



# Moving the Goalposts for Environmental Sustainability

Manuherikia Catchment Water Strategy  
Group

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# Agenda



- Overview of National Freshwater Regulations
- Regulatory Approach by Councils
- So What Contaminants are we Talking About?
- The Nitrogen Problem
- Impact of Regulatory Changes
- Where to from Here



# Overview of Freshwater Regulations



## Factors Driving Regulatory Changes

Freshwater key economic asset for NZ. Reforms are aimed at addressing these following challenges:

- Declining water quality in some catchments across a range of indicators
- Over-allocation of water in some places
- Litigious, resource consuming decision-making creating uncertainty
- Water is not always being used efficiently or for its highest value use



# Overview of Freshwater Regulations

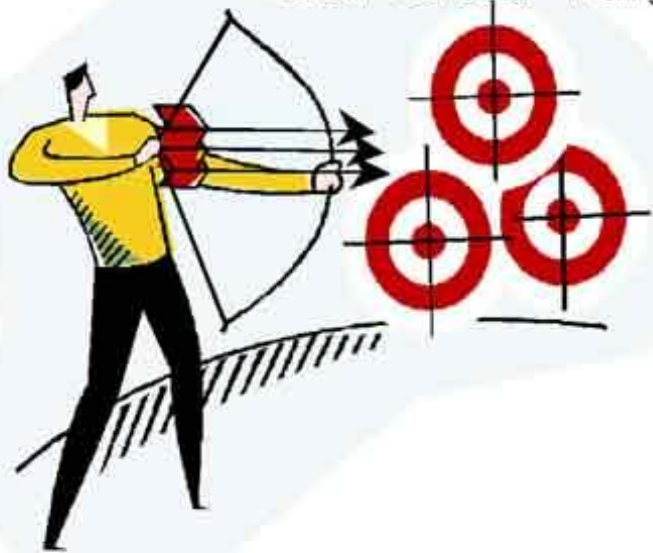


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## National Policy Statement for Freshwater Management 2011

- 2009 – Land & Water Forum established to develop common direction for freshwater management in New Zealand
- As result of 2010 Land & Water Forum report NPS established under the RMA in May 2011

### Set Clear Targets



- NPS directs regional councils to use RMA to establish “Freshwater objectives” and set enforceable “Freshwater limits”
- NPS requires all councils to have changes implemented by end of 2014 OR adopt a staged process showing full implementation by 2030

# Overview of Freshwater Regulations



## National Objectives Framework

- Establish standard list of possible values for which a particular freshwater body could be managed (e.g. swimming or fishing)
- Council to decide actual values for freshwater bodies, BUT minimum standards applying to those values set at national level
- All water bodies required to meet minimum state for ecosystem health and human health for secondary contact



