

PLANTATIONS

THE MISSING PIECE OF THE PUZZLE

NEW POLICY PROPOSAL FOR THE AUSTRALIAN GOVERNMENT 2016 BUDGET



AUSTRALIAN
FOREST PRODUCTS
ASSOCIATION
afpa

TREES | WOOD | PAPER

“This new policy proposal will reignite plantation investment in this country whilst ensuring trees are planted in the right places for the right markets.”



INTRODUCTION

Softwood and hardwood plantations provide more than 80% of the wood fibre and timber for our national forest product industries.

However, investment in new plantations in Australia has effectively come to a standstill.

In fact, the true situation is even worse. We are going backwards.

Tens of thousands of hectares of plantations, established on land too far from ports and processing centres, are being harvested and not replanted.

Industry surveys suggest that, over the next five years, up to 300,000 hectares will be lost from the national plantation base of 2 million hectares.

This result stands in stark contrast to the Plantations Vision 2020 goal, signed up to by all Australian Governments in 1997, to establish "3 million hectares by 2020".

THE GOAL:

To deliver 300,000 hectares of new tree plantings in the right places – replacing 300,000 hectares of lost plantations.

World scale plantations are absolutely vital to the growth of downstream processing in wood and paper products and essential if we are to have a global-scale, internationally competitive industry delivering vital regional jobs in decades to come.

This new policy proposal will reignite plantation investment in this country whilst ensuring trees are planted in the right places for the right markets.

It will do so by introducing a transparent, well-targeted suite of regionally focused policies.

This new policy proposal would see the Australian Government recognise 29 "Strategic Plantation Hubs" in which plantations and downstream processing would be encouraged through a range of well-targeted measures.

The plantation hubs would be defined by 100 kilometre radius circles drawn around the twenty-nine (29) major wood plantation growing and processing centres in Australia, which service domestic or export wood and paper markets. A list of the hubs and the major processing facilities within each hub are shown in **Appendix A**. Further spatial detail on the plantation hubs is contained in the state level maps in **Appendix B**.





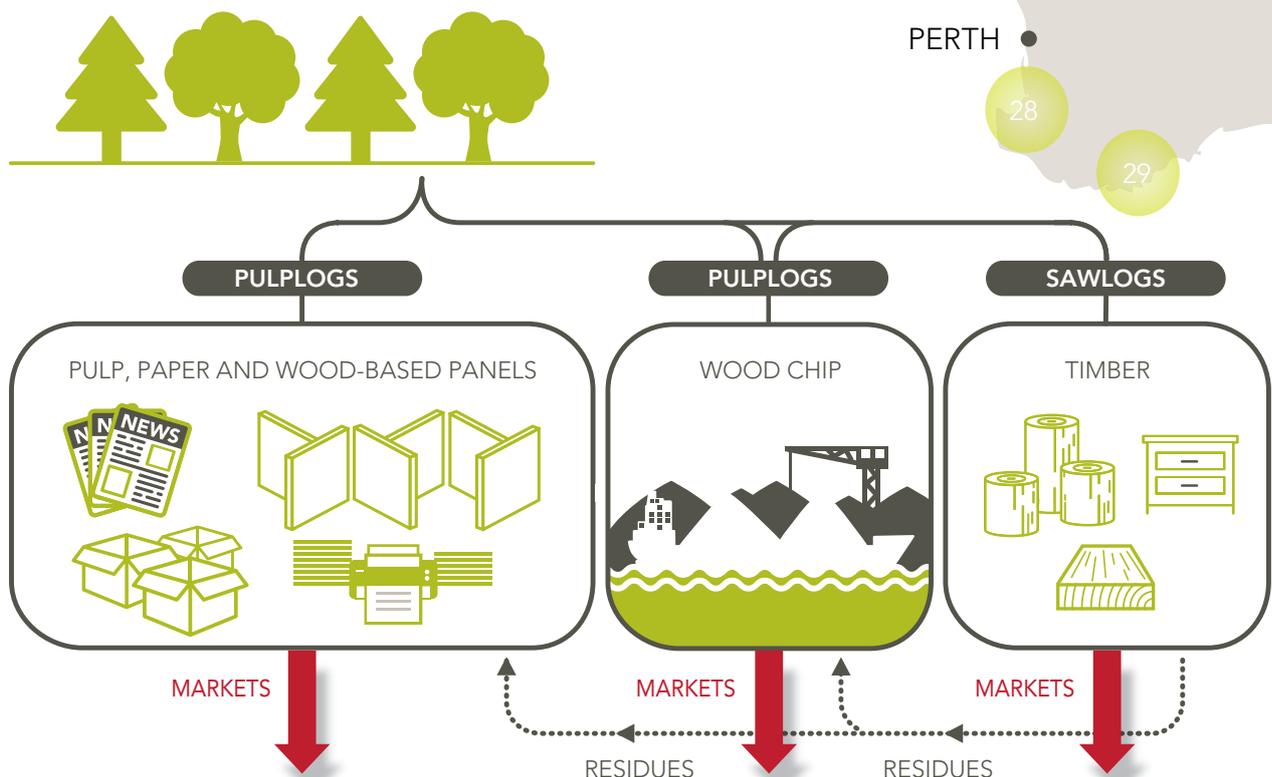
WHY 100 KILOMETRE HUBS?

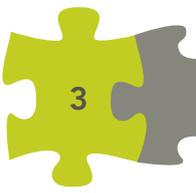
Research into the economics of the plantation forest industry has repeatedly shown that the optimal areas to develop new wood plantations are within 100 kilometres of major processing facilities and ports. These important facilities – including pulp and paper mills, sawmills, wood panel plants and port facilities - provide the most significant domestic and export market opportunities for the industry.

The most recent analysis by BAEconomics (2015) has shown that, unless exceptional circumstances exist, the typical economic haulage distance for investment in new plantations is within 100 kilometres of a market. The BAEconomics (2015) analysis also showed that new wood plantations would be unable to compete for high cost agricultural land.

The other advantage of planting within strategic hubs is the economies of scale brought about by the existing wood resources in these regions. Plantation resources that are too distant and fragmented lack the scale at a regional level necessary to support internationally competitive and profitable wood and paper product processing facilities.

