



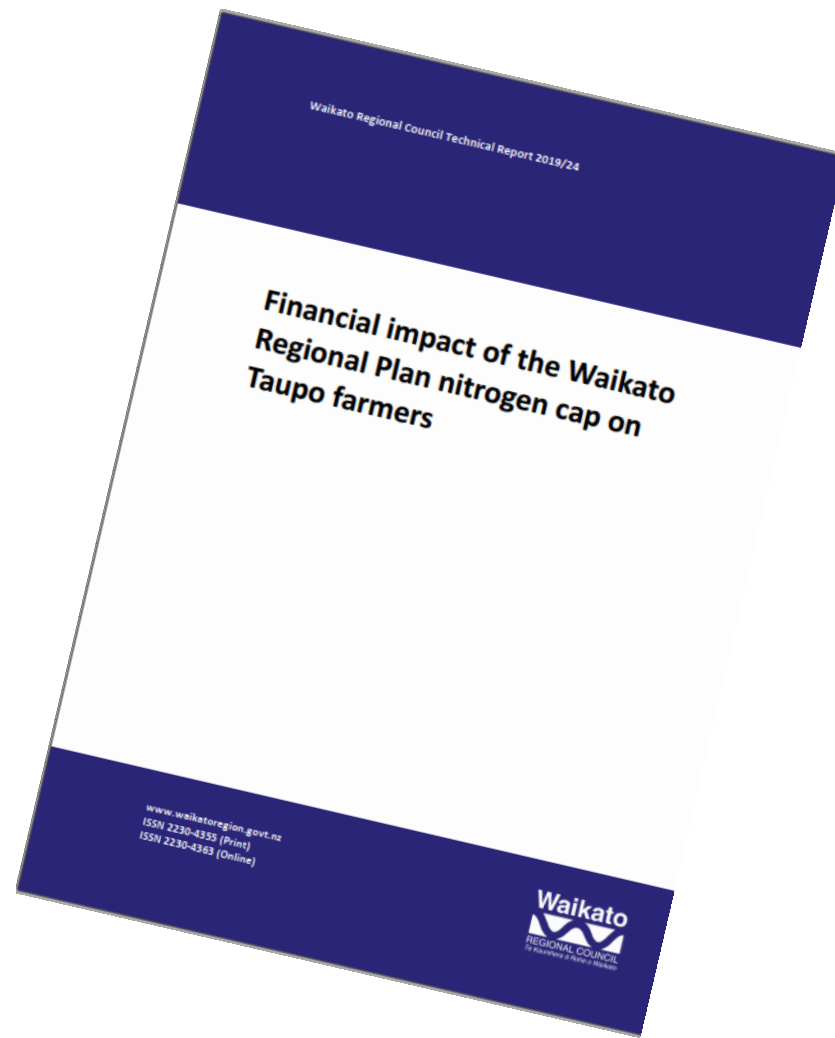
# Financial Impact of the Waikato Regional Plan Nitrogen Cap on Taupo Farmers