# Overview of Freshwater Regulations

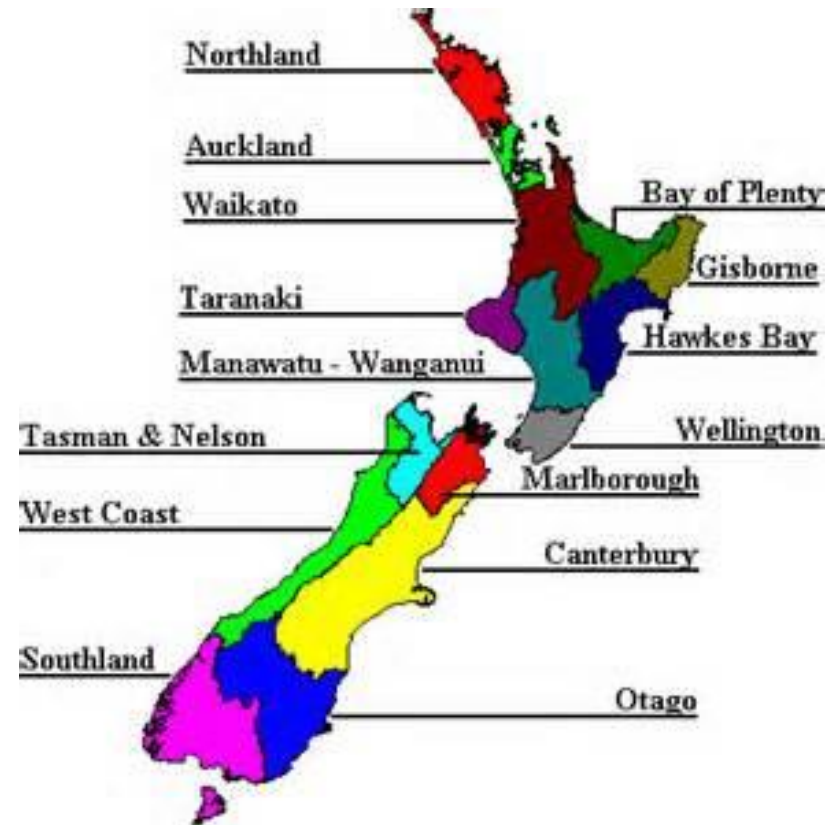


3 councils (Horizons, Otago and Taranaki) intend to have NPS implemented by end of 2014.

13 councils have until 2030 to fully implement the NPS in their regional plan.

3 distinct approaches being taken by these councils:

1. Five councils (Northland, Waikato, Gisborne, Hawkes Bay and Tasman) to notify progressive catchments, then notify a final plan change to capture rest of region
2. Five councils (Canterbury, Bay of Plenty, Wellington, Auckland and Southland) to establish region-wide default rules first, then progressively notify plan changes for individual catchments
3. Three regional councils (Marlborough, West Coast and Nelson) to notify plan change and implement NPS in one go



# Overview of Freshwater Regulations



Limits Set to Date

## Horizons Regional Council - "One Plan"

- Nitrogen limits (for priority catchments and intensive conversions) set based upon Land Use Capability Classes (LUC) with initial limits set as follows:

LUC I	LUC II	LUC III	LUC IV	LUC V	LUC VI	LUC VII	LUC VIII
30	27	24	18	16	15	8	2

- These limits progressively reduce over time (at year 5, 10 and 20)
- Farmers that met these standards still have to apply for a resource consent, but the Horizons Regional Council (HRC) must grant that consent (although it can impose conditions on that consent).  
Farmers who are unable to meet these limits will require a "Restricted Discretionary" resource consent, which the HRC has the discretion to decline.

# Overview of Freshwater Regulations



Limits Set to Date

## Otago Regional Council - "Plan Change 6A"

- The discharge of nitrogen within Otago is a permitted activity (can occur as of right without the need for a resource consent) providing the following limits are met:

Land within identified Lakes Areas	Land within identified Sensitive Aquifers	Land outside Lakes or Aquifer Zones (i.e. All other farms)
15	20	30

- Farmers who are unable to meet these limits by 2020 will require a "Restricted Discretionary" resource consent (which the Otago Regional Council has the discretion to decline).



# Overview of Freshwater Regulations



Limits Set to Date

## Environment Canterbury – “Land & Water Regional Plan”

- The Canterbury region has been divided into nutrient allocation zones (Lakes, Red, Orange, Green and Light Blue) depending upon to degree to which water quality outcomes are being met.
- The majority of Canterbury farmers will be assessed against the relevant zone to determine whether their land use is permitted or requires a resource consent.
- The following nitrogen limits will influence what type of resource consent is required (if any) within each zone:

Lakes Zone	Red Zone	Orange Zone	Green/Light Blue Zone
10	20	20	20

# Regulatory Approach by Councils

- Largely effects based regime – regulators set standards/limits BUT individual farmers determine best way of getting there
- Tends to incentivise innovation
- To take advantage important investment made into building knowledge, science and understanding to drive innovation
- Disadvantage is it creates uncertainty as farmers are unsure exactly what they need to be doing