An important feature of the plantation forest industry is the integrated use of high quality logs for timber as well as pulpwood and lower quality wood that is converted into value-added products such as paper and wood-based panels. The existence of strategically located processing facilities such as paper and panel board mills provide a high-value market for pulpwood and other processing residues from the sawmilling industry. This integrated value chain improves the overall profitability of the industry and underpins many regional jobs.





DARWIN

STRATEGIC PLANTATION HUBS

- | | | |
|----------------|------------------|-------------------|
| 1. Darwin | 11. Herons Creek | 21. Colac |
| 2. Mareeba | 12. Bathurst | 22. Portland |
| 3. Gladstone | 13. Tumut | 23. Mount Gambier |
| 4. Maryborough | 14. Tumbarumba | 24. Lofty Ranges |
| 5. Gympie | 15. Albury | 25. Burnie |
| 6. Yarraman | 16. Bombala | 26. Bell Bay |
| 7. Caboolture | 17. Wangaratta | 27. Boyer |
| 8. Kyogle | 18. Myrtleford | 28. Collie |
| 9. Koolkhan | 19. Morwell | 29. Albany |
| 10. Nundle | 20. Geelong | |

 **STRATEGIC PLANTATION HUBS**
100km radius around key processing or port facilities

FEDERAL POLICY INSTRUMENTS TO APPLY WITHIN THE PLANTATION HUBS:

THINK INSIDE THE HUB: FOUR KEY POLICY INSTRUMENTS

This policy would capitalise on the underlying regional basis and strengths of the plantation forest industry by utilising four key policy instruments. These are:

- **facilitating private investment in new plantations where it is needed most** - by better targeting access to the Carbon Farming Initiative under the Emissions Reduction Fund and the continuation of the plantation taxation arrangement in areas within the plantation hubs;
- **directing \$250 million of Commonwealth infrastructure, road and communications** funding to unlock productivity game changing initiatives (such as 'bottleneck bridges') within the plantation hubs;
- **directing \$3 million toward the development of a national farm forestry cooperative** for farmers within the plantation hubs; and
- **directing \$25 million for training and skills development to lift productivity** and address critical skill demand shortages within the plantation hubs.



FEDERAL BUDGET IMPLICATIONS

This policy does not propose new spending, rather the refinement of existing investment policy drivers and the allocation of targeted funds from existing programmes to state governments, local governments and industry in the 29 plantation hubs.

KEY POLICIES IN PLANTATION HUBS	ACTION
Facilitate private investment	Regulatory (Carbon Farming Initiative; renewable energy policy; plantation taxation arrangement)
Infrastructure development	\$250 million (from existing programmes)
Farm forestry co-operative	\$3 million (from existing programmes)
Training and skills	\$25 million (from existing programmes)
TOTAL NEW FUNDING	\$0

FACILITATING PRIVATE INVESTMENT

This policy would facilitate private investment for new plantations where it is needed most – within the plantation hubs and therefore close to existing resources and downstream processing and ports. This would be achieved by better targeting of new plantation projects in the Carbon Farming Initiative (CFI) under the Emissions Reduction Fund (ERF).

Under this policy there would be no CFI restrictions on access to agricultural land within the plantation hubs. This would generate both carbon abatement and wood production benefits as well as other environmental benefits from tree planting, such as erosion and salinity control.

The policy would also better recognise the full range of opportunities for renewable power and thermal energy (e.g. cogeneration) from processing facilities located in the plantation hubs, via renewable energy and climate change policies.

Projects utilising the plantation taxation arrangement, such as managed investment scheme projects, would also be limited to new plantings that occur solely within the plantation hubs. This would help to ensure that the right trees are planted in the right places under the plantation taxation arrangement. This would generate longer term benefits for the industry and regional communities.

BETTER INFRASTRUCTURE, ROADS AND COMMUNICATIONS

Up to \$250 million in funds would be directed from existing programmes under the \$42 billion Infrastructure Investment Programme to address critical regional road and other infrastructure needs.

The Infrastructure Investment Programme includes a number of sub-programmes targeted at improving road and other infrastructure in regional communities. These are the:

Roads to Recovery Programme, with \$4.3 billion committed for the maintenance of the nation's road infrastructure, to facilitate improved safety, economic and social outcomes;

Black Spot Programme, with \$500 million committed to reduce crashes and improve safety on Australian roads;

Bridges Renewal Programme, with \$300 million committed to upgrade bridges and facilitate heavy vehicle access for local communities;

