

# ETS

## Opportunities & Risk for the Farming Sector

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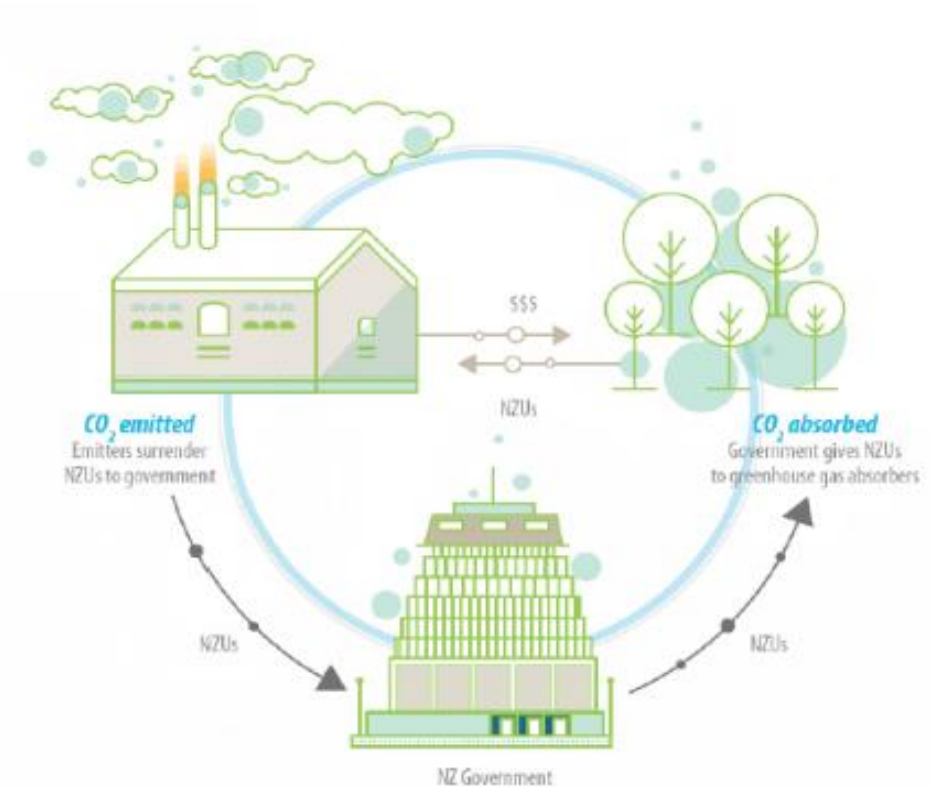


**Forest  
Management**  
GROUP

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# What is the emissions trading scheme (ETS) ?

- The ETS is the trade of carbon units-called NZUs- to reduce greenhouse gases
- 1 NZU represents a tonne of carbon dioxide equivalent
- Polluters have to surrender NZUs to Government each year to cover their emissions
- Those who remove greenhouse gases e.g. forest owners can earn NZUs to sell



Source: Environmental Protection Agency

# Why is NZU price on the move up?

- NZ commitment to Paris may be hard to achieve
- NZU demand to double in 2019 due to phase out of emitter 2-for-1 subsidy
- ETS review signals increase of \$25 price cap prior to 2020 (EU ETS Price is NZ\$35)
- Uncertainty as to supply of NZUs during 2021 to 2030
- Productivity Commission models show \$150 - \$250 by 2050