Independent  
Agriculture &  
Horticulture  
consultant  
network

Phil Journeaux, Darren McNae, James Allen

# There is a Report



**On WRC Website**

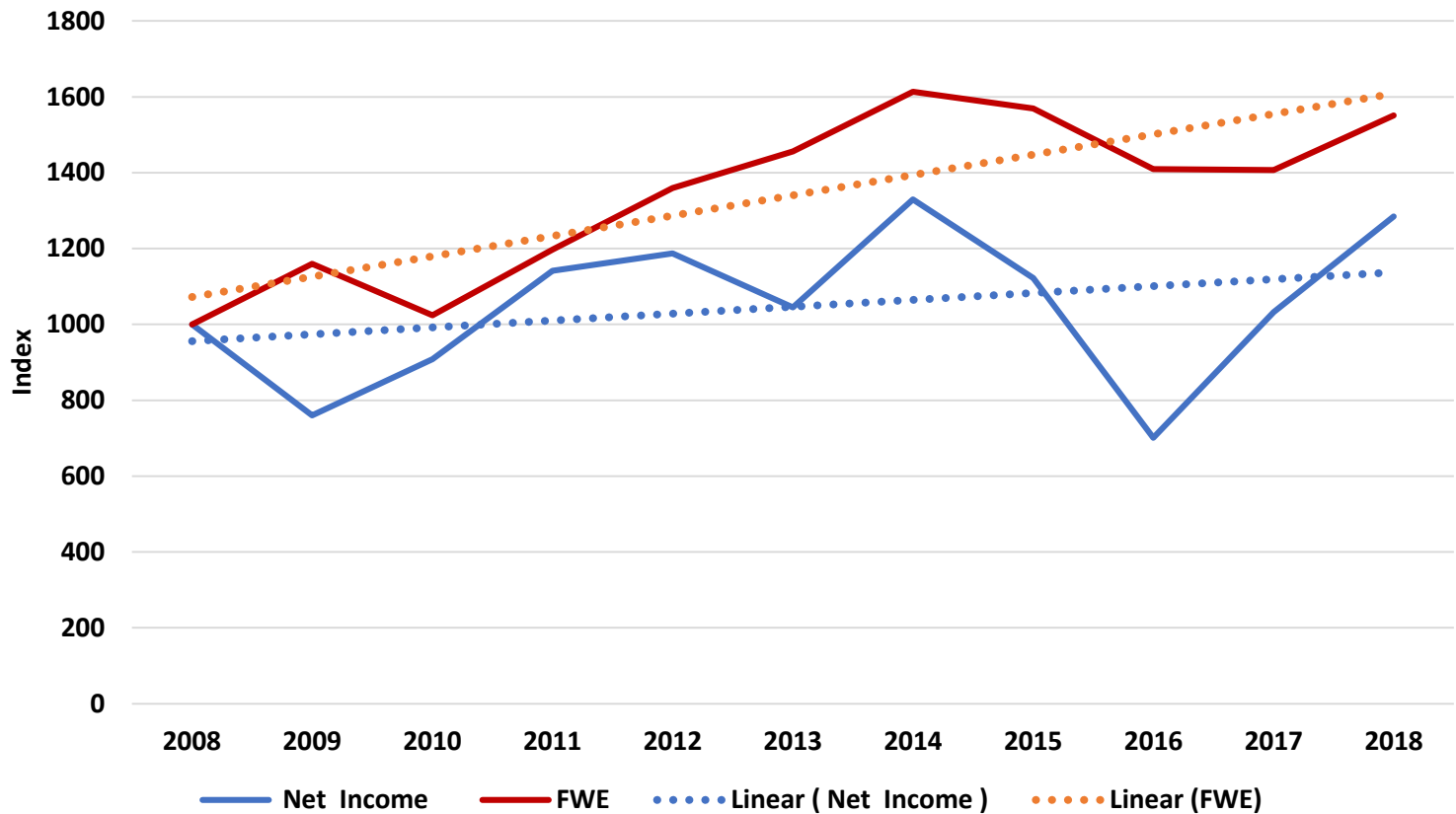
# Objectives

- To undertake an analysis as to the impacts of the nitrogen cap on farmers within the Taupo catchment
- Has the ability to trade nitrogen discharge rights reduced the financial impact
- Have some farmers have been more impacted than others
- What financial impacts may the nitrogen cap have over the coming 20 years
- Implications for the potential impacts across the Waikato region
- Further research or policy analysis recommendations

# Methodology

- **Literature Review**
- **Analysis of farm income/expenditure**
- **Analysis of land sales data**
- **2 workshops with Taupo farmers**

# Impact on Farm Working Expenses



# Impact on Farm Working Expenses

Over the last 10 years:

- FWE have increased faster than Income on dairy farms and hill country S&B farms
- Not so on Intensive S&B farms – income has increased faster than FWE
- Has the nitrogen cap exacerbated this trend – not enough data to definitely quantify, but unlikely

# Compliance Costs

## **Range of increased compliance costs:**

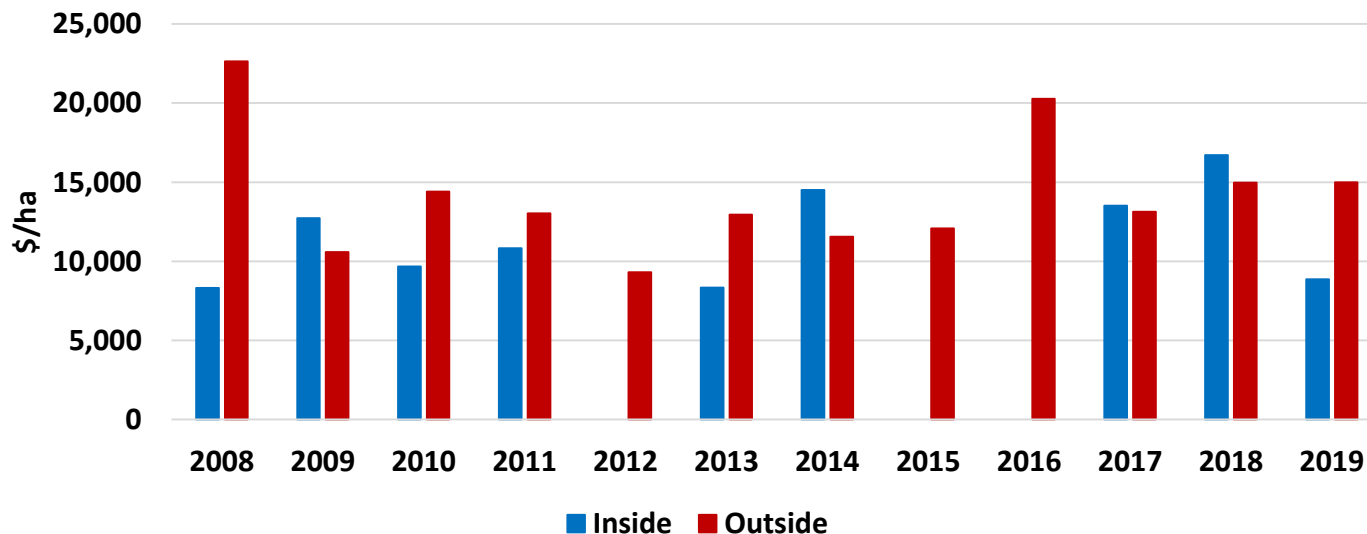
- **ongoing monitoring and consent fees**
- **annual audit fees**
- **professional fees**
- **Personal time – farmer &/or staff**
  