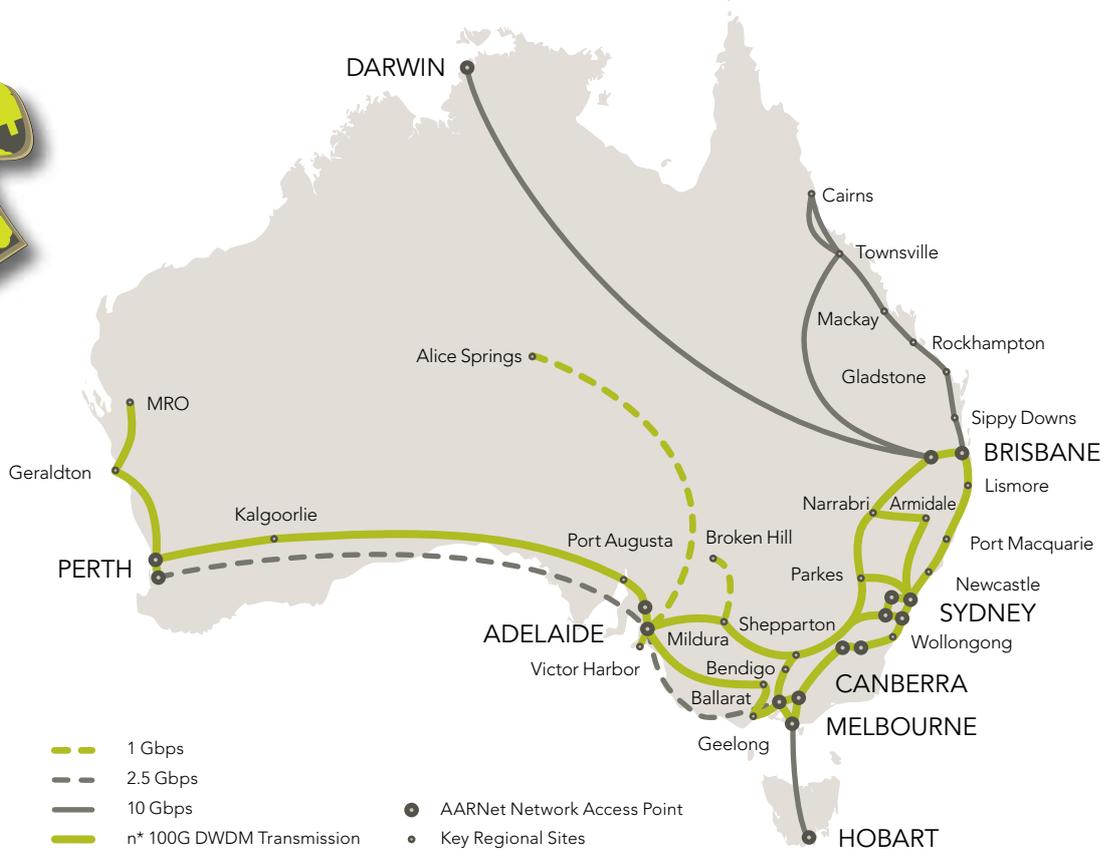
Heavy Vehicle Safety and Productivity Programme, with \$200 million in funding committed to improve productivity and safety outcomes of heavy vehicle operations across Australia, through funding infrastructure projects; and

Mobile Black Spot Programme, with \$160 million to extend mobile coverage throughout regional Australia.

These programmes typically provide co-funding for road investment by local councils, state and territory governments, as well as direct investment for better communications such as mobile phone base stations and regional satellite services. For regionally based timber communities, priority roading projects would enable key roads to be upgraded that are currently under pressure from heavy vehicle traffic as well as improve safety and reduce congestion with local and tourist traffic.

There is also an excellent synergy between the plantations hubs and the Australian Academic and Research Network (AARNet) digital infrastructure, which provides ultra-high speed, very high-quality

AARNET NATIONAL INTERCAPITAL NETWORK



broadband telecommunications services between Australian research and education organisations. AARNet members include universities, CSIRO and numerous vocational and training organisations such as Technical and Further Education (TAFE) centres.

The additional investment necessary to connect the majority of the 29 plantation hubs to AARNet via relevant research and training centres, using AARNet’s own extensive fibre network (see map) augmented with some government owned fibre assets (federal and state), would amount to around \$15 million (Bombala and Albany may have to be connected at lower broadband speeds). This would greatly improve research and training outcomes for the industry.

AARNet supports the plantation hubs proposal to improve regional education and training services through the deployment of broadband telecommunications for forest sector innovation and learning. Further detail about AARNet is contained in Appendix C.

FARM FORESTRY CO-OPERATIVE

The plantation farm forestry measure would build on the Agricultural Competitiveness White Paper initiative to provide farmers with the knowledge and materials to develop cooperatives and more innovative business models. A proportion of the \$13.8 million White Paper initiative would be targeted to address farm forestry management, business and marketing needs. The policy would direct \$3 million of seed funding for the establishment of a national farm forestry cooperative for farmers.

INDUSTRY SKILLS DEVELOPMENT

As a regionally based industry that requires a range of specialist skills, forest industry training is high cost to deliver. The plantation hubs would enable service providers to better target and deliver forest industry skills and training programmes. Up to \$25 million in skills and training funding would be directed to the plantation hubs from the \$664 million Industry Skills Fund, which aims to provide up to 250,000 training places to meet specific business needs.



GROWING TREES + GROWING JOBS + GROWING CARBON + GROWING FARM PROFITABILITY

The implementation of this policy would support new plantation establishment of 30,000 hectares per year over the next decade. It would also stimulate productivity and new investment in the processing sector.

AFPA estimates that the plantation hubs policy would create more than 4,500 new jobs over the next ten years.

For every 100 hectares of plantation in Australia, it has been shown that around 1.5 direct jobs are created in management, harvesting, haulage and processing (Bureau of Rural Sciences 2005).

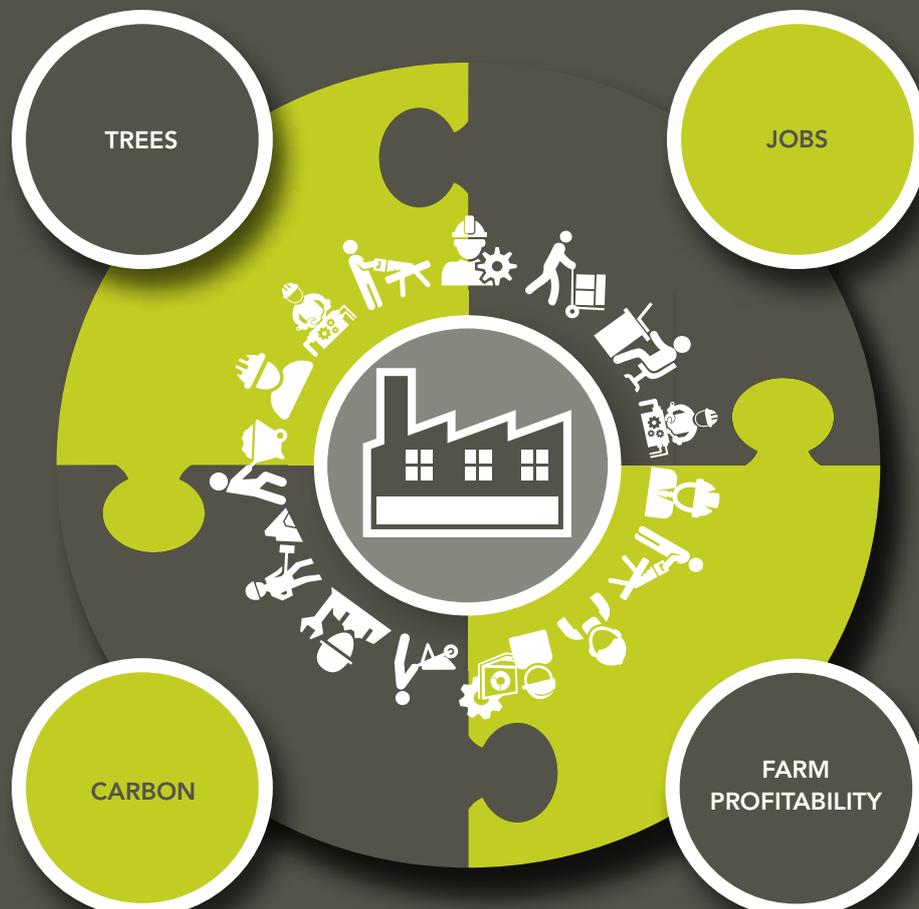
These new jobs would be created across the industry supply chain, in silviculture, harvesting and haulage, as well as in sawmilling, wood processing and paper manufacturing. This would be a major boost for regional economies and communities across the nation.

