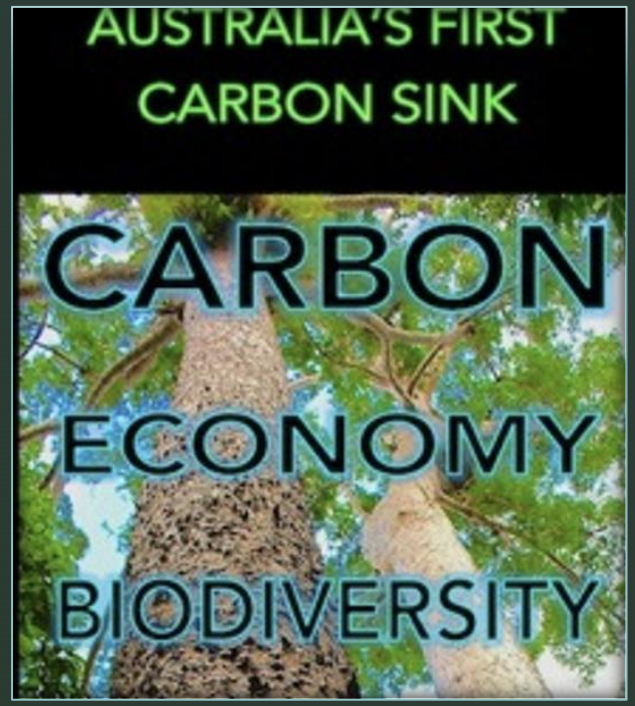
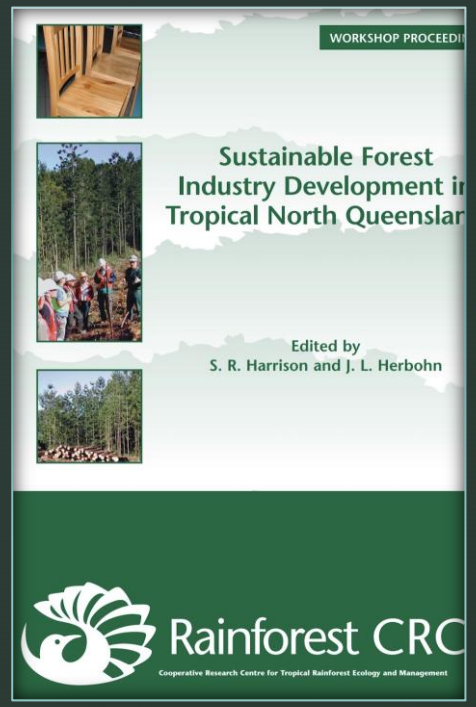


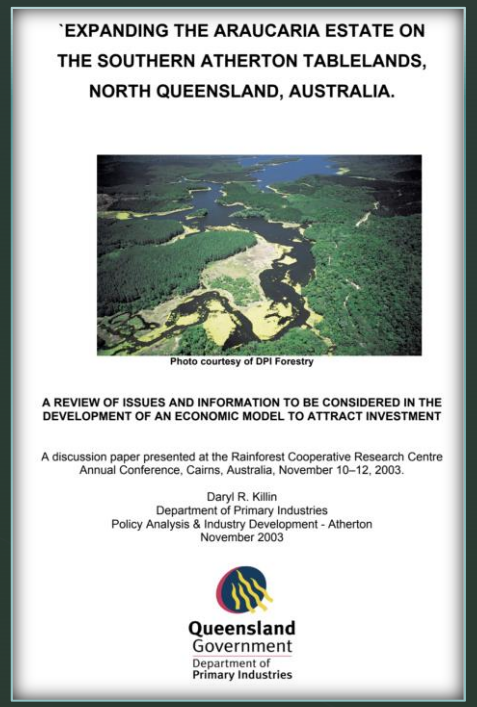
RESTORING FORESTS, RESTORING FUTURES

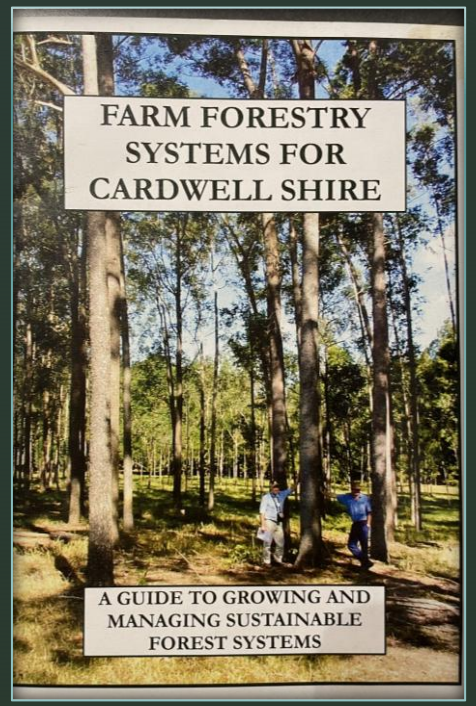
A Case Study in Hybrid Conifer - Rainforest Reforestation for Climate & Community Resilience

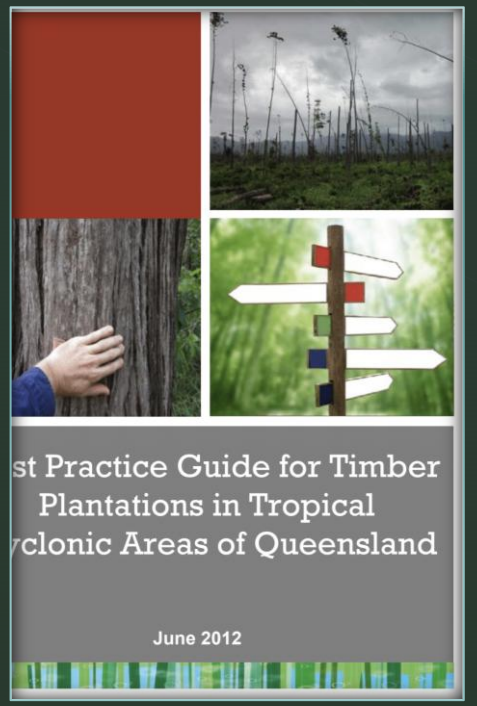
Daryl Killin, Managing Director - NATIVE CONIFERS CARBON SINK