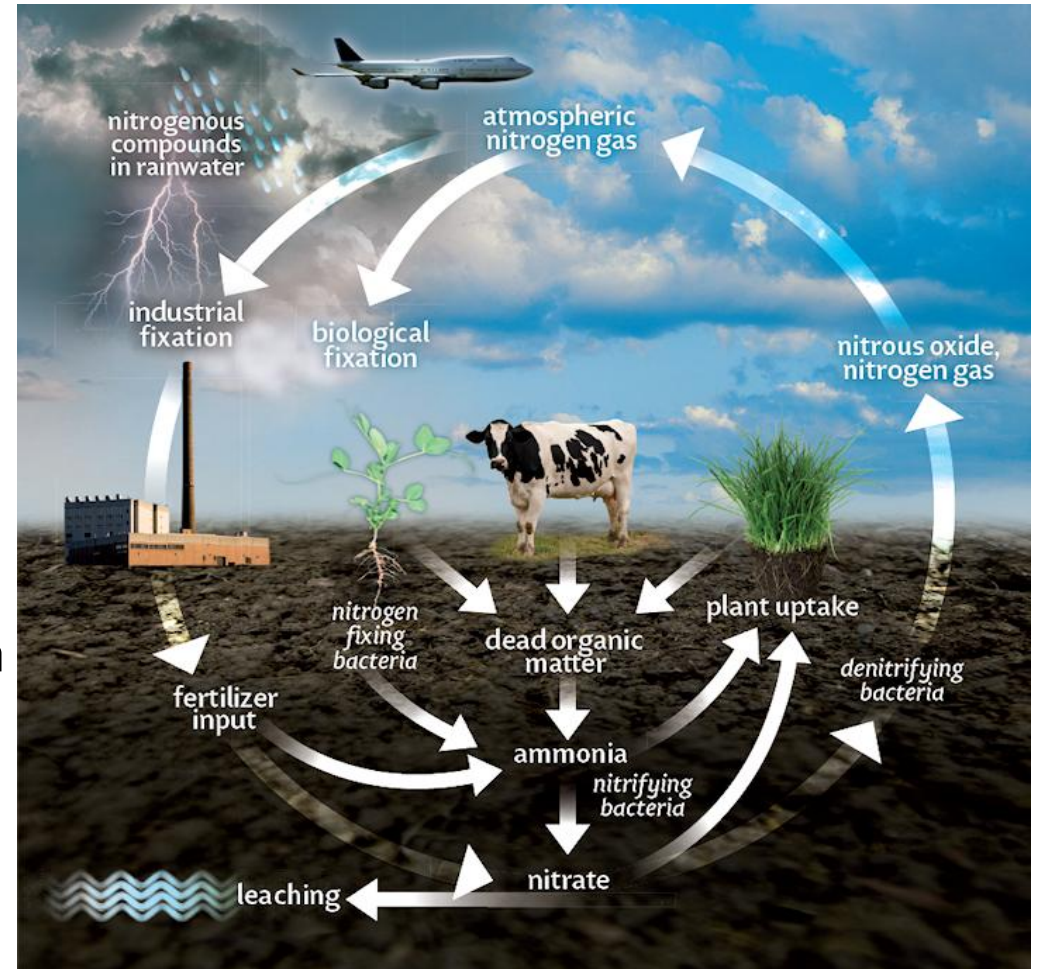
# So What Contaminants are we Talking About?

Contaminants that move across the surface

- Phosphate
- Sediment
- Ecoli

