Department of Primary Industries and Regional Development

Opportunities for Forestry in the ACCU Scheme

Fabiano Ximenes – DPIRD Forest Science – Forestry Australia Symposium

Outline

- Brief history
- Workshop – discussed changes to existing methods, new methods
- EOIs recently submitted
- International market opportunities

Brief History

Carbon Farming Initiative (CFI)

- Commenced in 2011; established project level, offset certification scheme. Designed to work with an emissions trading scheme… Land managers could participate by selling credits due to storing carbon or reducing GHG emissions. Participation via methodologies (industry-led). Integrity of methods assessed by the DOIC
- Methods contain a set of rules and conditions for the implementation of a project activity. A standardised baseline scenario assumed for all projects
- Positive list – activities deemed additional
- Negative list – adverse impacts

Brief History – cont.

Emissions Reduction Fund (ERF)

- Replaced the CFI in 2014. Reverse auction (voluntary) - Govt purchased credits to meet international GHG obligations.
- Safeguard mechanism – ensuring emissions reductions from ERF were not displaced by higher emissions elsewhere in the economy.
- Voluntary carbon offsetting –sales of credits to companies (National Carbon Offsets Standard)
- Positive list abolished; instead method prioritisation based on meeting criteria: likely abatement; level of support; tech proven; likelihood of adverse impacts
- Method development via TWG – compliance with offset integrity standards

Offset Integrity Standards

Offset Integrity Standards	Comments
Additional	Additionality can be assessed as regulatory / financial / new or better than industry average. “At the method-level, additionality tests should be applied on the basis of evidence and observable common practice, and not require statements of intent or financial viability by project proponent”.
Measurable and verifiable	Several options including direct measurement / modelling / factors developed previously.
Eligible carbon abatement	“Abatement must be capable of being used to meet Australia’s mitigation targets under the Kyoto Protocol and Paris Agreement.”
Evidence-based	“Where initial research was industry-led, it could be worth commissioning an independent review of that research.” “Identifying gaps and whether further research would be needed to provide clear and convincing evidence.” and “The level of support for the assertions made by technical experts and industry.”
Conservative	“Does the level of conservatism reflects the likelihood of direct and indirect leakage from the method?”
Other criteria	
Permanence	Typically choice between 25 or 100 year periods for sequestration projects
Double-counting risk	For new forestry abatement projects – is there potential double-counting risk with existing plantation forestry method?
Likely industry uptake	Directly linked with considerations on industry related criteria below
Abatement potential	Distinguish between carbon sequestration/storage and substitution-based approaches
Geographical coverage	Limited coverage may still be ok if associated with large abatement potential