Australian Forestry Conference – 20 October 2025









TIMBER QUEENSLAND: CANOPY
MASTER TREE GROWER (MTG) PROGRAM

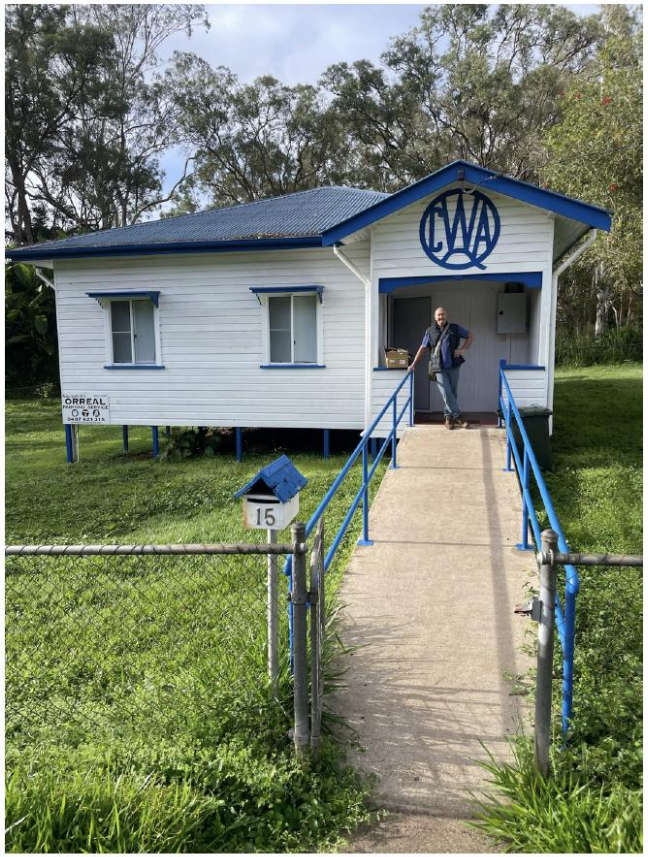


Figure 1: Master TreeGrower Founder Rowan Reid at Ravenshoe CWA Hall

WET TROPICS MTG COURSE SUMMARY REPORT: APRIL 2024

Introduction

Australia's First Carbon Sink (CFI)

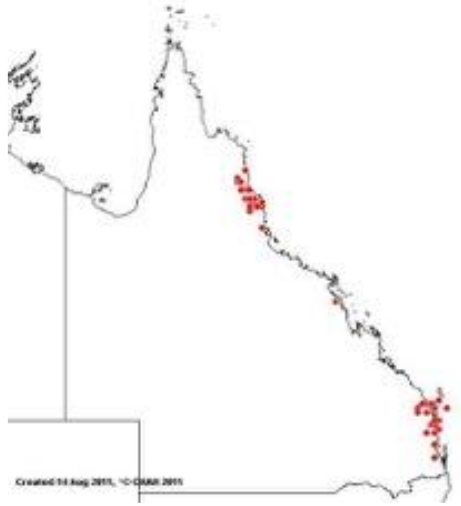
- The **Native Conifers Carbon Sink Project 01** was the first Carbon Sequestration project approved under the Carbon Farming Initiative (CFI) on 13th December 2012, using the now-ancient Reforestation Modelling Tool (RMT) methodology.
- Pilot Project, "01" refers to the first leased property, at an altitude of 930m at Ravenshoe in the Wet Tropics.
- Chosen species of the **Project** produce carbon credits generated by three native conifer species: *Araucaria cunninghamii (hoop pine)*, *Araucaria bidwillii* (bunya pine) and small areas of *Agathis robusta* (kauri pine), plus highly biodiverse rainforest species planted in the creeks.
- The Project produces approx. 500 ACCUs for every hectare over the first 10 years.
- Supported by Qld Govt Land Restoration Fund (2018 - 2025), including a higher ACCU price to reflect the ecological and social co-benefits associated with the project.

