Wood+

Insights and lessons from an analysis of the history of planted trees in Australia

Braden Jenkin

Next Generation Forest Plantation Investment

9/08/2018

Outline

- *Introduction - The wheel*
- *The project*
- *Key definitions*
- *The estate*
- *Insights*
- *Recommended approach*

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Statement of independence

Mid 1980's: Tasmanian blue gum silvicultural research in southwest Western Australia.

Late 1980's to late 1990's: Company extension and joint venture arrangements.

The early 2000's: Provided service to projects promoting trees on farms.

The MIS era: Developing MIS projects, rating MIS projects and winding-up projects (cradle to grave).

Since the late 1990's I have rented office space in an agricultural consulting practice where I have been exposed to fully commercial agricultural thinking.

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The main overall project aim and outcome

Greater integration of tree growing with agriculture and new types of partnerships to provide benefits to a wider range of stakeholders.

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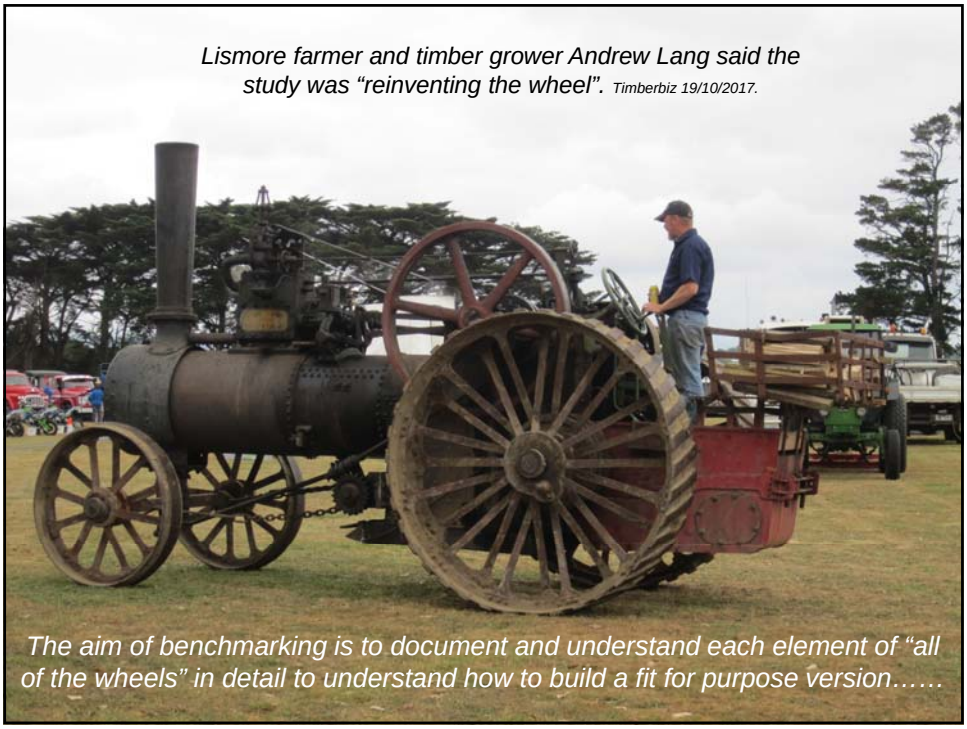
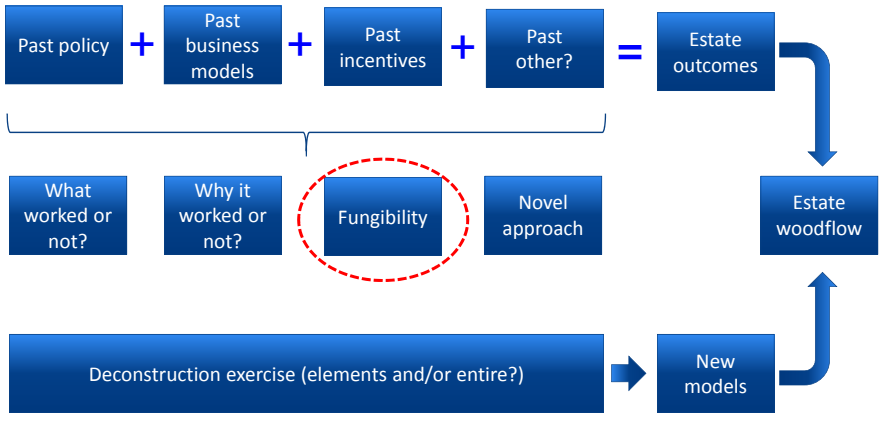
Lismore farmer and timber grower Andrew Lang said the study was "reinventing the wheel". Timberbiz 19/10/2017.