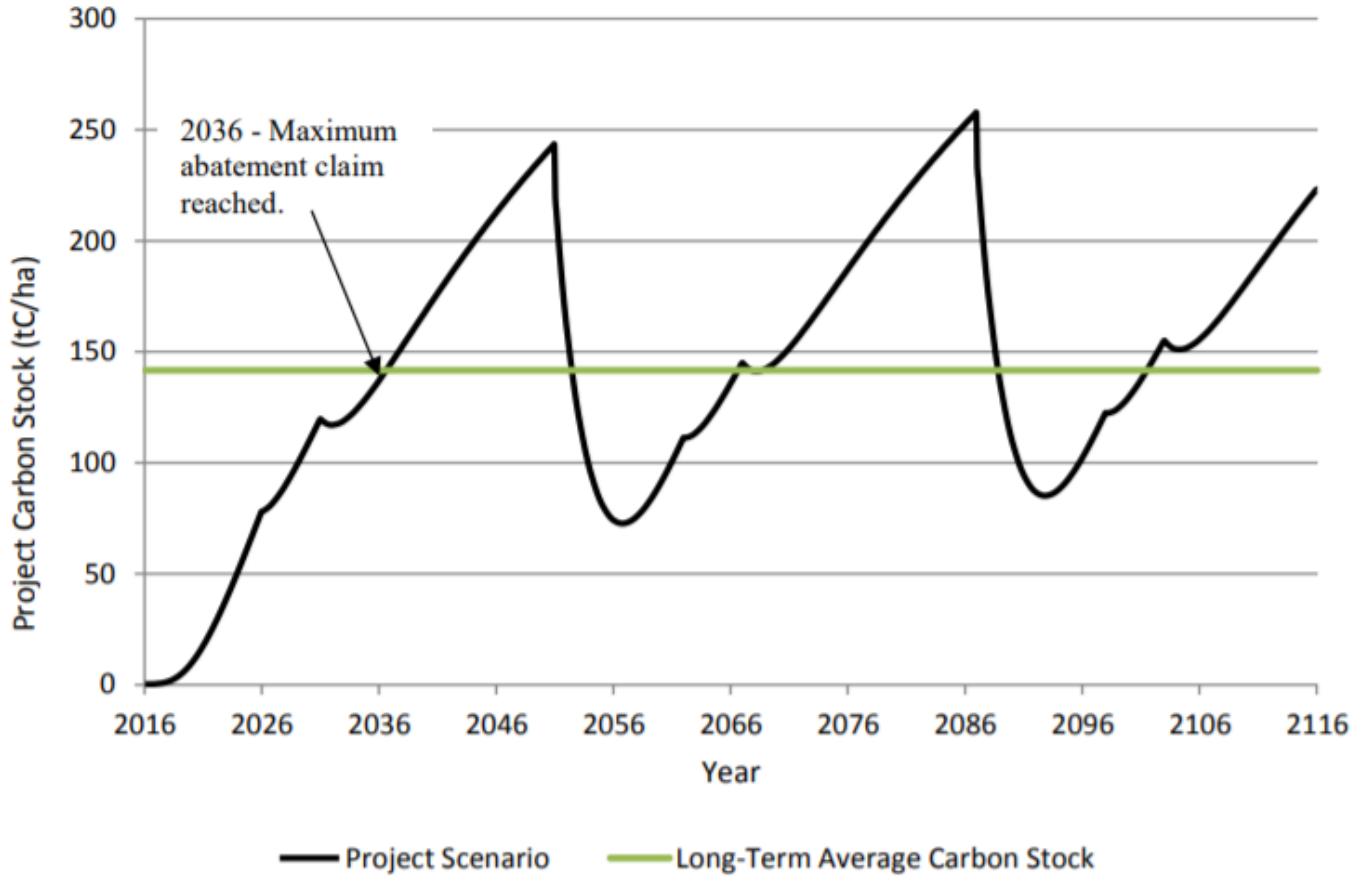
Brief History – cont.

Australian Carbon Credit Units Scheme (ACCU Scheme)

- Proponent-led method development (onus on proponent)
- Variations or new method development. Changes to existing methods will be referred to as modules. In practice will mean the Integrity Committee can approve methods rather than via a legislative instrument
- Regular rounds of calls for EOIs. New Method EOIs to be assessed and prioritised by CAIC on abatement potential; likely uptake; duplication potential; etc…
- Proponents have 12 months to complete a draft module and 18 months for a draft method after EOI is approved.

National carbon market: Plantation Forestry Method

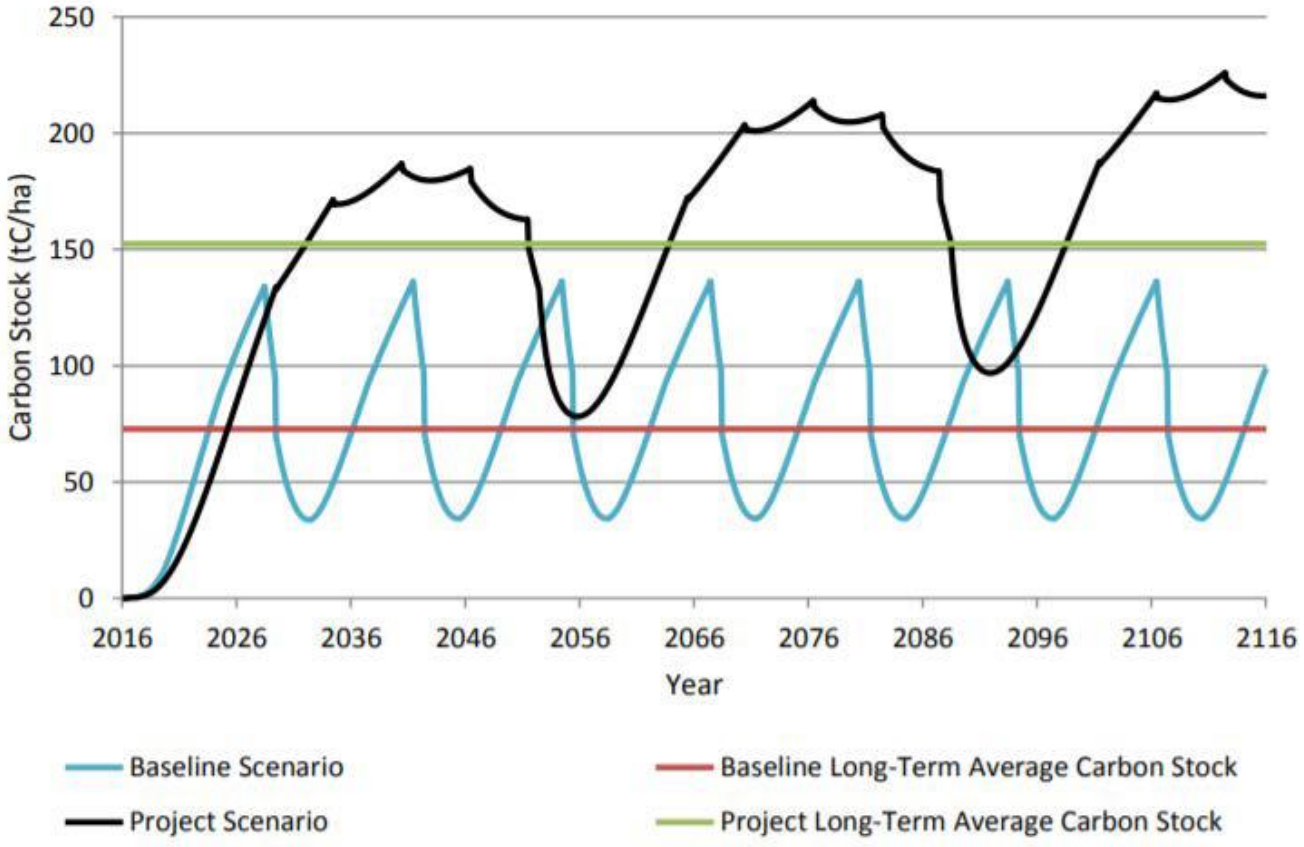
- Four different activities:
    * New plantations