Contaminants that leaches down into groundwater system

- Nitrogen



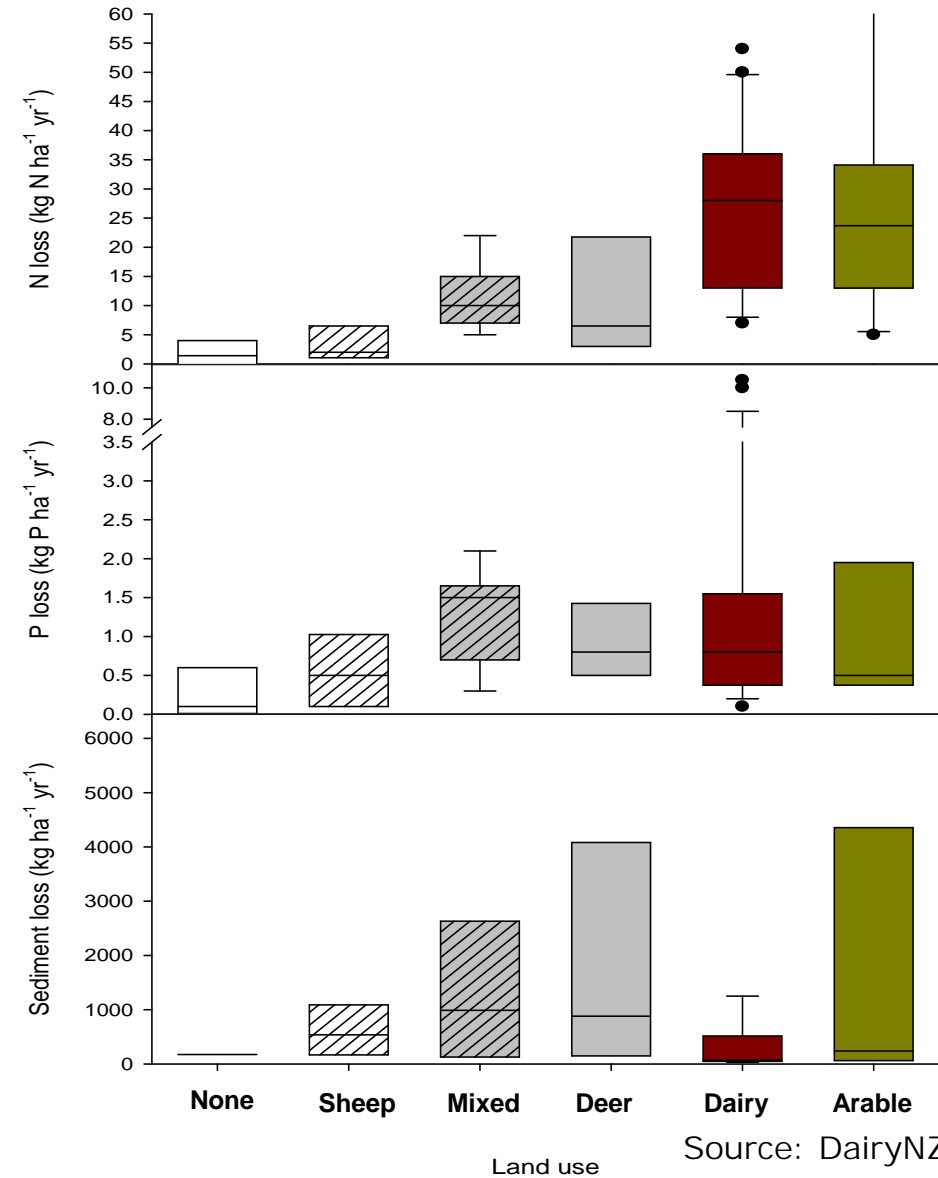
# So What Contaminants are we Talking About?