The aim of benchmarking is to document and understand each element of "all of the wheels" in detail to understand how to build a fit for purpose version……

Benchmarking analysis



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Defined: An active market

An active market is a market in which all the following conditions exist:

a) The items traded within the market are homogeneous;

b) Willing buyers and sellers can normally be found at any time; and

c) Prices are available to the public.

AASB 136.6, AASB 138.8, AASB 141.8: http://www.aasb.gov.au/Pronouncements/Glossary-of-defined-terms/Definitions-A.aspx

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Defined: The high value myth

A common statement associated with intensively managed trees is that they are HIGH VALUE trees.

The value of the trees will be set by an active market.

In the absence of an active market, the trees are HIGH COST trees.

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Defined: The high value myth

A hand crafted chair.

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Commencement of the estate

Australia's plantation estate was stimulated by:

"*….the discovery and mining of gold in Victoria in the 1850s. The large-scale destructive cutting of forests to meet the voracious demands of a rapidly expanding population and a frenetic mining industry prompted an otherwise unlikely troika of the Surveyor General, the Assistant Commissioner of Lands and Survey and the Secretary for Mines to strongly recommend in 1865 that the Government establish plantations of indigenous and exotic species.*"

Carron (1990)

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Commencement of the estate

'.....South Australia's policy was supported by the United Kingdom in 1926 by a grant of migration funds toward 2,000 hectares per year for ten years to assist migrant employment.'

Carron (1990: p.15&16).

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Commencement of the estate

'In 1921, 'the planting of the great waste areas of Tasmania with exotic conifers...the establishment of forest plantations, (and) homes or colleges in which destitute and waif boys of the Empire may find their place, their manhood and their citizenship in planting the waste and in leaving a heritage of enormous value to those who come after'.

The sixth conference (Brisbane, 1922) applauded this 'bringing into a forestry partnership of practical usefulness the waste lands of Tasmania and the waste childhood of the Empire'.

Carron (1990: p.14&16).

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Commencement of the estate

Australian plantation forestry commenced with development of softwood (wood) resources combined with many other objectives (+).

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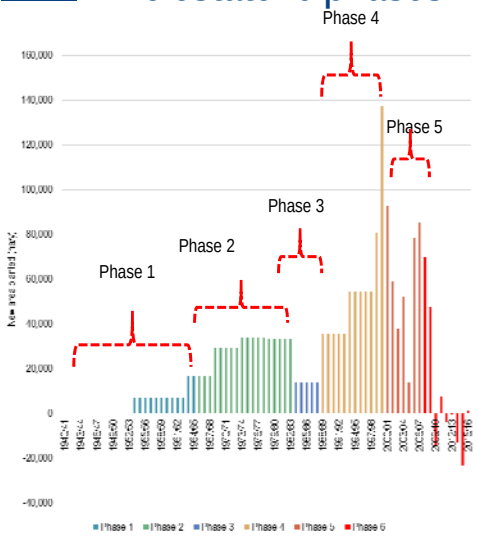
The estate: 6 phases



The first 5 phases:

- *Phase 1:* Initiation on a strategic basis.
- *Phase 2:* The softwood loans era and self sufficiency.
- *Phase 3:* A transition from public softwood to private hardwoods.
- *Phase 4:* A swap from softwoods to hardwoods, private to public ownership and the rise of MIS.
- *Phase 5:* Including a move into new regions with new species .