National carbon market: Plantation Forestry

- Four different activities:

  * New plantations
  * Converting from short to long rotation



National carbon market: Plantation Forestry

- Four different activities:
    * New plantations
    * Converting from short to long rotation
    * Continuing rotational harvest cycles in a plantation forest
    * Transitioning a plantation forest to a permanent forest

- 25 yr or 100 yr permanence
- Carbon pools: above and below ground biomass, debris, harvested wood products
- Emissions: fuel, fertiliser, fire, disturbances

Workshop Participants

Participant	Organization
Annette Cowie, Fabiano Ximenes	NSW DPI
Penny Baalman	GHG Offset Services
Geoff Roberts	Flintpro
Stephen Roxburgh	CSIRO
Martin Timperley	University of Queensland
Phil Thompson	Native Secrets
Arjan Wilkie	Landari
Shaun Suitor	Sustainable Timber Tasmania
Justin Williams	Forestry Corporation of NSW
Andrew Morton	Indufor

Suggested changes to Plantation Forestry Method

Suggested Action	Discussion Outcome
Development of standard tools / templates to assist proponents developing a project	Already being pursued by AFPA
Audit costs – remote sensing techniques	AFPA to consult with plantation growers to gauge likely project uptake
Addition of species to FullCAM	AFPA to consult with members about any experience of underestimates of carbon abatement
Compressed crediting for all forest methods	Clarification required with the DCCEEW whether possible; then gauge likely uptake
Allowance for direct measurement options	Consultation with individual industry players required; also on the merits of using alternative methods
Inclusion of soil carbon	Current supporting evidence tenuous; more research needed

Suggested changes to Plantation Forestry Method – cont.

Suggested Action	Discussion Outcome
Inclusion of carbon storage in wood products in landfills	High priority given robust scientific evidence and likely material impact on project returns
Inclusion of short-rotation woody crops	Agreed should be pursued – consultation required with the DCCEEW on best way to progress
Inclusion of other planting options (environmental plantings; continuous forestry, farm forestry)	Agreed that flexibility for landholders is desirable - consultation required with the DCCEEW on best way to progress
Change in land use requirements prior to establishment	AFPA to consult with plantation growers to gauge likely project uptake

New potential methods suggested

Suggested Method	Discussion Outcome
Thinning regimes	Modelling work required to determine likely abatement
Resetting areas dominated by INS / weeds; Restoring areas of native forest in areas that have been burnt past their tolerable fire interval	May be best pursued as a nature repair activity; coverage / abatement / regulatory requirements to be considered
Fuel load management – cool burns in temperate forests	May be best pursued as a nature repair activity; more evidence required
Extending rotation cycles	Modelling work required to determine likely abatement
Changing mix of logs to longer-lived products	Modelling work required to determine likely abatement; may be best considered under the guise of an integrated forest method
Use of residues for bioenergy (e.g. hard to abate sectors)	High priority, high abatement potential - commence the work needed to develop the EOI package, in consultation with industry

New potential methods suggested – cont.