This policy would also generate climate change mitigation benefits.

The planting of 30,000 hectares per year of new long rotation softwood plantations over the next ten years, for example, would capture and store an additional 5 million tonnes per annum of carbon emissions from the atmosphere. These new plantations would remove a total of 50 million tonnes of carbon emissions over that period.

The additional carbon sequestration assumes an average mean annual increment of 18.5 cubic metres/hectare/year and standard expansion factors for above and below ground carbon from the national carbon inventory and stem wood density from Ximenes et al (2008).

This policy will deliver triple bottom line benefits through more trees being planted in the right places, more jobs and more carbon sequestration from the land sector.



WE MUST START PLANTING

The area of wood plantation in Australia is 2 million hectares, with 1.02 million hectares of softwood plantation and 980,000 hectares of hardwood plantation.

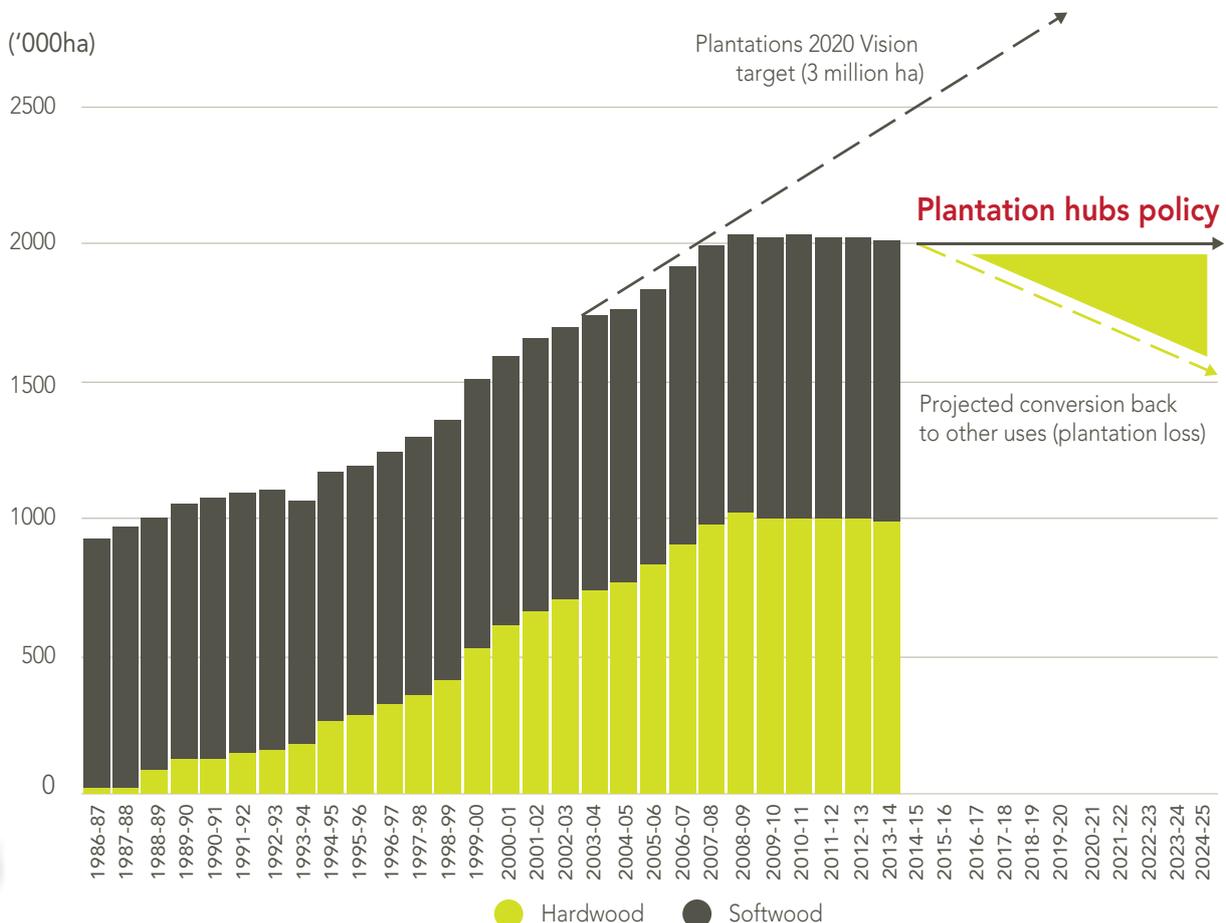
However, it has been estimated that up to 300,000 hectares of existing plantations will be converted back to other uses over the next few years. These plantations mostly comprise short rotation hardwood plantations that have been planted on poor sites or too far from domestic processing and export markets. This represents a deforestation event and will impact on Australia's carbon emission accounts.

A 300,000 hectare goal will rationalise the plantation footprint in Australia and boost the scale of resource within the plantation hubs for future growth in processing and exports.