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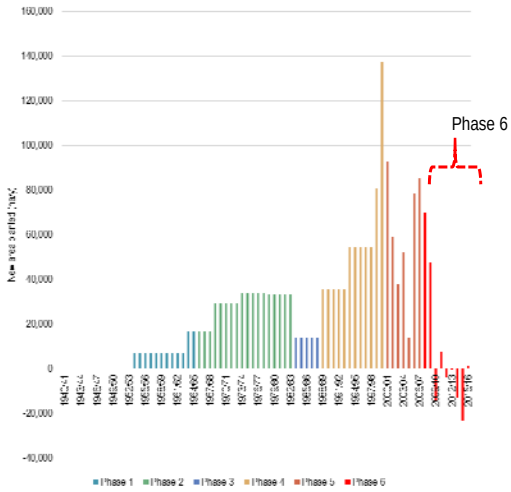
The estate: 6 phases



Phase 6 (2008 onwards):

- *A period of reckoning* - poor species performance has resulted in exit and establishment of pasture;
- Hardwood plantation area loss (2009/10 to 2015/16) is under-stated by gross area change as R1 masking the nil R2;
- 2005/06 to 2015/16:
  - Softwood expanded by 35,648 ha, but limited over the most recent two financial years.
  - Hardwoods - 100,620 ha loss (10.2% of the peak estate) not re-planted.

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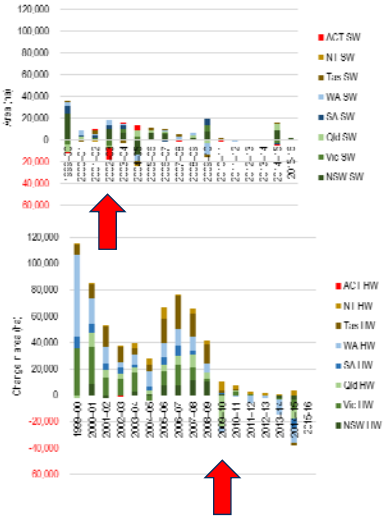
The estate: 6 phases



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  - Softwood expanded by 35,648 ha gain, but limited over the most recent two financial years.
  - Hardwoods - 100,620 ha loss (10.2% of the peak estate) not re-planted.
- Significant impact events on the plantation estate: for example the 2003 Canberra wildfires reduced the area of Radiata pine estate recorded in 2004/05
- A write-off of MIS hardwood projects in southern Queensland reduced the area of hardwoods in 2009/10.

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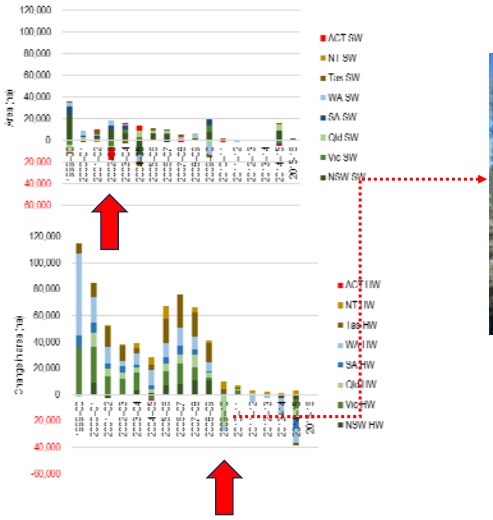
The estate: 6 phases



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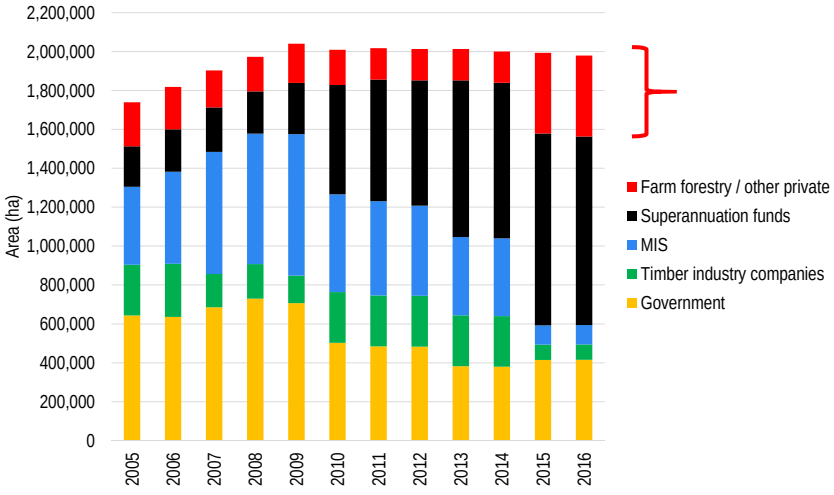
The estate: Change in ownership