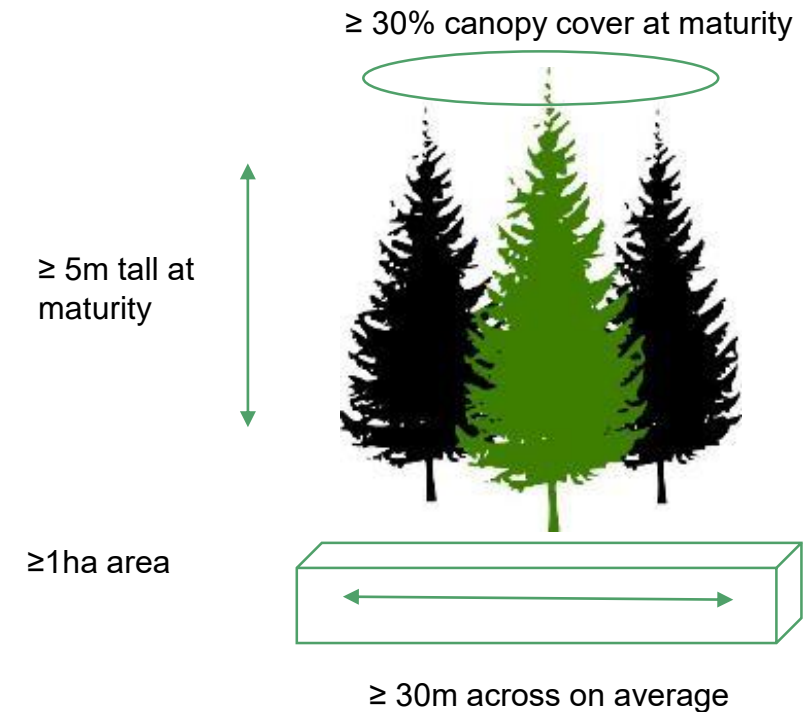
Source: Carbon Forest Services

# What is an eligible carbon forest?

Forests established on 'bare land' after 1989 = eligible post-1989 forest

Forest =

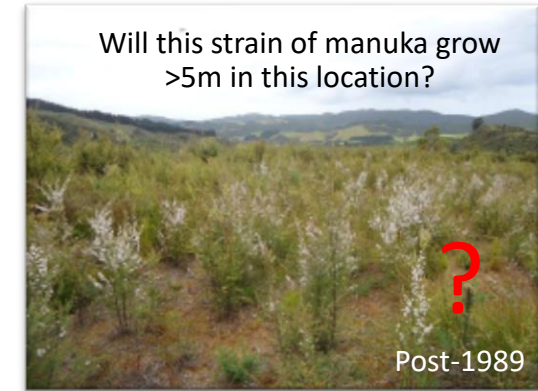
- At least 1 hectare in area
- At least 30m in width (excludes most shelterbelt plantings)
- 30% canopy cover per hectare at maturity
- Tree species capable of reaching 5 metres in height at maturity in situ (i.e. in location they are growing)



Source: Ministry for Primary Industries

# What land is eligible for carbon forestry?

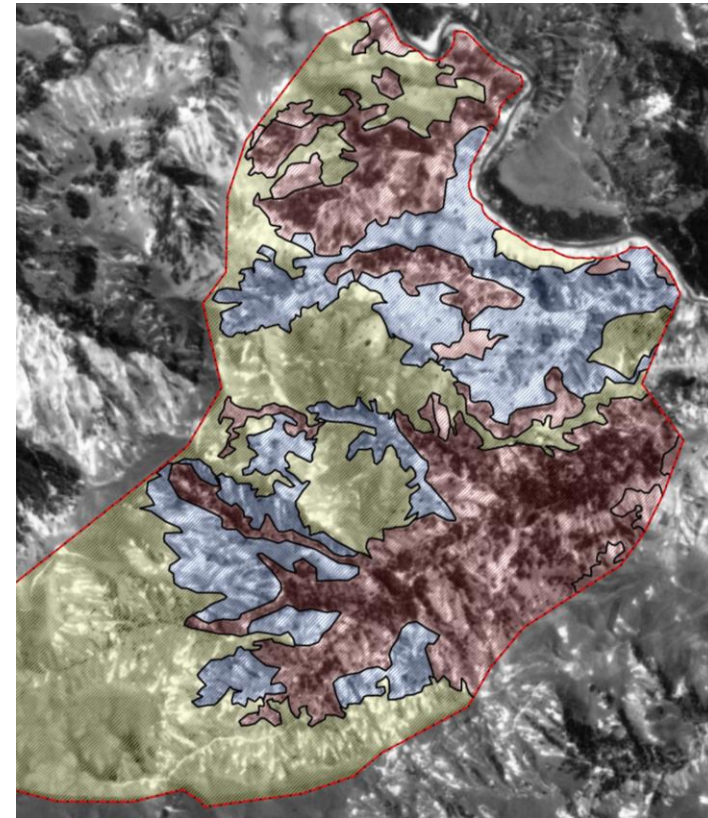
- If land meets forest definition before 1990 it is generally pre-1990 forest and not eligible
- Forest includes native & exotic **tree species**/ planted or regenerated