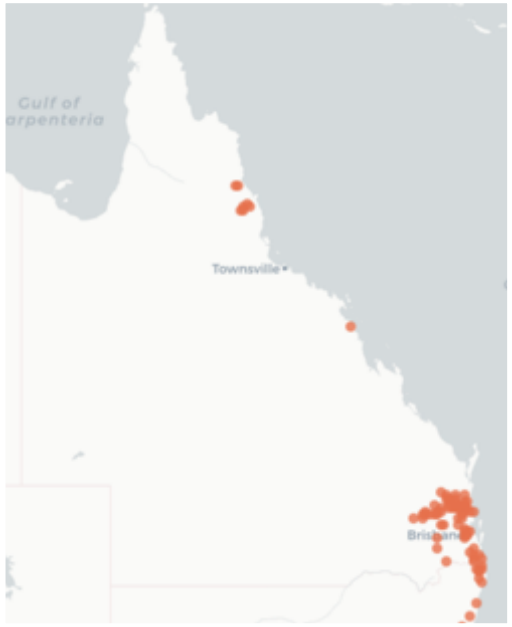
Company Values

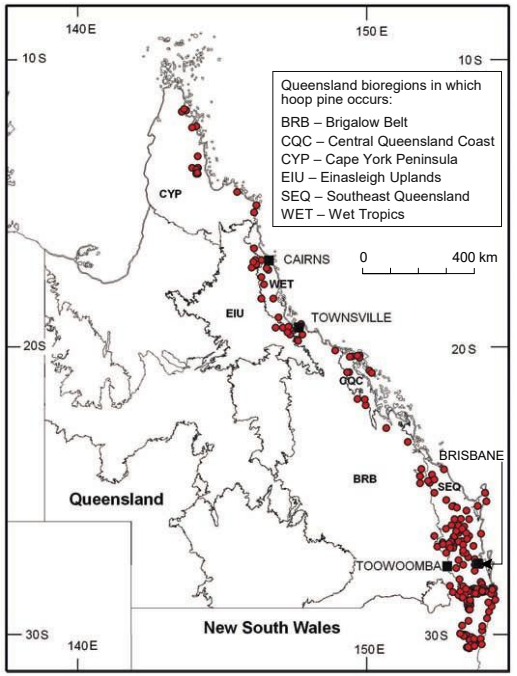
1. FUTURE FOCUS	*We Produce a Legacy of Intergenerational Productive Forests*
2. PASSIONATE STEWARDSHIP	*We Understand Trees for Timber, Carbon & Nature*
3. SEQUESTRATION SOLUTIONS	*We Address Climate Change in the Wet Tropics*
4. TECHNICAL KNOW-HOW	*We Know the Science & History of Growing Native Conifers*
5. BRIDGE TO A NEW ECONOMY	*We Generate Carbon & Environmental Credits for Investors*
6. IUNRELENTING NNOVATION	*We Develop Technology for Improved Productivity*
7. ETHICAL STANDARDS	*We Insist on Excellence in Ethical Business Conduct*
8. COMMUNITY ACTION	*We Operate on a Grass Roots Basis*
9. EDUCATION & TRAINING	*We Educate our Clients & Train our Partner Communities*