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The estate: Farm trees caution in the data

The year 2000 farm trees estate was 67,021 ha:

- Hardwoods: 22,958 ha major hardwoods species
  - Tasmanian bluegum (13,099 ha)
  - Shining gum (9,302 ha),
- Softwoods: 22,194 ha as major softwood species
  - Radiata pine was the dominant species
- 32.6% of the farm forestry estate was recorded as minor species, unknown species or mixed species.

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The estate: Recurring themes

"*By 1915, there were about 1,600 hectares of hardwoods (mainly eucalypts), 1,200 hectares of wattles and 2,400 hectares of exotic softwoods, and the forest service said it was having problems finding suitable land".*

Carron (1990: p.12).

"*during the 1920s and 1930s Australia and New Zealand saw a rash of small investment companies offering interests to the public. The majority of these were dismal failures where the investor received little or no return*".

McKenzie Smith (1977: p.69).

"The third main weakness of forest policy analysis concerns the great questions of where the land and money are to come from to expand the area of Australia's plantations, and what sorts of growers might be involved."

Dargavel (1990b: p.438)

'Blunt taxation incentives have been unable to maximise sustainability outcomes.'

Alexandra & Campbell (2002: p.87)

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Key lesson # 1 The project

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY

National Afforestation Program (NAP)

Applications are invited from forestry companies, community groups, local government organisations, and research organisations and individuals for assistance from the National Afforestation Program.

The Program provides financial assistance for broad-acre plantation, agroforestry, land rehabilitation and degradation control, and research and demonstration projects which will stimulate a sustained increase in the establishment of hardwood plantations, the rehabilitation of degraded land and control of land degradation through afforestation.

Project funding may be up to three years; however, funds are only available on a year to year basis with continuing support being dependent on satisfactory progress of the project and the availability of funds through the Budget.

The closing date for submission of projects for funding in financial year 1987/88 is Friday 18 March 1988. Applications for projects to commence in 1988/89 are required by 2 May 1988.

Applications must be submitted in accordance with the NAP guidelines; copies of which may be obtained from the Assistant Secretary, Forestry and Land Resources Branch, Department of Primary Industries and Energy, GPO Box 858 Canberra 2601.

Enquiries: Mr Doug Pittart (Phone: 062-72 3213)
Mr John Powell (Phone: 062-72 5909)

1987 to 1992
$15 million
6,000 ha

A project must result in a commercially viable resources – duration of funding:

1. Consideration of new or existing estates is critical;
2. A new estate must have long-term funding commitment:
   a) Grants have failed = stranded resources.
   b) Grants + assumed investors have failed = stranded resources.
   c) Short-term JV have failed = stranded resources.
   d) Un-proven silviculture has failed = stranded resources.
3. With an existing estate a short-term resource top-up can be successful:
   a) Same species + log = success.
   b) Provided can access supply chain.

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Key lesson #1 An insight

A continuous string of policy, action statements and strategies has supported plantation expansion on cleared agricultural land, promotion of farm forestry and integration of trees into agriculture for wood production, benefits to the farming enterprises and environmental services.

This has not translated to trees on significant areas of commercial trees on farms.

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Key lesson #1 An insight

Information does not plant trees, people do.

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Key lesson #2a Farmer motivations then

Ron Quaiff and John Sanders:
Pioneers of the WA Tasmanian bluegum industry, and the trusted faces of the company.

Success in WA was in the context of 1980's & 1990's:

1. Trusted local staff as part of the community promoted projects;
2. Farmer motivation was high;
   a) Low commodity prices.
   b) Lack of business approach.
   c) Getting tired.
3. Trees offered $/y plus retained title;
4. High interest and uptake.