Suggested Method	Discussion Outcome
Avoided clearing for production	Modelling work required to determine likely abatement; leakage considerations
Lighter silviculture options	Modelling work required to determine likely abatement; may be best considered under the guise of an integrated forest method
Carbon storage/substitution in wood products used in buildings	EOI package already submitted
Use of wood processing residues for hard to abate sectors	Similar to above but at facility level
Integrated forest method option	Agreement should be prioritised – EOI package already submitted.

Prioritisation for method development

- Integrated forest method
- Carbon in wood in the built environment
- Residue use

ACCU Schemes: Method EOIs submitted

Greening Construction with Sustainable Wood	The proposed method will incentivise project developers of large-scale buildings to use sustainable wood products as an alternative to the use of other more emissions-intensive building materials. Projects will achieve lower embodied carbon by replacing non-renewable construction materials (reinforced steel, concrete, etc.) with increased use of timber products through innovative Mass Timber Construction (MTC) designs.	Australian Forest Product Association
Enhancing Native Forest Resilience through Active and Adaptive Management	There is a suite of ecologically sustainable forest management activities that can generate eligible carbon abatement, while also enhancing landscape resilience and providing a broader range of co-benefits. The proposed method would apply a broad, holistic approach to active and adaptive management of native forests across all tenures.	Forestry Australia
Improved Native Forest Management in Multiple-use Public Native Forests (INFM)	The proposed INFM method would incentivise projects involving the cessation or deferral of harvesting in multiple-use public native forests, to increase removals in, and avoiding emissions from, relevant forest-related carbon pools.	NSW Dept. of Climate Change, Energy and Environment

Plus methods on biochar, liquid biofuels, bamboo and hemp…

https://www.dcceew.gov.au/climate-change/emissions-reduction/accu-scheme/assurance-committee/method-development-tracker

Wood in the built environment

- Method developed by industry (Indufor lead): “Greening Construction with Sustainable Wood”
- Generate ACCUs by demonstrably reducing the upfront embodied emissions in building construction projects
- Use of mass timber design in large scale buildings instead of emissions-intensive products

Macquarie Uni Innovation Hub

T3 Collingwood Building

Enhancing Native Forest Resilience Method

Aim

- Reduce emissions, improve carbon stocks and productive capacity of the forests over the longer term; and increase forest resilience to shocks such as landscape fires and the impact of climate change.

This method incorporates active and adaptive management options and silvicultural interventions to restore or enhance structural diversity within native forests and increase resilience to bushfires and other shocks while maintaining biodiversity at the landscape level.

Who

All managers of native forests in Australia – State Forests, National Parks, indigenous land managers, PNF landholders

Residues for energy

- A range of methods rely on biomass to displace a fossil fuel alternative
- “Industrial and Commercial Emissions Reduction”; “Industrial Equipment Upgrades” and “Facilities” Methods: Opportunity for plantation harvest and processing residues
- “Aviation” and “Land and Sea Transport” Methods: no restriction of biomass type; however due to expire soon
- Opportunities for broader industry participation – residue management
- Each year – more than 1.5 million tonnes of harvest residues produced