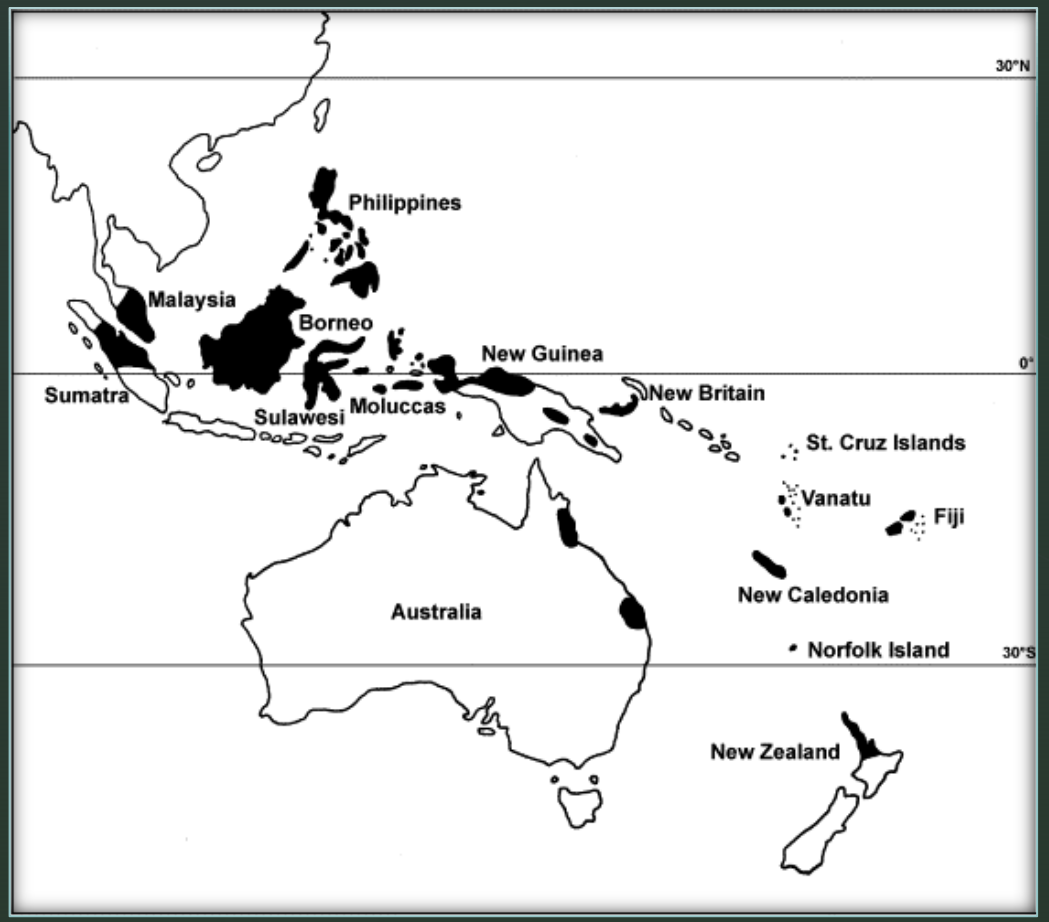


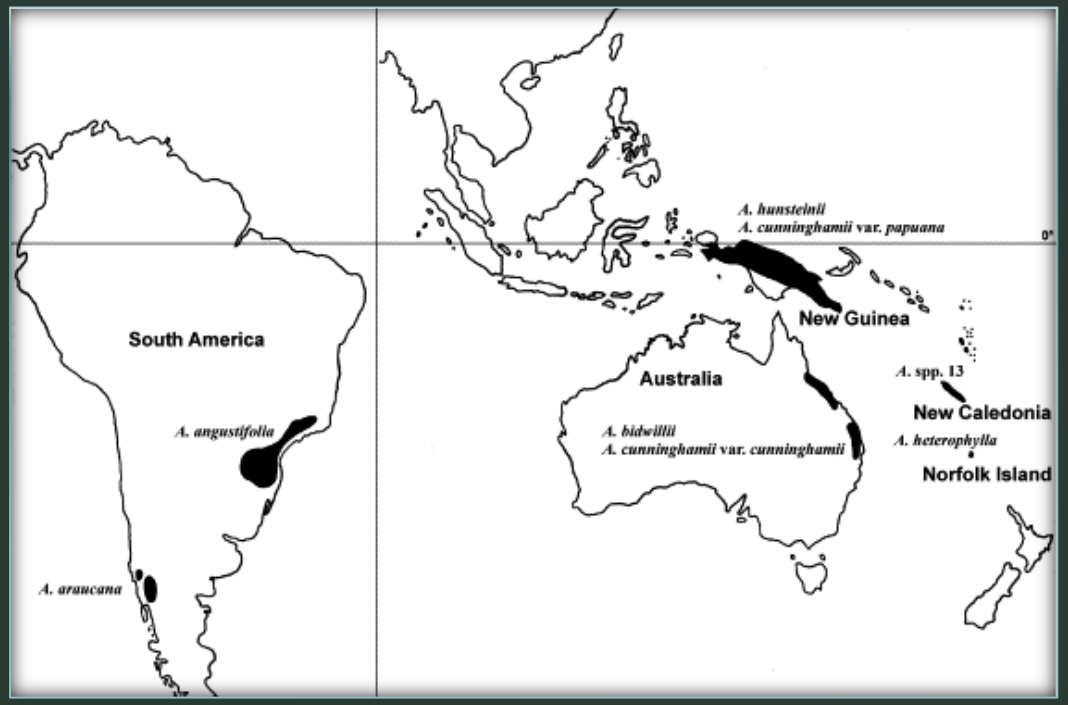
Hoop, Bunya & Kauri Pine are endemic to Queensland









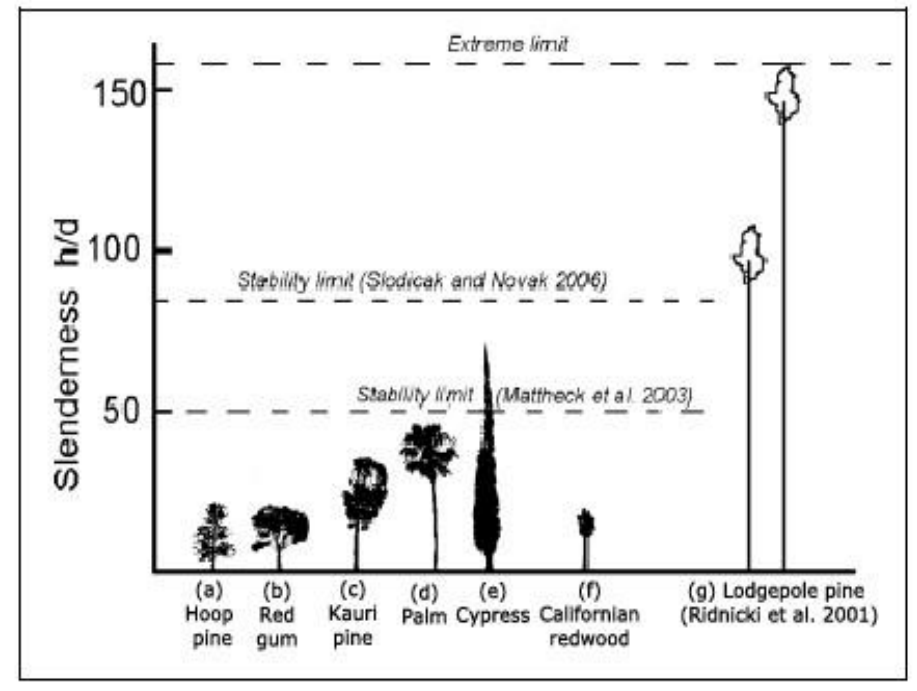


The genera Agathis (left) & Araucaria (above) are also endemic to the Asia Pacific region

Cyclone Resilience

Many species currently used in typical environmental plantings in the Wet Tropics are not cyclone resilient due to shallow rooting, low wood density, and umbrageous (spreading) crowns.

By contrast, native conifers have strong apical dominance, a low slenderness ratio (height/diameter) and spend their first few years putting down a deep taproot.

