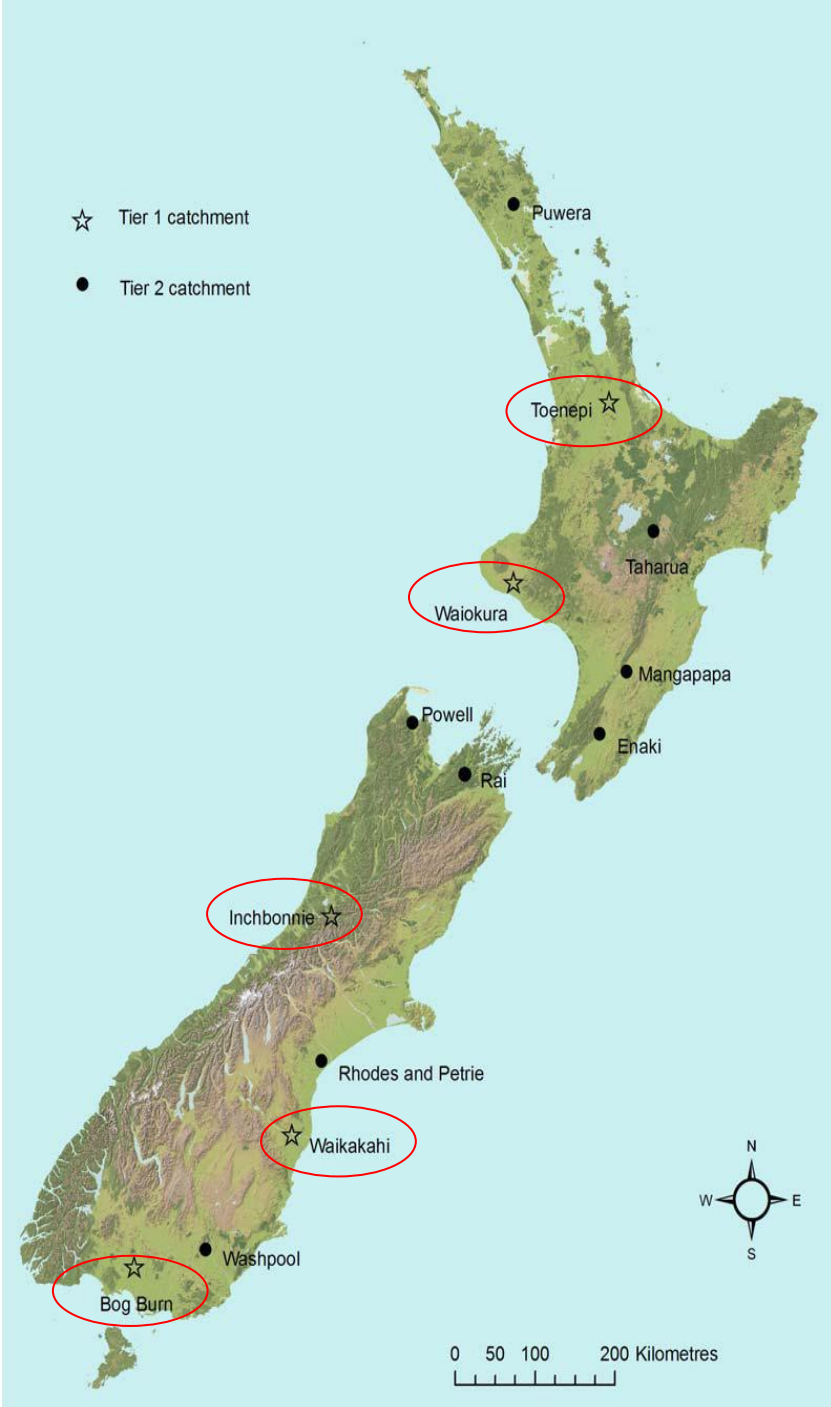
Thanks to NIWA for Nitrate and MCI data

# Water quality & dairy intensification

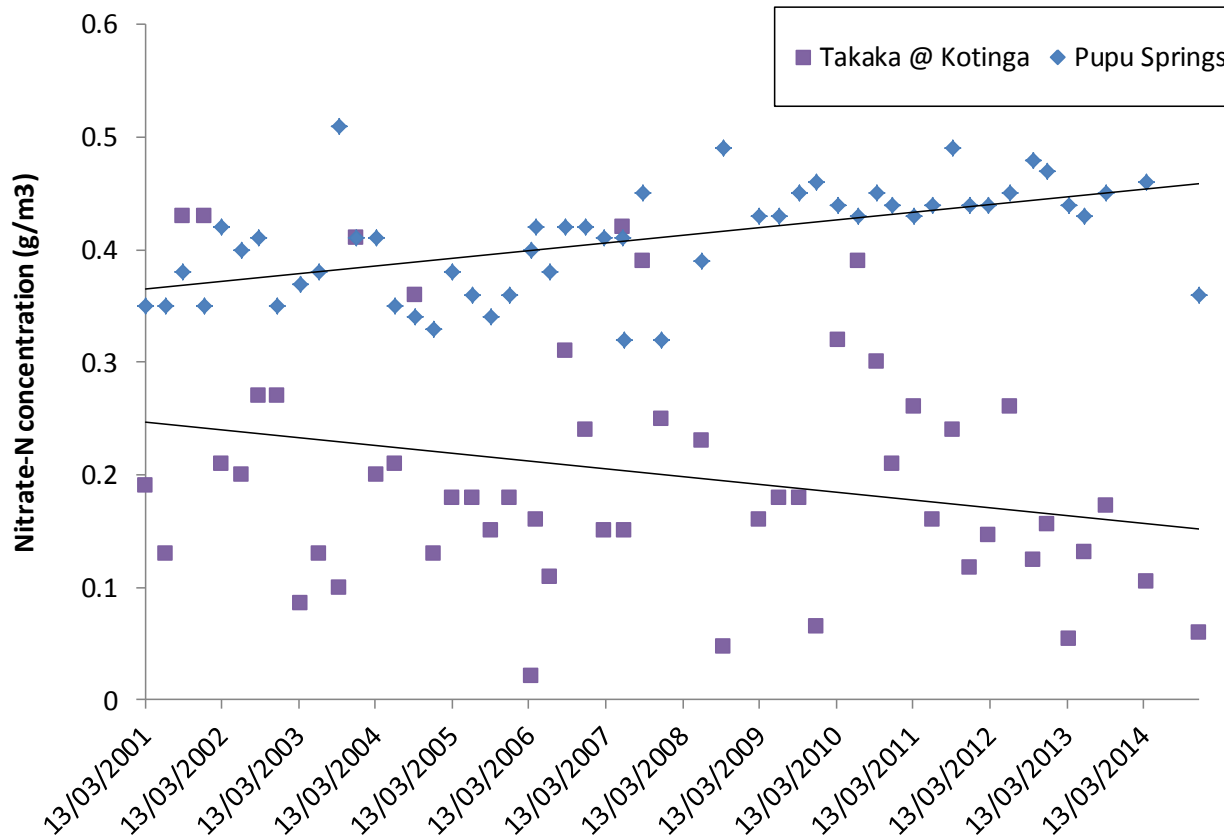
- Farmer change = water quality improvements
- Intensification = increasing nitrate trends

## Rule of thumb

- $\uparrow$  Dairy =  $\uparrow$  N
- $\uparrow$  Dairy  $\neq$   $\uparrow$  Sediment, P, *E. coli*



# Nitrate trends (2001-2014)



## Pupu Springs:

- Significant ( $P < 0.001$ ) increasing trend (1.8% per annum)

## Takaka River:

- Non-significant ( $P = 0.05$ ) decreasing trend (4.6% p.a.)