International carbon markets

Offset Program/Crediting Mechanisms	No. Projects	% Forest	Forest Activity Types
The Verified Carbon Standard (VCS)	2,154	12.3%	A/R, FM & AD
The Climate Action Reserve (CAR)	902	47.0%	A/R, FM & AD
The American Carbon Registry (ACR)	732	33.5%	A/R, FM & AD
Californian Compliance Offset Program (CCOP)	580	81.1%	A/R, FM & AD
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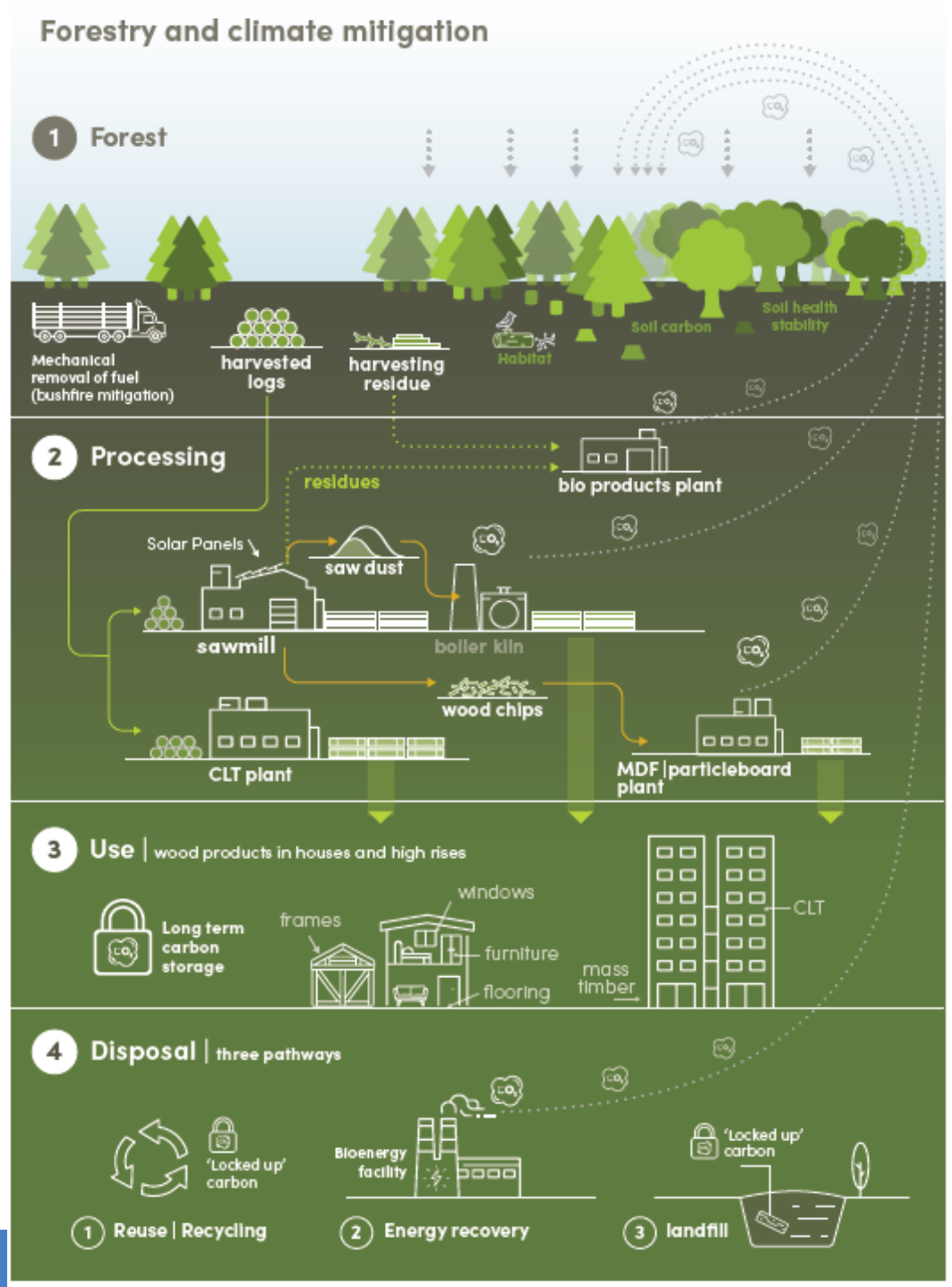
Canadian GHG Offset Credit System (CGOCS)	1	0.0%	FM

VCS Forest Management Methodologies

Number	Name	Included activities
VM0003	Methodology for Improved Forest Management through Extension of Rotation Age	FM - RHV
VM0005	Methodology for Conversion of Low-Productive to High-Productive Forest	FM - IFP
VM0010	Methodology for Improved Forest Management: Conversion from Logged to Protected Forest	FM - EHV
VM0011	Methodology for Calculating GHG Benefits from Preventing Planned Degradation	FM - EHV
VM0012	Improved Forest Management in Temperate and Boreal Forests (LtPF)	FM - EHV
VM0034	Canadian Forest Carbon Offset Methodology	A/R, AD, FM - RIL, EHV, RHV, IFP
VM0035	Methodology for Improved Forest Management through Reduced Impact Logging	FM - RIL



How can Australian forestry help with climate mitigation?