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Key lesson #2b Farmer motivations now

2020 Vision:

1997: *Goal 1: Government recognition of plantations as an agricultural crop.*

2002: *Strategic Element 2: Action 3*

plantations are treated as long rotation agricultural crops in terms of the planning approval process;

The farming world has changed:

1. Farming has consolidated & is more business like;
2. Farmers rely on technical advisors
   a) Agricultural.
   b) Financial / accounting.
   c) Legal.
3. Projects must be sophisticated and able to withstand scrutiny;
4. Promotion by agriculture to agriculture;
5. Forestry as and into agriculture.

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Key lesson #2b Farmer motivations now

The key to the success of MIS was that financial products were marketed to financial advisor groups who then marketed the products to their clients.

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Key lesson #2b An insight

The Rules To Make Change as applied by Ag-Challenge Consulting Pty Ltd.

R = Respect must be earned based on reputation, deeds and advice and cannot be demanded.

T = Threat to the enterprise from operating environment which can be identified, tested and mitigated against. This can include identifying false threats (as a reality check) and as defensive strategies.

M = Motivation will depend on the individual and include physical success and prestige as a driver (e.g. the best cows) resulting in the best financial outcome.

C = Crutch for support provided by the advisor which can be leant-on and includes skills, analysis (e.g. livestock rations) and as a sounding board for ideas.

Mr Jeff Urie, Partner, Ag-Challenge Consulting Pty Ltd. *pers. com.* 01/06/2018.

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Key lesson #2b An insight

The development of business models must focus on the needs of agriculture while taking full account of the commercial realities of commercial trees.

Trees should be regarded as part of agriculture and not be referred to as farm forestry.

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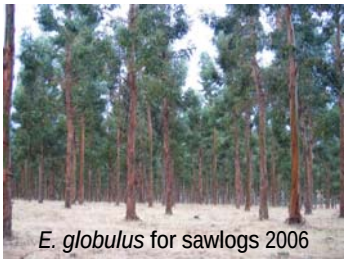
Key lesson #3 Extension & project robustness



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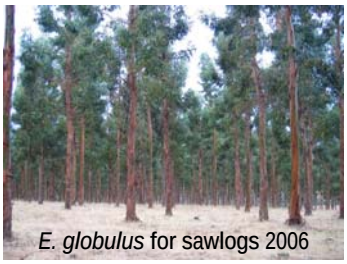

As farmers increase in sophistication = increased commercial focus:

1. Projects promoted to the advisor network by technical forestry experts;
2. Projects must be fully commercial;
3. Returns and risk are vital;
4. Management of expectations - promoted for sawlogs but ended up chipped….
5. Angus beef not emus nor alpacas….
   a) Known species.
   b) Known regimes.
   c) Actual markets.

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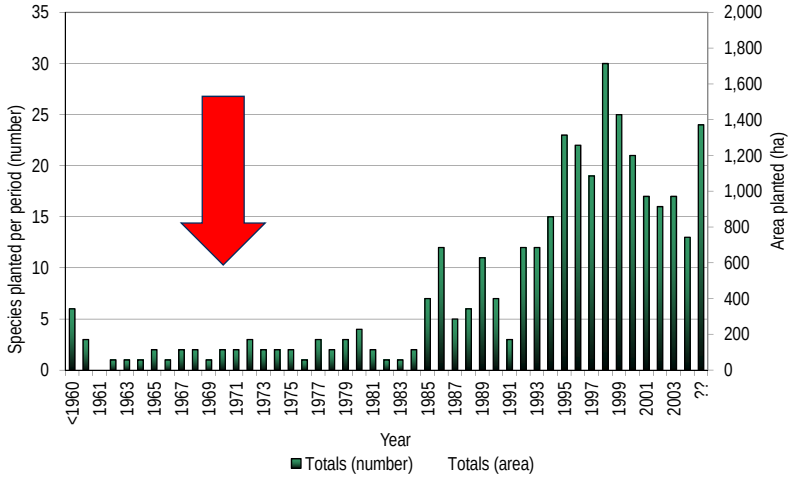
Key lesson #3 Extension & project robustness



Based on data from Jenkin (2005); ?? Indicates data supplied without planting years.