It will also ensure Australia does not fall too far behind the national policy goal of achieving 3 million hectares of plantations in the longer term. Australia is well below the trajectory to meet the Plantations 2020 Vision target.

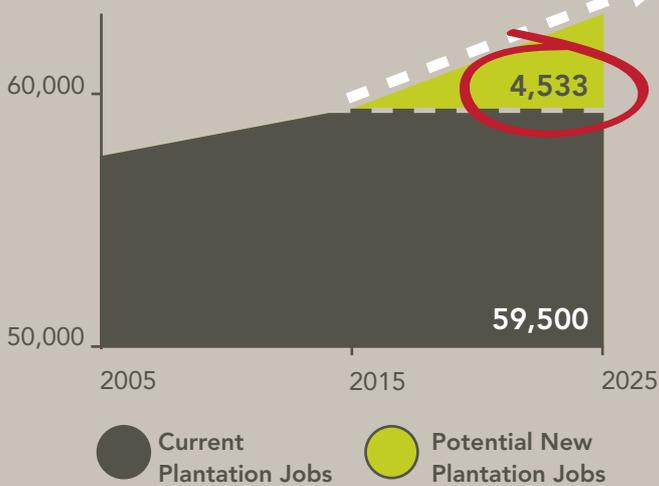
This policy will offset this projected loss in plantation area by establishing 300,000 hectares of new plantations over the next ten years within the plantation hubs