https://fwpa.com.au/tool/fwpa-carbon-guides-social-media-assets/

Department of Primary Industries and Regional Development

Thank You

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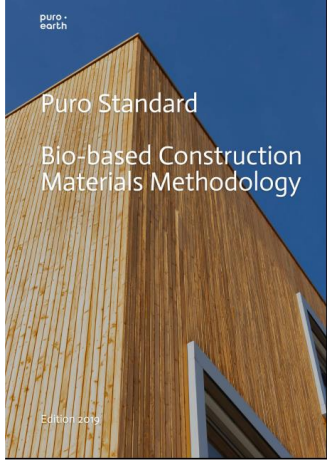
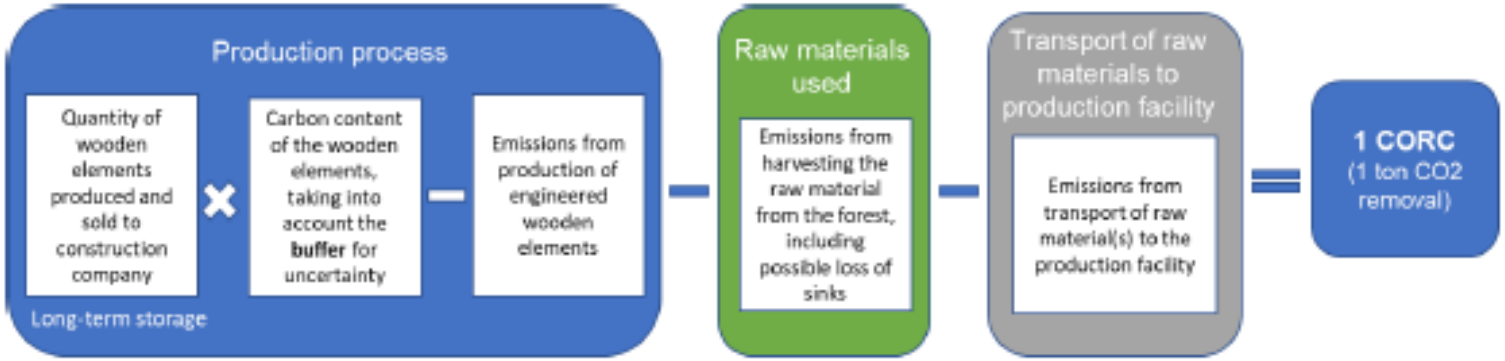
International Carbon markets – Puro Earth Biobased materials



- Quantifies the CO_2 removal achieved by production of wooden building elements.
- Production of engineered wooden building elements

https://fs.hubspotusercontent00.net/hubfs/7518557/Supplier%20Documents/Puro.earth%20Carbonated%20Materials%20Methodology.pdf

4.7 Calculation formula of CO2 removal



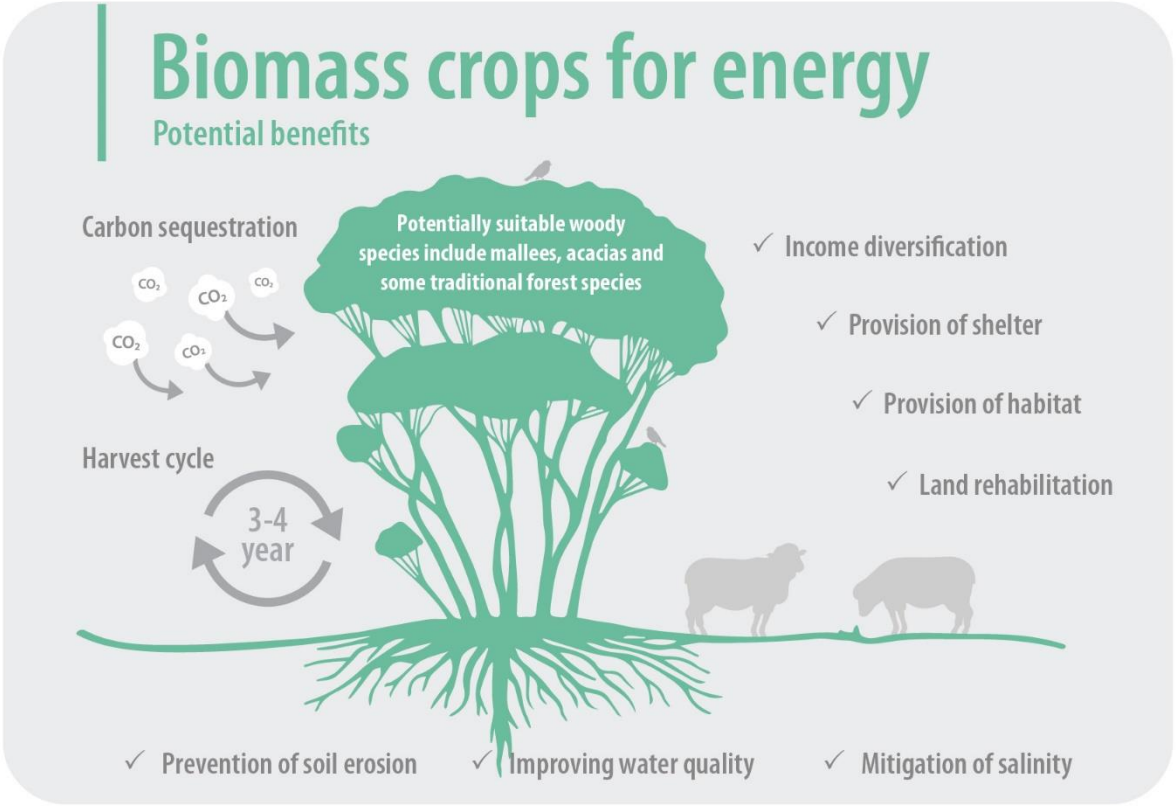
Design working life category	Working life in years
4. Building structures and other common structures	Minimum 50 years
5. Monumental building structures, bridges and other civil engineering structures	Minimum 100 years