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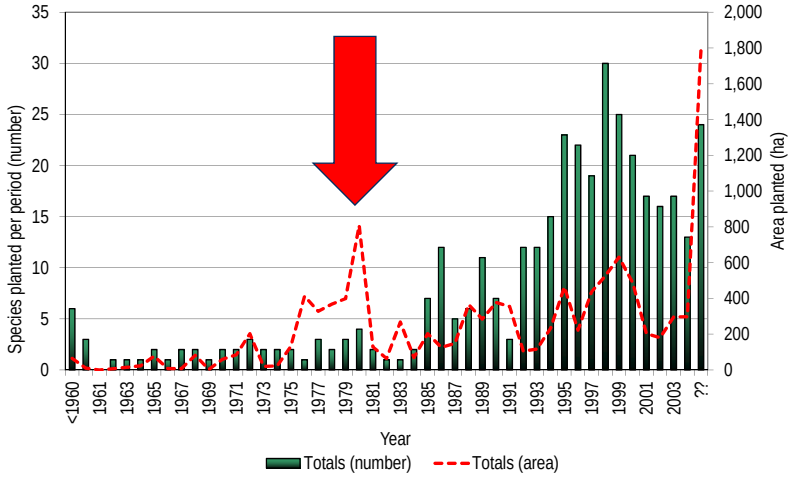
Key lesson #3 Extension & project robustness



Based on data from Jenkin (2005); ?? Indicates data supplied without planting years.

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Key lesson #3 Insights

There is a significant confusion between the differences and utility of trees planted for biodiversity, as an arboretum and as commercial woodlots.

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Key lesson #3 Insights

While we must defend the right of individuals to plant whatever species they want and in any area, the corollary is the market has the right to only purchase commercially viable resources that are fit-for-purpose to its needs.

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Key lesson #3 Insights

Ownership of the outcomes is required:

The market did not plant the wrong trees in the wrong place.

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Key lesson #3 Insights

Many elements of Australia's farm forestry has been a grand experiment with commercially un-proven species, planted and managed in a commercially un-proven manner in areas lacking an active (actual) market for the target log outcomes.

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Key lesson #4 The project mechanisms

There are three basic direct investment structures:

1. 100% independent grower:
   a) Self-funded.
   b) Favorable debt – the Commonwealth Softwood Loans (1967 to 1982) = $78.1 million & 730,000 ha.
2. A lease arrangements:
   - All arrangements at arms length and lessee preference for 100% control, but downside of $/y.
   - Lease payment are independent of the crop outcome.
3. A joint venture
   - The parties are joined for the project and returns are linked to the project outcomes.
   a) A marketing JV: The classic Farm Forestry Agreement (first right of refusal = not very successful).
   b) A crop-share JV: Very successful – current area of 71,000 ha.

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Key lesson #4 insights

Formal linkages between industry and growers (e.g. joint ventures) align the interests of the parties.

However, examples of un-balanced relationships and wood supply on a first right-of-refusal by industry, and refused.....

= the growers without a market and with negative perceptions.

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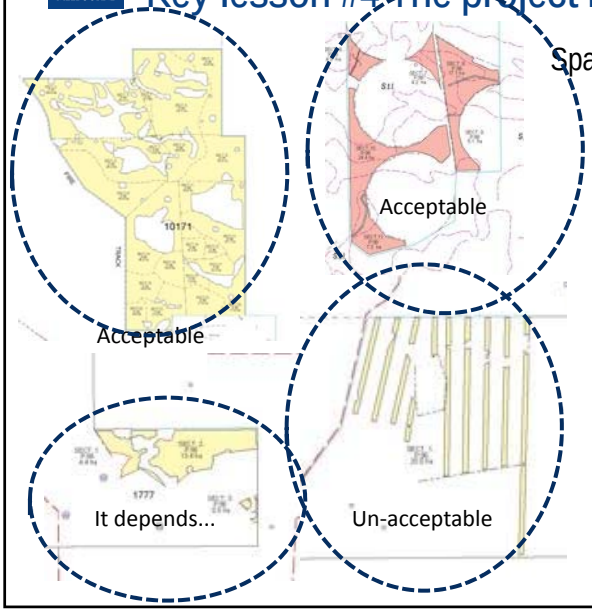
Key lesson #4 The project mechanisms

Spatial arrangements:



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Key lesson #5 Incentives

Incentives have been explored – an incentive is any thing that seeks a responding course of action – very broad!