Dairy 30 kg N/ha/yr  
 Drystock 10 kg N/ha/yr

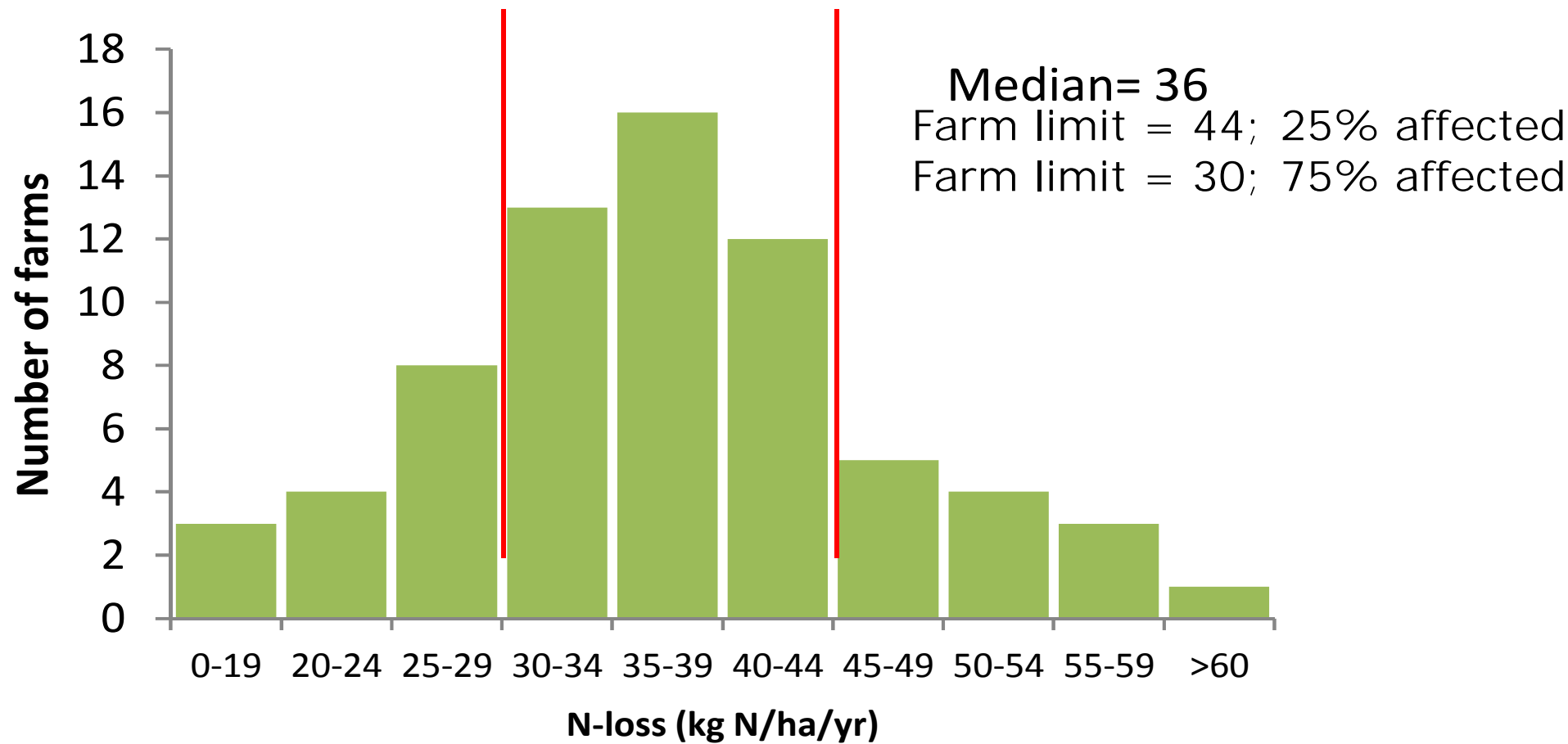
P loss similar across land uses

Sediment loss for drystock higher than Dairy



# The Nitrogen Problem

National Dairy Farm Leaching Rates



Source: Mike Scarsbrook Dairy

# The Nitrogen Problem

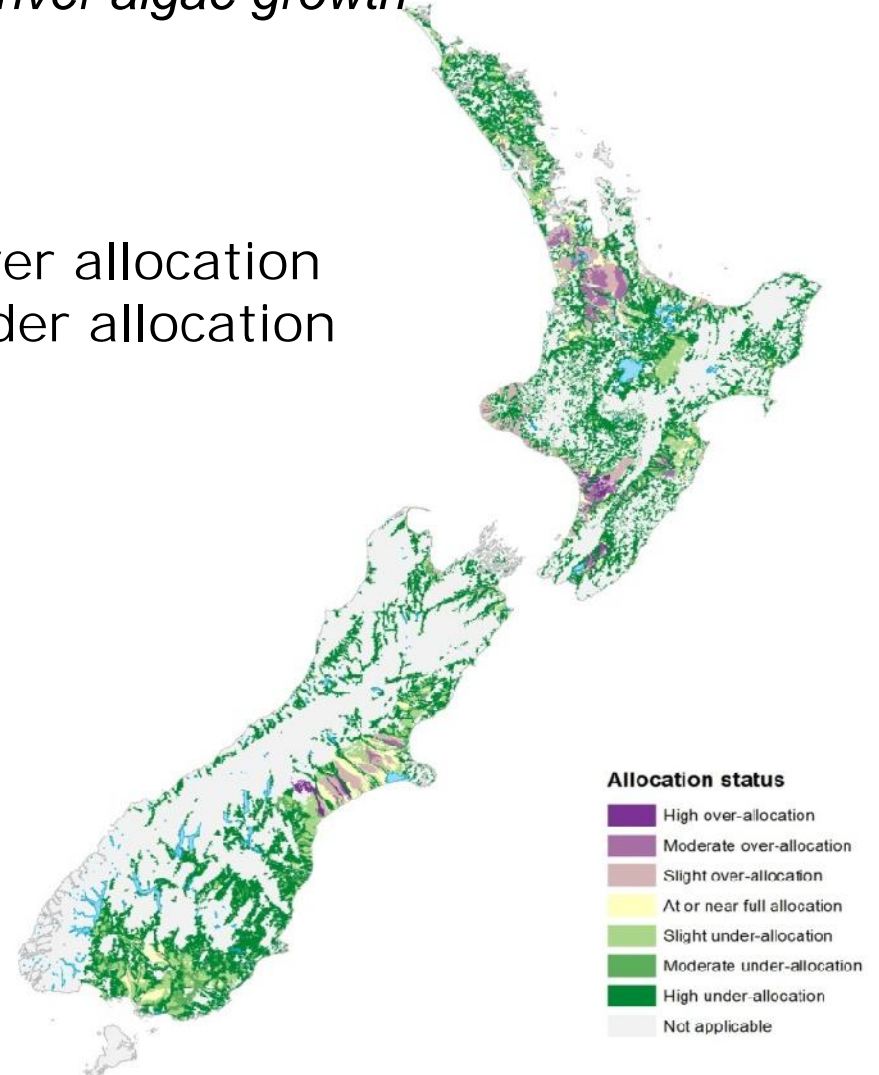
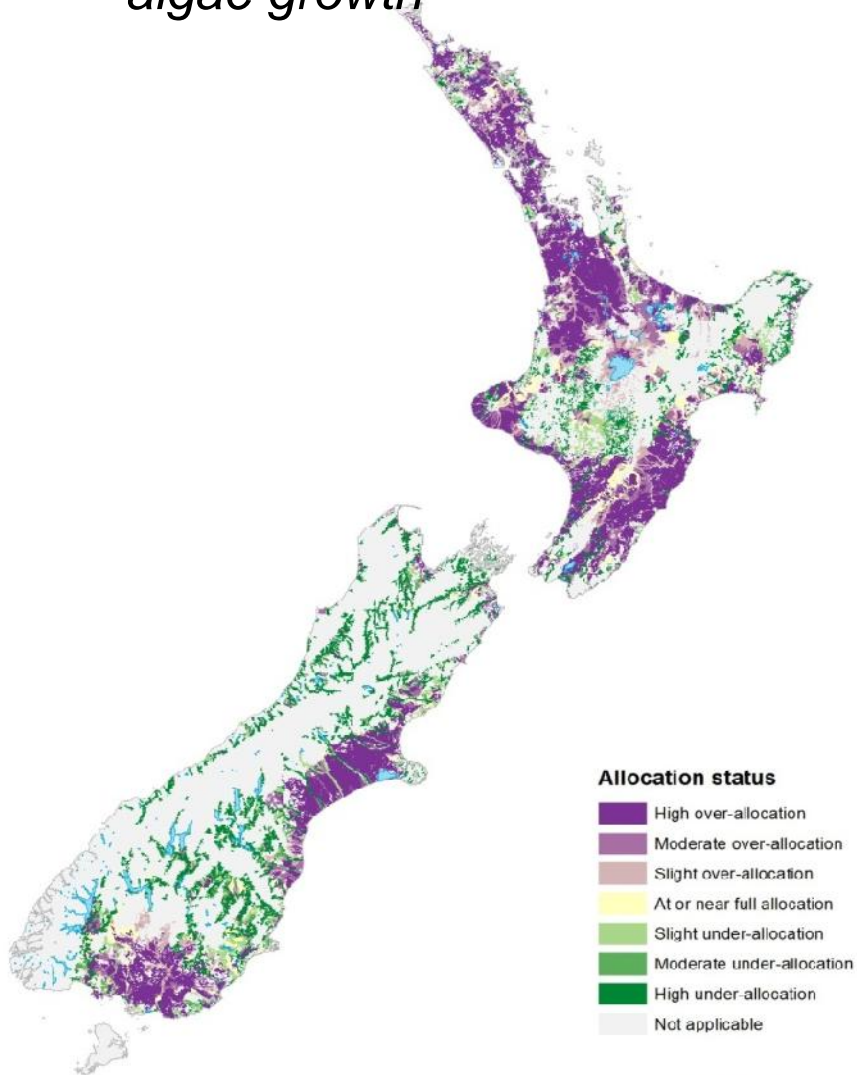


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*N at a moderate threshold for river algae growth*

*N at a permissive threshold for river algae growth*

Purple = over allocation  
Green = under allocation



# Impact of Regulatory Changes

- Current land water and nutrient rule changes will have significant effect on the way this/next generation can farm the land
- Consent to farm will increasingly become the norm
- Significantly increase the technical complexity of farming
  - Increased reliance on new technologies/consultants with expertise in environmental management
  - Increased risk, including: technology failure, inappropriate technology, prosecution
- Nitrogen largely dairy issue BUT Sediment & Phosphate may pose challenges for drystock farmers in some regions
  - Fencing/riparian of waterways costly/impractical in many areas
- Effective nutrient and water management will become core function like good pasture and livestock management.

# Where to from Here?

- Industry/individuals need to get involved in regional/catchment plan change processes to ensure rules are fair/reasonable/workable and will have the desired to the environmental outcomes
  - Encourage plans that encourage innovation and can be adjusted with advances in knowledge/technology
- Begin/build on, basic understanding of individual farm specific nutrient and water issues and start adapting if necessary
  - Develop farm specific solutions that will generate the greatest improvements for each \$ spent
  - Actively seek information on rules proposed for their region/catchment
- If uncertain/have concerns work with local council/industry representatives (e.g. Fed Farmers/Beef+Lamb) or environmental consultants





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