



**TIMBERLANDS**

# FOREST ECOSYSTEMS SERVICES

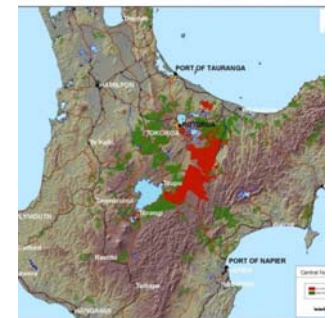
Colin Maunder

# Kaingaroa Forest

- CNI of NZ
- Canadian PSP / NZ Super / Kakano (iwi) forest owners
- Timberlands Limited Managers
- Iwi landowners
- 190,000 ha productive
- 18,000 ha natural reserves
- 95% radiata pine
- 100% replant radiata pine – 8,000 ha / year
- 5 million m<sup>3</sup>/yr sustained harvest
- Average MAI 25m/ha /yr
- Genetics, nursery, log processing yard, rail
- Whakarewarewa Forest – Mountain Biking
- NZ Falcon



KAINGAROA  
TIMBERLANDS



## Environmental Services

Recreation over 400,000 visits & 75 events/year, over \$50 million annually to Rotorua economy

Soil stability – avoided erosion

Food – hunting / fishing / water cress over 2,500 recreation permits per year

Water quality (including N)

Carbon sequestration (next slide)

Flood minimisation

Employment – over 1,000 local business accounts, 800 direct workers

Oxygen

Biodiversity

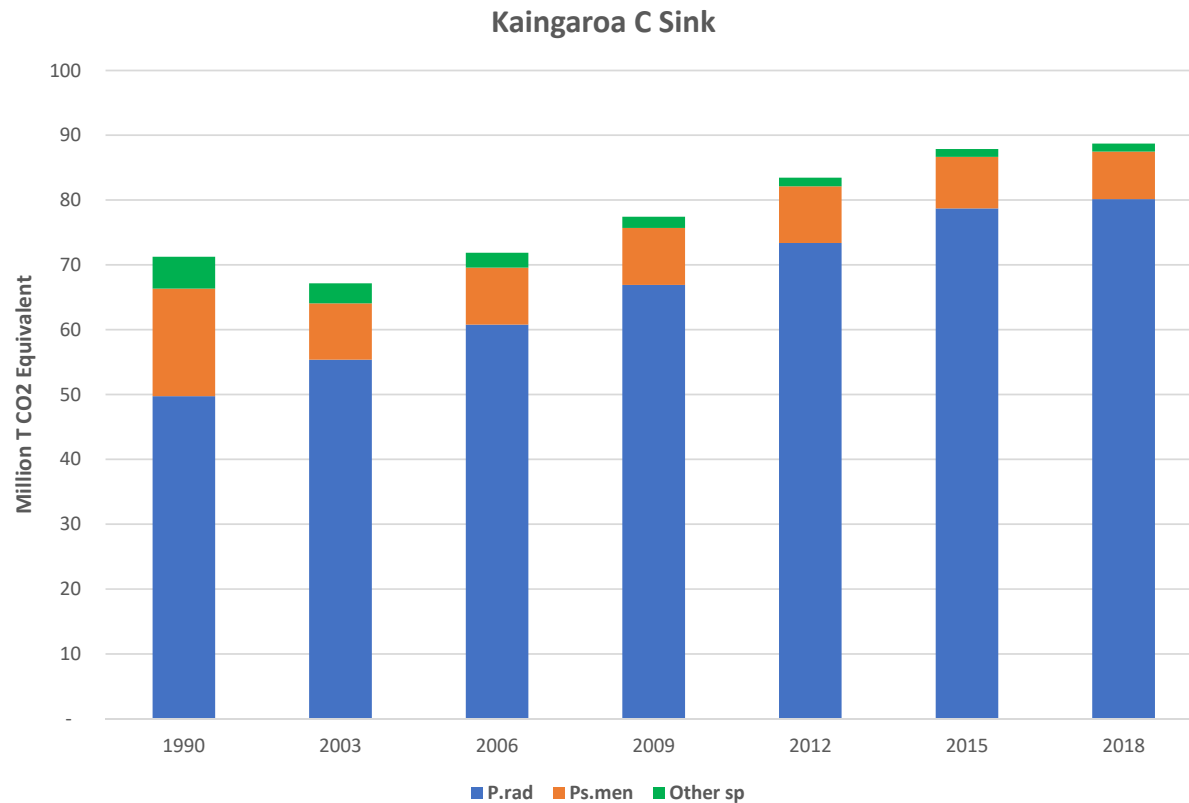
- Rare species (falcon)
- Other species (fantail)
- Reserves – Ecosystems over 18,000ha actively managed

Amenity/landscape

Fire Protection

Other?

# KT MANAGED CARBON



21.6 million tonnes more than  
when TL assumed management  
of the forest in 2003 = 1.44  
million tonnes / year



313,000 annual, or



660,000 annual

# VALUE

Cash

Licence to operate / Certification

Staff recruitment / retention

Ethical investor

Policy leverage





# EXPERIENCE

- Reward vs Penalty
- Zip \$
- Nationalised
- Grandparented
- Rules
  - Carbon
  - Nitrogen
  - Biodiversity (NPS - SNA)





WHAT NOW?

- Policy
- Who pays for what?
- 50 by 50