- **Overall annual average cost is \$3,900**
  
- **Can be additional costs for many of the Māori owned entities**

# Land Values

Based on land sales data from Telfer Young (Rotorua) comparing sales within and immediately out side the catchment.

Covered S&B farms >100ha, S&B farms < 100ha, Dairy farms

Sheep and Beef farm sales greater than 100 ha





## Land Values#2

	% Reduction	\$/ha	Land Value differential at catchment level (\$m)
Sheep & Beef >100ha	14%	\$2,749	\$142.3
Sheep & Beef <100ha	8%	\$1,518	\$2.0
Dairy	7%	\$2,415	\$7.1
			\$151.4

Regression analysis values: NDA versus land value

	Total sale \$/ha	Land value \$/ha
R <sup>2</sup>	0.03858	0.00643
Correlation	0.196	0.082

# Opportunity Costs#1

1. Conversion to dairying

Potential to convert 10,000ha to dairying

Opportunity cost of not doing this due to N cap = \$69.4 million

2. Conversion of forestry land

Possibility of this, but wasn't taken up – forestry conversion now relatively uneconomic, especially with the ETS

# Opportunity Costs#2 - Intensification

**Main issue with farmers – inability to intensify/loss of flexibility**

- 1. Methodology#1 – opportunity cost = \$144.5 million**
- 2. Methodology#2 – opportunity cost = \$143.7 million**

# Opportunity Costs#3

1. Not fully using NDA – farmers concerned at risk of fully utilising their NDA (in case they go over)

Opportunity cost of this =\$33.8 million (in 2016/17)

2. Development of undeveloped Māori land  
11 tonne of N available for this – not taken up within time limit  
Currently under discussion

If not utilised – opportunity cost of \$0.6 million

If utilised – no opportunity cost

# Opportunity Costs#4

## Alternative Farm Systems

1. AgResearch modelling – alternative farm systems which improve productivity/profitability within N cap
2. Other pastoral opportunities – Taupo beef, Maui Milk, milking goats
3. Horticulture – some horticultural crops are possible – tree nut crops, blueberries, grapes

## Summary of Costs

	\$ million
Land value differential	151.4
Opportunity cost of:	
➤ not intensifying existing farming system	144
➤ no land use change	69.4
➤ not fully utilising NDA nitrogen	33.8
Increased compliance costs	4.7

# Financial cost of the nitrogen cap to Taupo catchment farmers

	\$ million
Land value differential	151.4
Opportunity cost of not fully utilising NDA nitrogen	33.8
Increased compliance costs	4.7
Total	189.9

= to ~\$1.8m per farm

# Back to the Objectives

1. Has the ability to trade nitrogen discharge rights reduced the financial impact

**Yes – allowed for increased flexibility. N-trading in the Taupo catchment is a world first, and it has been quite successful. Which the farmers understand and appreciate.**

2. Have some farmers have been more impacted than others

**Yes**

- (i) **Most probably the smaller blocks – limited ability for further development/intensification, but little data available**
- (ii) **Some farms who have made bad decisions around selling N**



# Back to the Objectives#2

## 3. What financial impacts may the nitrogen cap have over the coming 20 years

Difficult to quantify, as other factors have significant impacts – commodity prices, cost inflation, changes in technology

Some farmers handling the new situation well, others struggling

## 4. Implications for the potential impacts across the Waikato region

Taupo is a direct forerunner for the rest of the Waikato/NZ

The rest of the Waikato does incorporate significant areas of high-quality soils, so horticulture a greater possibility

**The End**