TOTAL PLANTATION AREA IN AUSTRALIA



**4,533
NEW JOBS**

STRATEGIC
PLANTATION
HUBS POTENTIAL

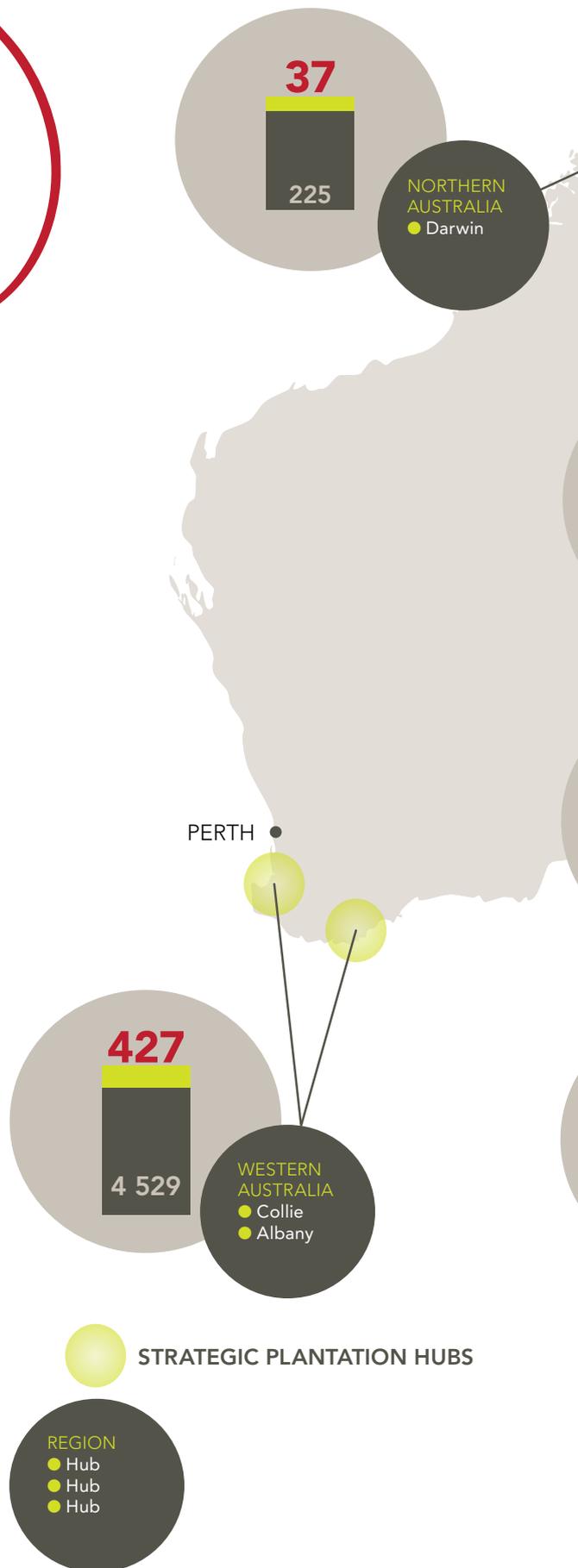


● Current Plantation Jobs ● Potential New Plantation Jobs

STRATEGIC PLANTATION HUBS

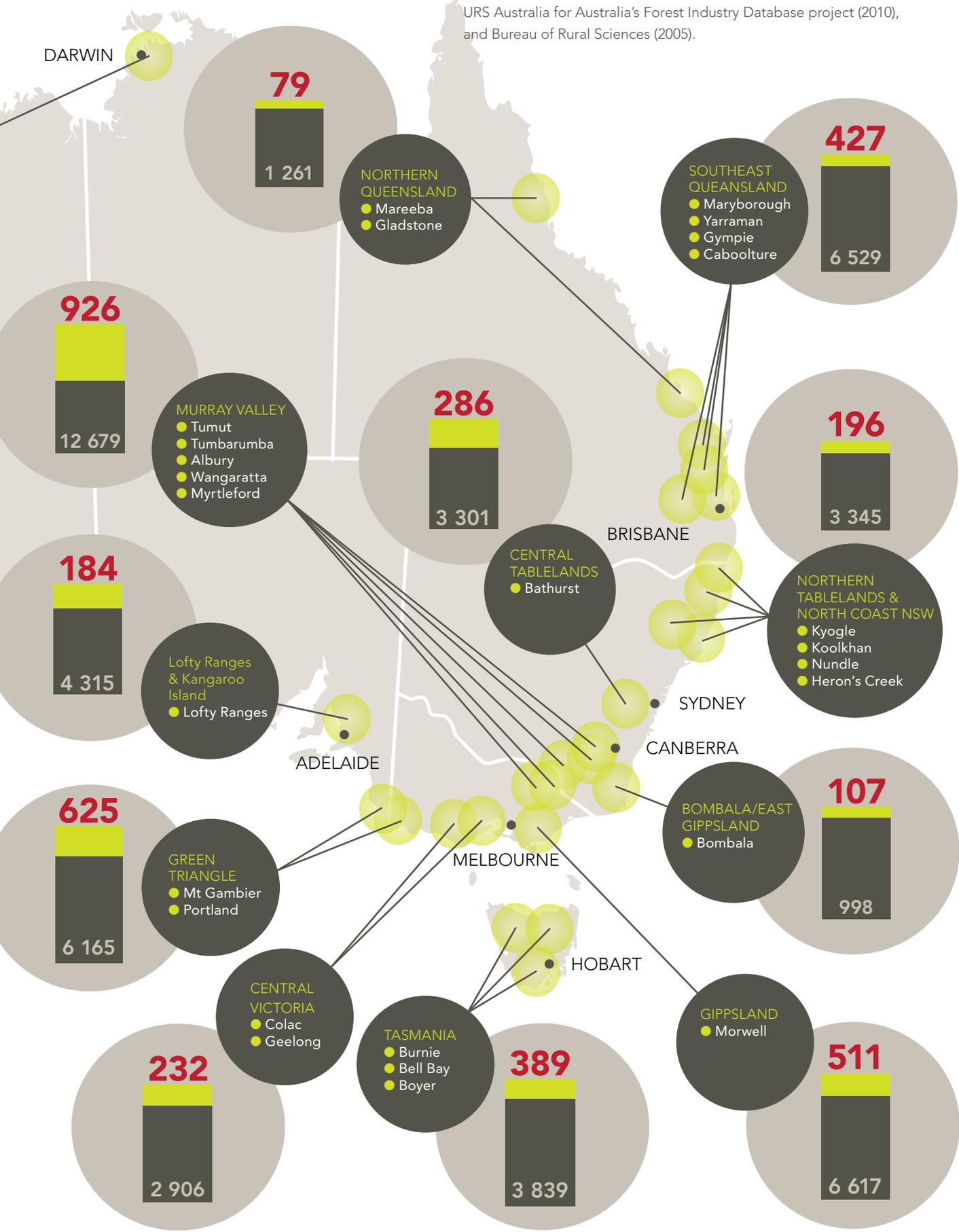
- | | |
|----------------|-----------------|
| ● Darwin | ● Bombala |
| ● Mareeba | ● Wangaratta |
| ● Gladstone | ● Myrtleford |
| ● Maryborough | ● Morwell |
| ● Gympie | ● Geelong |
| ● Yarraman | ● Colac |
| ● Caboolture | ● Portland |
| ● Kyogle | ● Mount Gambier |
| ● Koolkhan | ● Lofty Ranges |
| ● Nundle | ● Burnie |
| ● Herons Creek | ● Bell Bay |
| ● Bathurst | ● Boyer |
| ● Tumut | ● Collie |
| ● Tumbarumba | ● Albany |
| ● Albury | |

POTENTIAL



NEW JOBS BY REGION

Source: Based on the employment model developed by URS Australia for Australia's Forest Industry Database project (2010), and Bureau of Rural Sciences (2005).

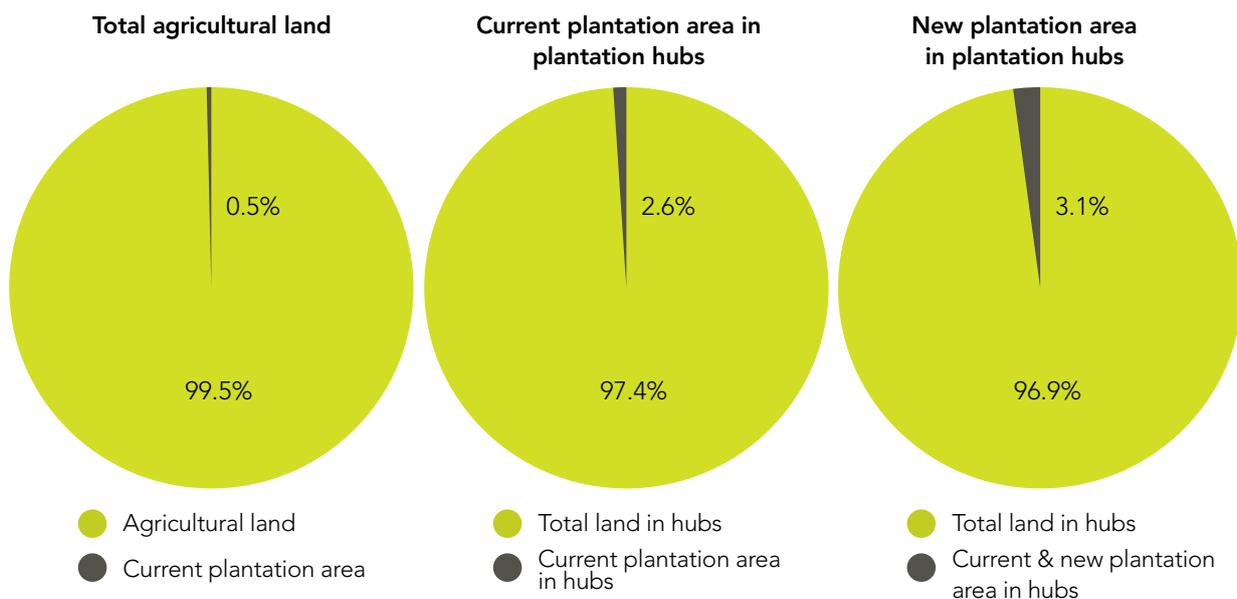


A SMALL BUT CRITICAL PIECE OF THE AGRICULTURAL LANDSCAPE

Australia’s agricultural land is a strategic asset. There is just over 406 million hectares of farmland in Australia which is valuable for food and fibre production.



AGRICULTURAL AND PLANTATION LAND USE IN AUSTRALIA



LAND USE INSIDE THE PLANTATION HUBS

- Plantations currently represent 2.6% of the land area of the 29 plantation hubs.
- An additional 300,000 hectares would result in plantations occupying a very modest 3.1% of the total area in the plantation hubs.