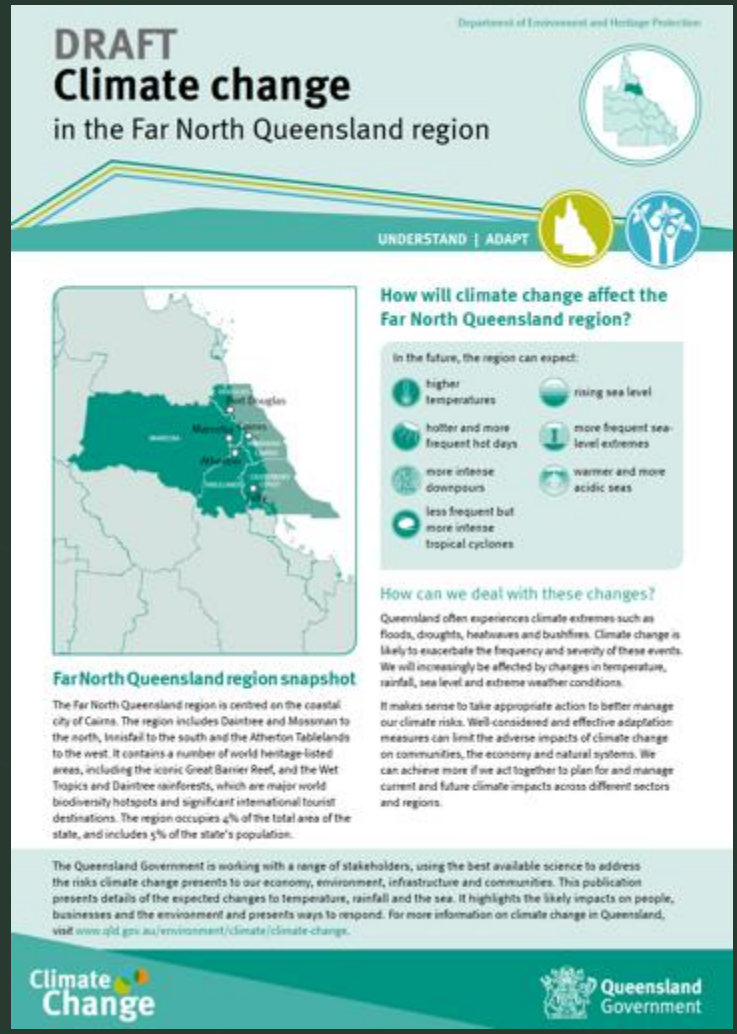


Climate Change Resilience

Climate change is likely to impact on species endemism in the Wet Tropics.

Focussing on planting only endemic angiosperms is flawed, given projected climate changes in the next 100 years.

By contrast, native conifers have adapted to climate change over 200 million years.



DRAFT
Climate change
in the Far North Queensland region

UNDERSTAND | ADAPT

How will climate change affect the Far North Queensland region?

In the future, the region can expect:

- higher temperatures
- rising sea level
- hotter and more frequent hot days
- more frequent sea-level extremes
- more intense downpours
- warmer and more acidic seas
- less frequent but more intense tropical cyclones

How can we deal with these changes?

Queensland often experiences climate extremes such as floods, droughts, heatwaves and bushfires. Climate change is likely to exacerbate the frequency and severity of these events. We will increasingly be affected by changes in temperature, rainfall, sea level and extreme weather conditions.

It makes sense to take appropriate action to better manage our climate risks. Well-considered and effective adaptation measures can limit the adverse impacts of climate change on communities, the economy and natural systems. We can achieve more if we act together to plan for and manage current and future climate impacts across different sectors and regions.

Far North Queensland region snapshot

The Far North Queensland region is centred on the coastal city of Cairns. The region includes Daintree and Mossman to the north, Innisfail to the south and the Atherton Tablelands to the west. It contains a number of world heritage-listed areas, including the iconic Great Barrier Reef, and the Wet Tropics and Daintree rainforests, which are major world biodiversity hotspots and significant international tourist destinations. The region occupies 4% of the total area of the state, and includes 3% of the state's population.

The Queensland Government is working with a range of stakeholders, using the best available science to address the risks climate change presents to our economy, environment, infrastructure and communities. This publication presents details of the expected changes to temperature, rainfall and the sea. It highlights the likely impacts on people, businesses and the environment and presents ways to respond. For more information on climate change in Queensland, visit www.qld.gov.au/environment/climate/climate-change.