# What is eligible Forest? Difficult Cases

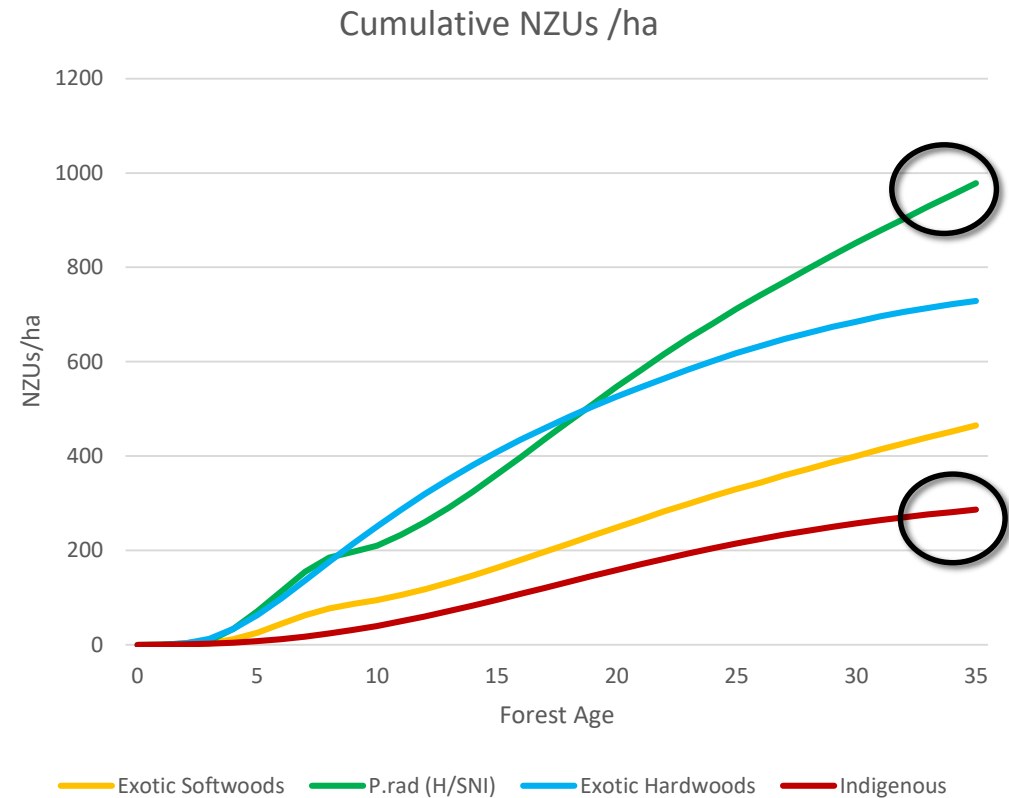
- Scattered scrubby vegetation present in 1990 and now in forest
- Need clear evidence that not tree species in 1990 i.e. was broom or gorse
- MPI become very strict. A lot of poor scrubby farmland which is perfect for native regeneration is deemed ineligible



Source: Farm land in Waikato Region- 1988 Aerial

# Species comparison

- High variability between species based on Growth Rates
- Exotics are fast / natives slow
- Exotics cheaper than natives
- Early sequestration maximizes internal rate of return (IRR%)



Source: MPI look up tables (Climate Change (Forest Sector) Regulations 2008)

# Funding Support- One Billion Trees

Type of planting	Size	Base rate/ha	Top-up available/ha		
			Erosion prone land OR land in areas that support regional development goals/ha	Fencing/ha	Ecological restoration partnership projects /ha
Indigenous mix (e.g. a mix of native trees and shrubs)	1ha–300ha	\$4000	\$500	Up to \$500	Up to \$2000
Mānuka/kānuka (particularly for erosion control or as a nurse crop for an indigenous forest)	5ha–300ha	\$1800	\$500	N/A	N/A
Indigenous natural regeneration (e.g. retiring land and managing it to naturally return back to trees)	5ha–300ha	\$1000	\$500	Up to \$500	N/A
Exotic (e.g. planting eucalypts, redwoods or <i>Pinus radiata</i> )	5ha–300ha	\$1500	\$500	N/A	N/A