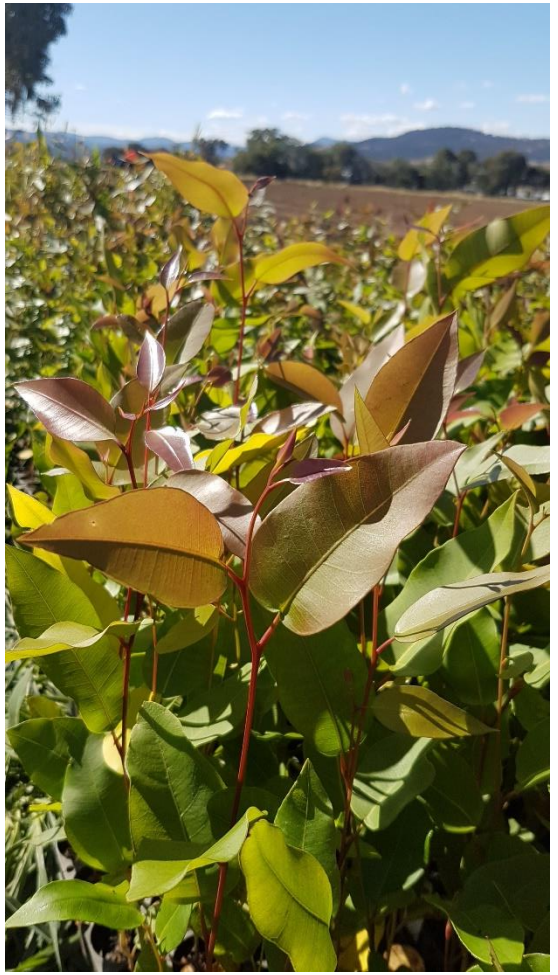
Other things to mention

- International market opportunities (also check Pen's report)
- Check FWPA report
- Check all EOIs

Woody Biomass Crops

- As existing biomass is used, additional biomass sources may be needed





Enhancing native forest resilience Method

- **An ACCU method for supporting active & adaptive management of native forests to improve carbon stocks, productive capacity, and landscape resilience.**

Background

- Major threats to forest cover and forest ecosystems are a result of a historical legacy of extensive clearing of forests, climate change (associated change in fire regimes), urban expansion, invasive species.

- Forest resilience is vitally important for ecosystem health, biodiversity, stability and permanence of forests as a viable carbon store. Increasing the resilience will also support the development of sustainable livelihoods for regional communities.

Enhancing native forest resilience Method

Proposed interventions for forest managers under this method

Avoided Harvesting

A. Avoided harvesting

Emission types:
- Avoided emissions from harvesting and associated biomass losses

Carbon stock change:
- Net increase in carbon stored in standing forests, in short term
- Reduction in transfer of carbon stocks from forest to HWP and debris

Co-benefits:
- High conservation value retention

Adaptive Harvesting Practices

B. Less intensive silviculture
C. Extended rotation

Emission types:
- Avoided emissions from harvesting and associated biomass losses

Carbon stock change:
- Net increase in carbon stored in standing forests, in short term
- Reduction in transfer of carbon stocks from forest to HWP and debris

Co-benefits:
- Balanced socio-economic impacts
- Increased ecosystem services
- Maintain structural diversity
- Flexibility to actively manage risks