Climate Change

Queensland Government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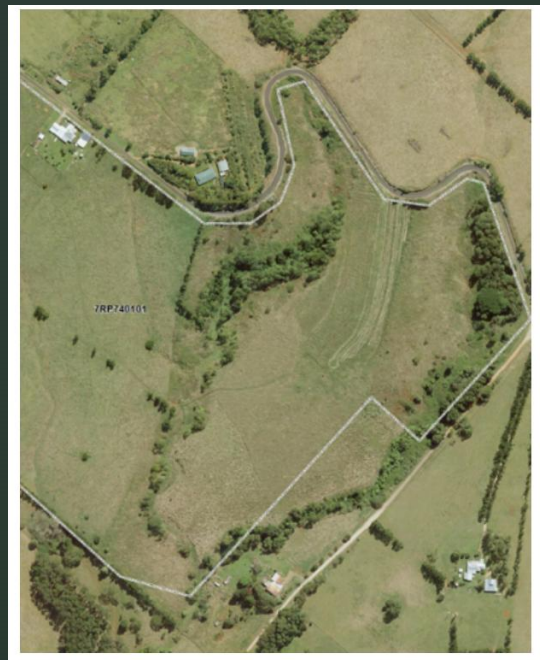
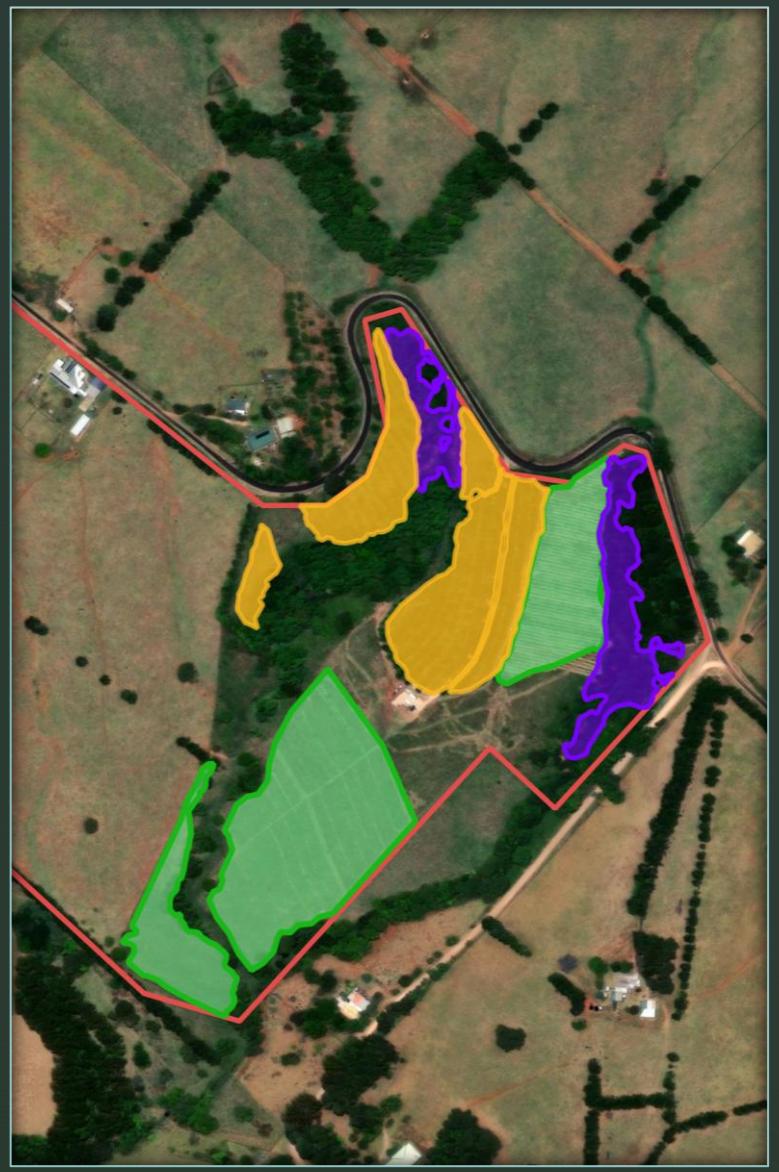
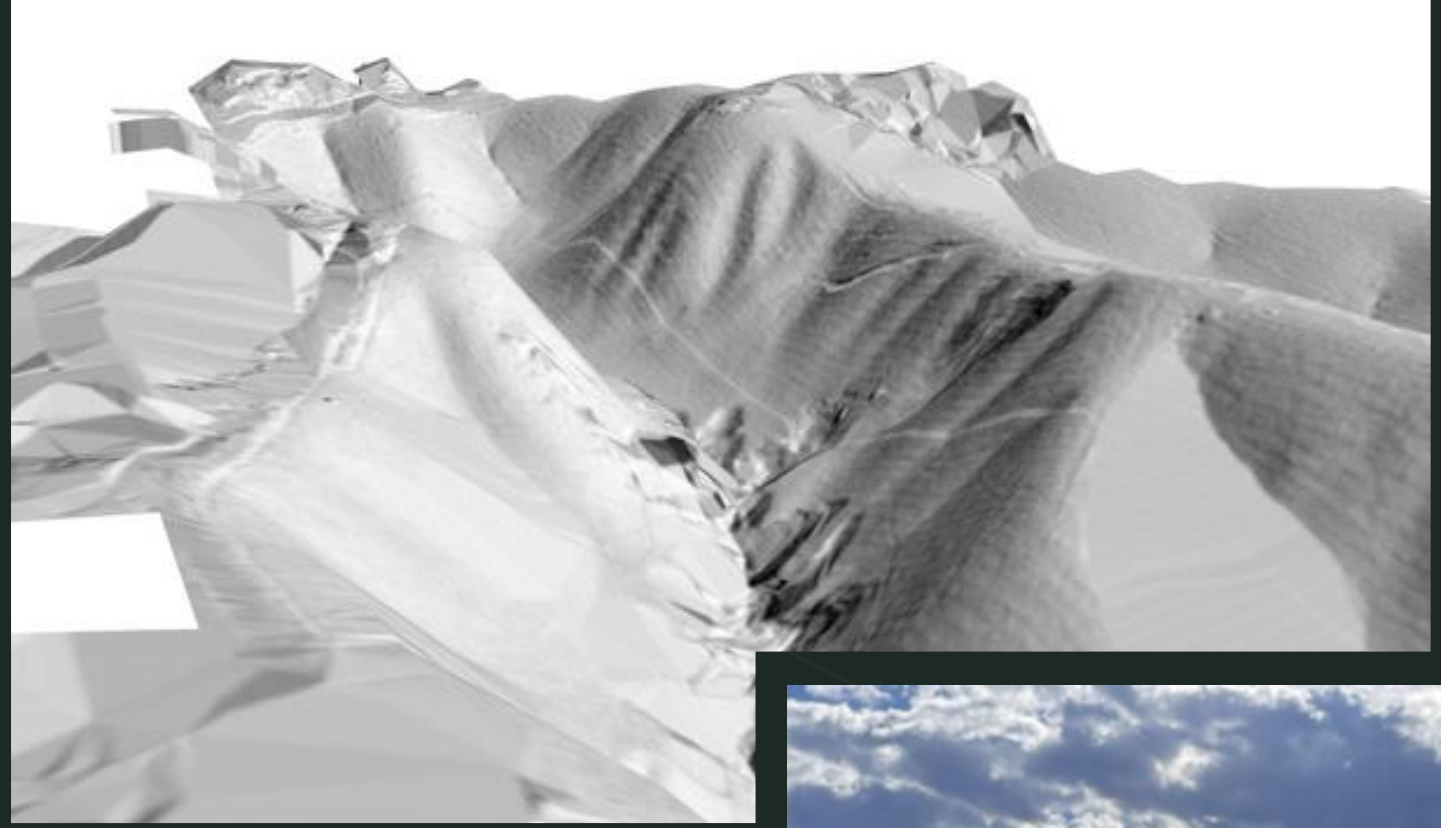
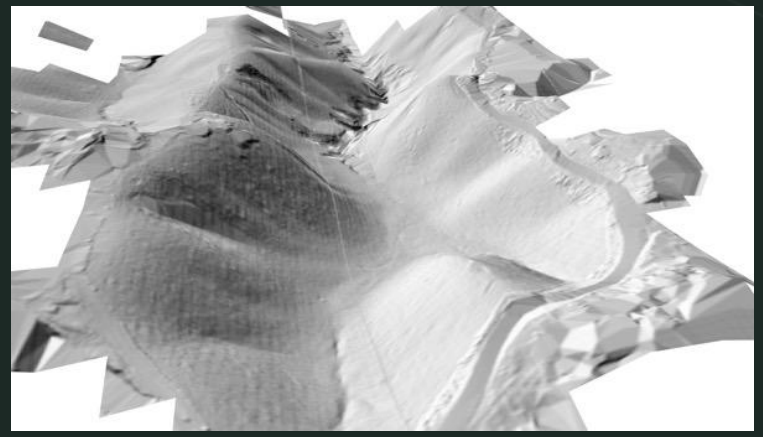