# IRR Example- Timber Forest + Carbon (averaging)

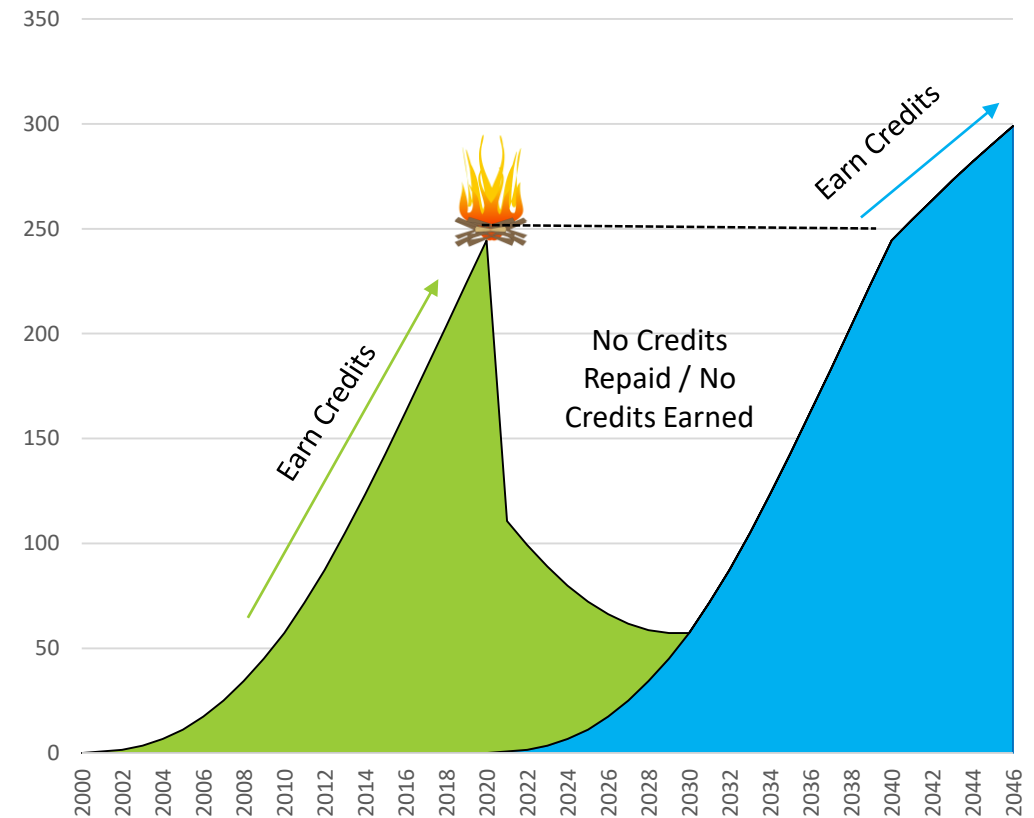
- Effect of Averaging on Timber Crop
- Front end carbon income to offset costs
- Lift IRR by 4 – 6%
- Higher impact on marginal land of less value
- No carbon liability risk
- Low or no need for carbon insurance



	Land @ \$4k/ha
Timber Only	5.7%
Timber+Carbon (averaging)	9.9%

# New Rules- Permanent Forests

- Permanent forests receive full carbon stock allocation
- No carbon liability if adverse event- BUT
- Forest must be re-established
- No credits earned until forest recovers to pre-adverse event carbon stocks
- No more carbon loss insurance
- But still may want lost carbon income insurance (i.e. future carbon insurance)



# Conclusions:

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- Major momentum in climate policy (Paris/ZCB/1BT)= good for trees
- NZU Price is high and projected to Increase
- Barriers / Risk to participation hopefully met with ETS Review
  - Averaging avoid harvest liability / Revamped PFSI scheme / 1BT Program
- Get professional advice from carbon and forestry experts
- Current Future carbon price looks rosy but you never know what will happen!

# THANK YOU!

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