Restorative Practices

D. Thinning
E. Re-forestation

Emission types:
- Carbon sequestration and storage ('Negative emissions')

Carbon stock change:
- Net increase in carbon stored in standing forests in the long term
- Potential net increase in HWP over the longer term

Co-benefits:
- Improved structural diversity
- Enhanced habitat value (larger trees that develop hollows quicker)
- Improved forest function and resilience to pests, dieback and fire impacts

Improved Utilisation of HWP

F. Shift short-lived log allocation to Long-lived HWP

Emission types:
- Carbon sequestration and storage
- Avoided emissions

Carbon stock change:
- Net increase in carbon stored in standing forests, in short term
- Reduction in transfer of carbon stocks from forest to HWP and debris

Co-benefits:
- Less wastage and economic efficiency
- Increased supply of construction-grade wood products for built environment

National carbon market: the ACCU Scheme

- Voluntary Scheme, reverse auction system
- Participants run projects that reduce or avoid greenhouse emissions (emissions avoidance) or remove and store carbon from the atmosphere (sequestration).
- ACCUs can be sold on the secondary market or to the Australian Government
- Buyers also include Australia's highest emitting facilities under the Safeguard Mechanism.
- ACCU Methods set the requirements and rules for projects

National carbon market: Proponent-led approach

- CER changed the process from a centralised approach to a proponent led model
- First call of EOIs closed recently
- Opportunity for industries to get on front foot
- Over 40 EOIs submitted
- “Greening the Built Environment” and “Enhancing native forest resilience” of special importance for the forestry sector

National carbon market: the ACCU Scheme

The Australian forest industry can contribute to climate mitigation in a variety of ways. However there has been limited opportunity for the sector to contribute to abatement under the domestic carbon market. The Federal Government has changed the model for method development for participation in the Australian Carbon Credits Units (ACCU) Scheme to a "proponent-led methodology" approach. This will provide industry with an opportunity to propose additional methodologies and variations to existing ones.

In a recent FWPA-funded project, a group of national forestry carbon experts was convened to discuss the range of options for the forest sector to engage with the new approach. The options included changes to the existing Plantation Forestry method to enable greater take-up, and the development of new methodologies. The various options were discussed taking into account the offset integrity standards and Scheme principles as defined in the interim guidelines, as well as other criteria of direct relevance to the industry. This talk will discuss the outcomes of the workshop, also in light of the recent first round of EOI method proposals

ACCU Participation

Projects must:

- **be new (activities must not have started)**
- **go beyond business-as-usual activities**

- **not be required by law**
- **not be receiving financial support from specified government programs**

- **not be an excluded activity under the Carbon Credits (Carbon Farming Initiative) Rule 2015**
- **follow an approved method which sets out the rules for running the project and estimating emissions reductions.**

- You can choose to sell your ACCUs or hold on to them.
- You can sell your ACCUs on the secondary market under a private commercial agreement.
- You can also sell your ACCUs to the Australian Government through a carbon abatement contract

International carbon markets

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VM0005	Methodology for Conversion of Low-Productive to High-Productive Forest	FM IFP	FM Low-productive to productive
VM0006	Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects	ADD	AD Unplanned Mosaic, FM Low-productive to productive
VM0007	REDD+ Methodology Framework (REDD-MF)	A/R, ADD	ARR, AD and Degradation Planned and unplanned
VM0010	Methodology for Improved Forest Management: Conversion from Logged to Protected Forest	FM EHV	FM Logged to protected
VM0011	Methodology for Calculating GHG Benefits from Preventing Planned Degradation	FM EHV	FM Logged to protected
VM0012	Improved Forest Management in Temperate and Boreal Forests (LtPF)	FM EHV	FM Logged to protected
VM0015	Methodology for Avoided Unplanned Deforestation	AD	AD Unplanned
VM0034	Canadian Forest Carbon Offset Methodology	A/R, AD, FM RIL, EHV, RHV, IFP	ARR, AD planned, FM Reduced impact logging, logged to protected forests, Extended rotation age, Low-productive to productive
VM0035	Methodology for Improved Forest Management through Reduced Impact Logging	FM RIL	FM Reduced impact logging
VM0047	Afforestation, Reforestation, and Revegetation	A/R	ARR
VM0048	Reducing Emissions from Deforestation and Forest Degradation	ADD	AD planned and unplanned, Degradation Unplanned

Avoided harvest method – Key Issues

- No net climate benefit
- Additionality – challenging to demonstrate
- Inclusiveness – only applies to State Forests
- Does not consider international leakage
- Opportunity cost

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