Planting 6 CEAs over 8 years



NATIVE CONIFERS
CARBON SINK



Address: Wongabel QLD 4883
Locality: -17.324700, 145.506500
Scan Date: 18/10/2020
Work: LiDAR - Terrestrial Laser Scan
Scan Type: Plantation

Field Observations
Vegetation Type: Plantation (1936)

Structural & Floristic summary:
Very tall plantation to 35 m dominated by *Agathis robusta* with *Aleurites moluccanus*. Thick rainforest understory regenerating to 20 m including Dendrocnide, Ficus, Elaeocarpus, Cupaniopsis, Argyrodendron with Calamus and Cissus thickets.

Figure 1: Field Photo.

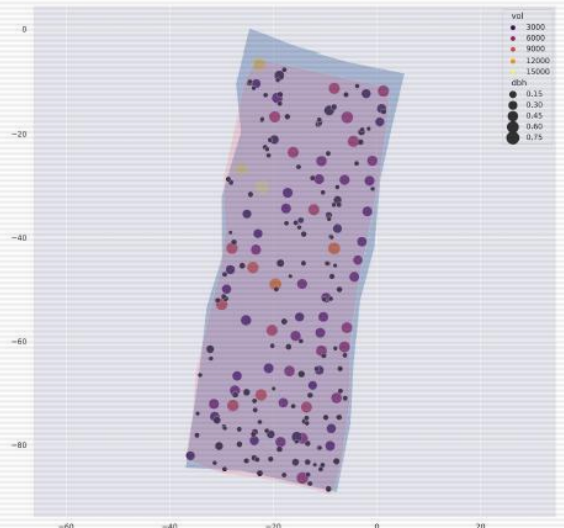
ID: wongabel

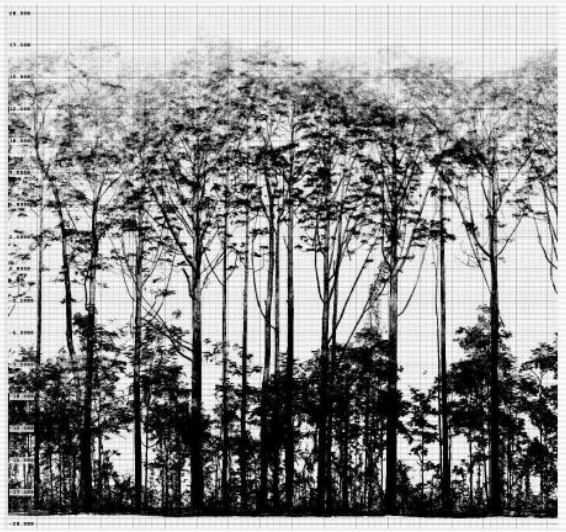
PLOT SUMMARY*

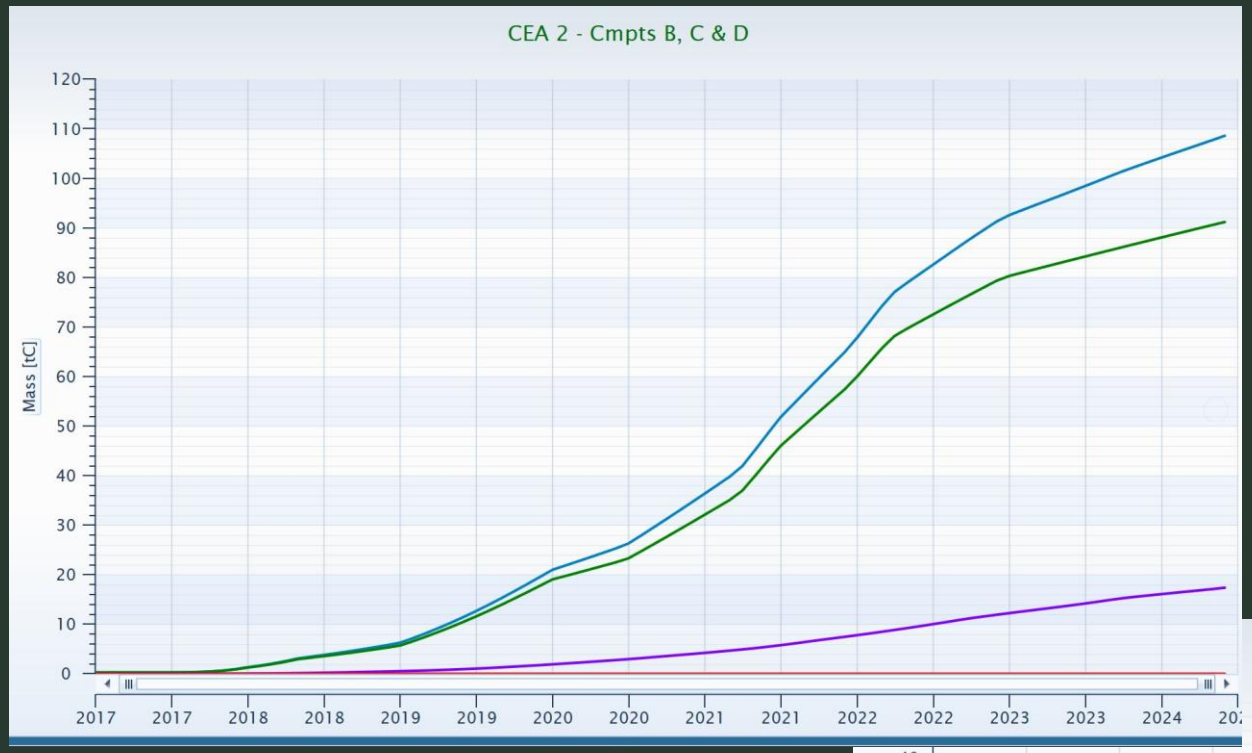
	Plot
Stems	204
Stems *per hectare*	897
Scan Area *ha*	0.24
Plot Area *ha*	0.23
Mean Volume m^3	1.84
Total Volume m^3	375.68
Woody Volume m^3/ha	**1652.65**