Direct incentives	Variable incentives		Enabling incentives
	Sectoral	Macro-economic	
• Goods and materials (for example, seedlings, fertilizers etc.); • Specific provision of local infrastructure; • Grants; • Tax relief or concessions; • Differential fees and access to resources; • Subsidized loans; • Cost-sharing arrangements and price guarantees.	• Input and output prices; • Specific taxes; • Trade restrictions (e.g. tariffs).	• Exchange rates; • General taxes; • Interest rates; • Fiscal and monetary measures.	• Land tenure and resource security; • Accessibility and availability of basic; • Infrastructure (ports, roads, electricity etc.); • Producer support services; • Market development; • Credit facilities; • Political and macro-economic stability; • National security; • Research and development; • Extension.

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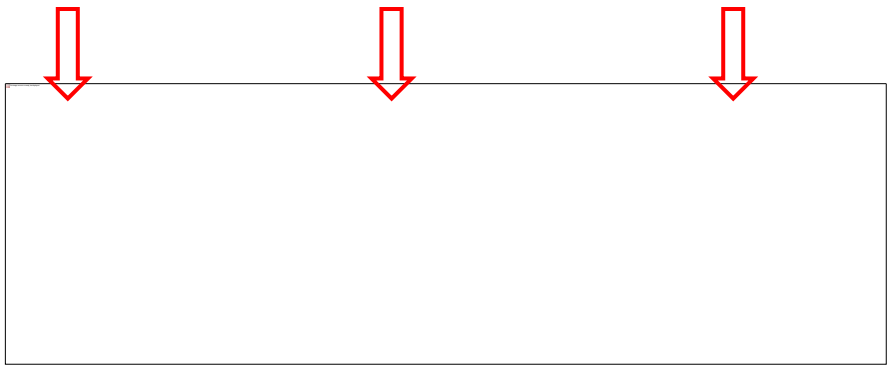
Key lesson #5 Incentives



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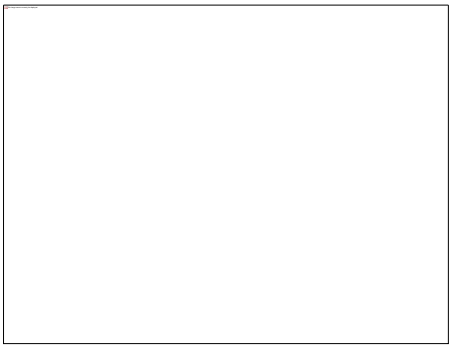
Key lesson #6 Wood + Environmental services

For decades: a failure to monetize environmental services (to achieve a holy grail).



$64.4 million, 5 years, 17,982 ha planted in JV addressing salinity and to grow resources (GoWA, 2010)

1. WA projects include reducing salinity as a motivation (wood +);
   a) Collie River: Water salinity levels reduced by 150 mg/L = potable water within 20 years.
   b) A lack of market for salinity ES;
2. Impact investing links parties directly;
   a) Ethical invest = nil -ve.
   b) Impact invest = nil –ve + +ve outcome
3. Place a value on un-salt affected water;
   a) Annual payments from beneficiaries of improved water.
   b) Fund lease payments.
4. But what happens if nil R2?

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Key lesson #6 Insights

It is possible for growers to decide that the benefits of trees on their land out-way the expected financial returns from harvest.

A mechanism to balance interests and power is required.

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A business model: success defined

'The establishment of future plantations must be based on matching the ideal species to the right location and for plantations to be at the appropriate scale. Considerations include matching species with soil and climatic conditions, deciding whether to grow short or long rotation plantations, and proximity of infrastructure for processing'.

'However, the market must drive industry—the types of trees being planted must reflect market demand for particular products'.

Transforming Australia's forest products industry, FIAC / Commonwealth of Australia (2016: p.5)

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Key lesson - Critical success factors

A series of critical success factors have been identified:

1. A project plan with matching funding e.g. long-term funding (e.g. 10 years) for new area projects.
2. Motivated, trusted and empowered (have funds) parties promote and implement the project.
3. An existing supply chain & markets for outputs (*a boring project*!).
4. Known and proven silviculture – in commercial operation today.
5. Identify and lobby to address any policy issues (many have been addressed).
6. Develop an incentives strategy.

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