PAST PLANTATION POLICY

Due to the long term nature of plantation investment, the establishment of new plantations has historically required some form of government assistance or supportive regulatory environment. This is the same in all countries with a significant plantation resource. Large-scale wood plantation development began in the 1960s, through the use of concessional loans from the federal government to the state governments which established and managed the development of long-rotation (e.g. 35 year) pine plantations.

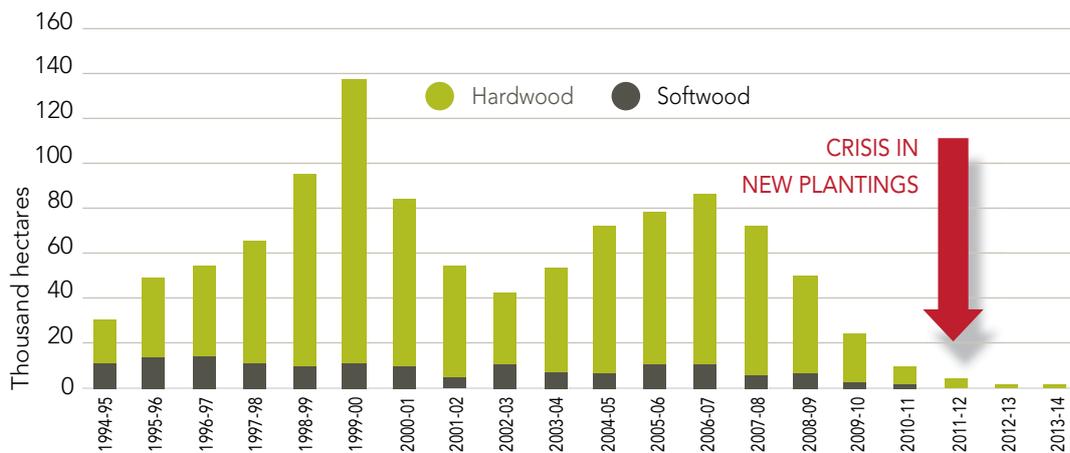
Plantation policy in Australia over the past 20 years has been driven by the *National Forest Policy Statement 1992 (NFPS)* and the *Plantations for Australia: 2020 Vision*. A key goal of the NFPS was to 'expand Australia's commercial plantations of softwood and hardwoods so as to provide an additional, economically reliable and high-quality wood resource for industry'. The *Plantations for Australia: 2020 Vision*, launched by the federal and state governments

in 1997, aimed to 'enhance wealth creation and international competitiveness by trebling the area of wood plantations to 3 million hectares by 2020.'

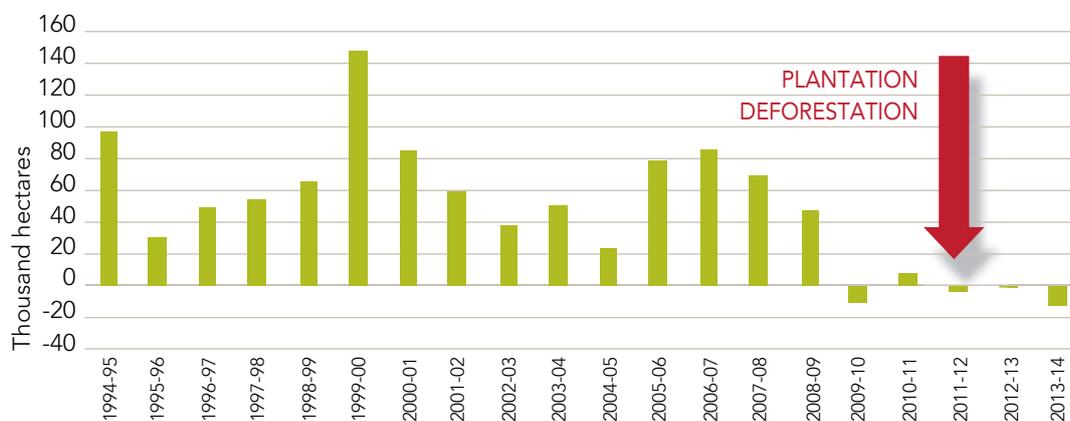
In the 1990s, the emergence of managed investment schemes - which utilised existing plantation taxation arrangements and pooled capital from a large number of small investors - led to a surge in investment in new hardwood plantations largely for woodchip export markets. However, since the collapse of many former managed investment schemes companies, not long after the Global Financial Crisis, new plantation investment in Australia has effectively ceased.

In addition to the crisis in new plantings, the total area of plantation in Australia has actually gone backwards in the past few years as sub-optimal areas are harvested and not replanted. This rationalisation is expected to continue at a faster pace in the next few years.

NEW PLANTATIONS ESTABLISHED ('000 HA)



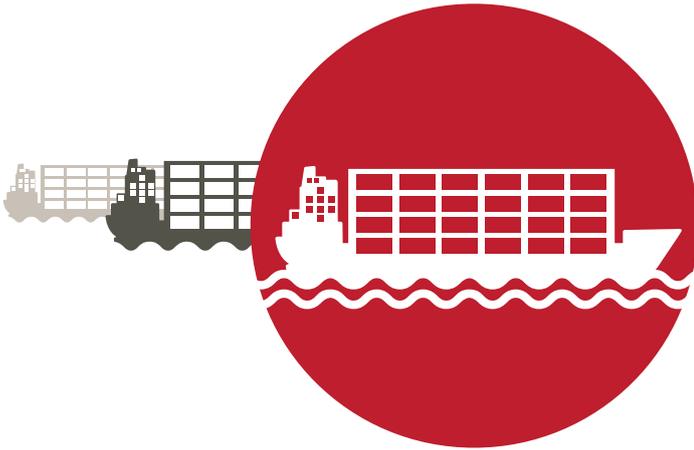
NET CHANGE IN TOTAL PLANTATION AREA ('000 HA)



Source: Australian Bureau of Agricultural and Resource Economics and Sciences.