DATA SUMMARY

Tallest tree:	36.74 m	(Tree 0305)
Mean Height:	18.28 m	
Largest diameter:	89.25 cm	(Tree 0566)
Mean diameter:	25.17 cm	
Largest volume:	15300 L	(Tree 0566)
Mean volume:	1841.58 L	

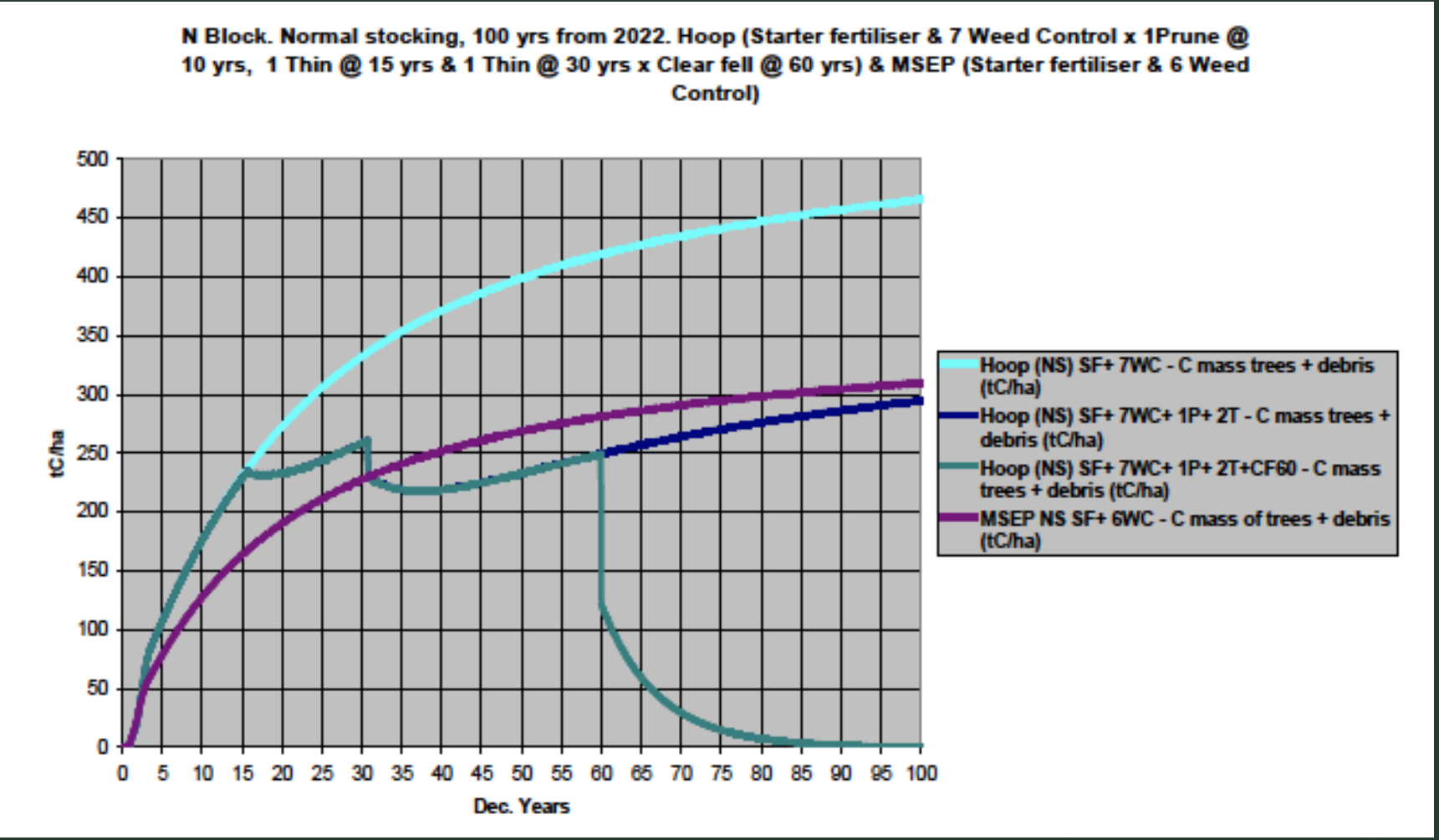






RMT Early Growth Carbon Calculation: Conifers (left) & Rainforest (right)

FullCAM: Native Conifers & Rainforest



"A century is but a season for a forester…"