WHERE IS THE **AUSTRALIAN SOFTWOOD** GOING TO COME FROM?

Despite having plenty of natural resources as well as developed infrastructure and skilled people, Australia fails to produce sufficient plantation timber for its own needs.



The recent building boom, which has seen a record 214,000 dwelling starts in the last 12 months, has also seen the largest ever volumes of pine structural timber enter our ports. This is partly because our mills cannot access sufficient pine plantation resource at an economical distance. **THIS MUST CHANGE.**

Without further plantation expansion, major wood processors reliant on plantation forests face a less certain future.

It is therefore imperative that we target new drivers for wood plantation expansion and provide a secure future for wood and paper processing industries in Australia.

ENVIRONMENTAL BENEFITS OF A PLANTATION HUBS POLICY

Planted forests for wood production can provide multiple carbon abatement benefits, through the carbon stored in the forest and harvested wood products, the substitution of more energy intensive products with wood products and the use of woody biomass for renewable bioenergy.

Climate policy incentives such as the CFI should better target wood plantation forests for carbon abatement and help address some of the investment hurdles for new wood plantations.

In addition to climate change mitigation (e.g. sequestering large amounts of carbon dioxide from the atmosphere), there would also be climate adaptation benefits. Some of these benefits include the role of trees and planted forests in providing shade and shelter for livestock, as well as enhanced climate cooling and resilience to climate extremes on farms. Other environmental benefits would include better dryland salinity mitigation and soil erosion control from tree planting.

IMPROVING ENVIRONMENTAL OUTCOMES



FOUR POLICY INSTRUMENTS FOR PLANTATION HUBS: IN DETAIL

FACILITATING PRIVATE INVESTMENT

Better targeting under the Carbon Farming Initiative



The plantation forest industry already makes a significant contribution to Australia's climate mitigation policy through the carbon sequestration from growing trees. Existing wood plantations contribute a carbon sink offset of around 4.5% of Australia's total annual emissions of 552 million tonnes.

However, there has been minimal planting of new plantations for wood production due to a lack of recognition of their carbon abatement benefits in environmental markets. This has been partly due to a previous emphasis on not-for-harvest environmental plantings in major schemes such as the CFI and a lack of suitable methodologies for wood plantations approved under the scheme. This latter issue is being addressed via a Plantation Forestry Methods technical working group that has been established by the Australian Government. This group is developing suitable methodologies for production (for-harvest) plantations under the CFI.

This new policy proposal would better target new plantation development for wood production and carbon abatement by promoting their uptake via the CFI within the plantation hubs. This would enhance the economies of scale and competitiveness of the plantation forest industry while ensuring an appropriate balance in forestry and other agricultural land use across the landscape.

Under this policy there would be no CFI restrictions on access to agricultural land within the plantation hubs.

The present requirement under the CFI to have a water property licence or regulatory approval for wood plantations established on land receiving above 600mm average annual rainfall would be removed within the plantation hubs. This requirement duplicates existing water management policy under the National Water Initiative and is unnecessary.

Better targeting of the plantation taxation arrangement

The plantation taxation arrangement, which facilitated previous plantation investment, should be better targeted to ensure future plantings occur in the right places. Access to the plantation taxation arrangement, in accord with the regulatory safeguards put in place to protect investors and improve financial due diligence, would be dependent upon new plantation investment occurring within the plantation hubs.

The strategic hubs model would allow companies to continue to utilise the plantation taxation arrangement to invest and grow. It would also address the concerns around many former plantation investment projects being established too far from markets or ports.

GROWING THE REGIONS WITH CRITICAL INFRASTRUCTURE



Like any regionally based industry, there are a range of critical infrastructure improvements that would greatly enhance the competitiveness of the plantation forest industry. These infrastructure requirements would also be of benefit to other locally based industries and regional communities that share critical public assets such as roads, bridges and communications towers.

A range of infrastructure needs have already been identified that would unlock the growth potential of the industry by addressing supply bottlenecks, improving communications and better road linkages in the supply chain. Some important examples of these infrastructure needs are outlined on the **AFPA website at www.ausfpa.com.au**.

This new policy would direct \$250 million in infrastructure funding from existing programmes to improve the competitiveness and productivity of the sector in the plantation hubs.

NEW FARM FORESTRY CO-OPERATIVE FOR FARMERS

3

There is over 150,000 hectares of small-scale planted forest in Australia that has been established by farmers for wood production and a range of other benefits such as soil and water conservation, salinity control, biodiversity and agricultural productivity (e.g. shade and shelter for livestock).

Well targeted forestry activities can be complementary to a broad range of farm level and wood production objectives, given a continuum of tree planting activities that can support agricultural productivity and farm profitability.

The potential for the farm forestry sector to contribute further to plantation wood supply is significant, and has a deep history in many countries, but has failed to realise its full potential in Australia.

has 16,000 members and collectively produces and sells around 2 million cubic metres of wood each year.

In the south-eastern United States, which is known as the wood basket of the nation, around 57% of the total forest area is owned by small family landowners who actively participate in forestry production in regional and global markets.

In New Zealand, over 620,000 hectares or 37% of the plantation forest, is owned by private individuals with parcels of no more than 10,000 hectares. The New Zealand Farm Forestry Association (NZFFA) acts as a national network of farm foresters who share information for mutual commercial benefit.

In Australia, the Australian Forest Growers (AFG) organisation represents an established network of small-scale farm foresters. The SMARTimbers initiative in western Victoria is also an example of

“Well targeted forestry activities can be complementary to a broad range of farm level and wood production objectives, given a continuum of tree planting activities that can support agricultural productivity and farm profitability”

Part of the problem in the past has been the high transaction costs for the processing industry in dealing with highly dispersed and small parcels of plantation forest. For small private owners, the marketing of wood as an individual grower has also posed challenges.

In the southern United States and Scandinavia, there is a long history of industrial wood supply from a large number of small private landowners and farmers as well as the development of marketing cooperatives.

In Sweden, for example, around 50% of forest land is owned by individuals and families. A number of successful marketing cooperatives have been developed, including Norra Skogsagarna - which

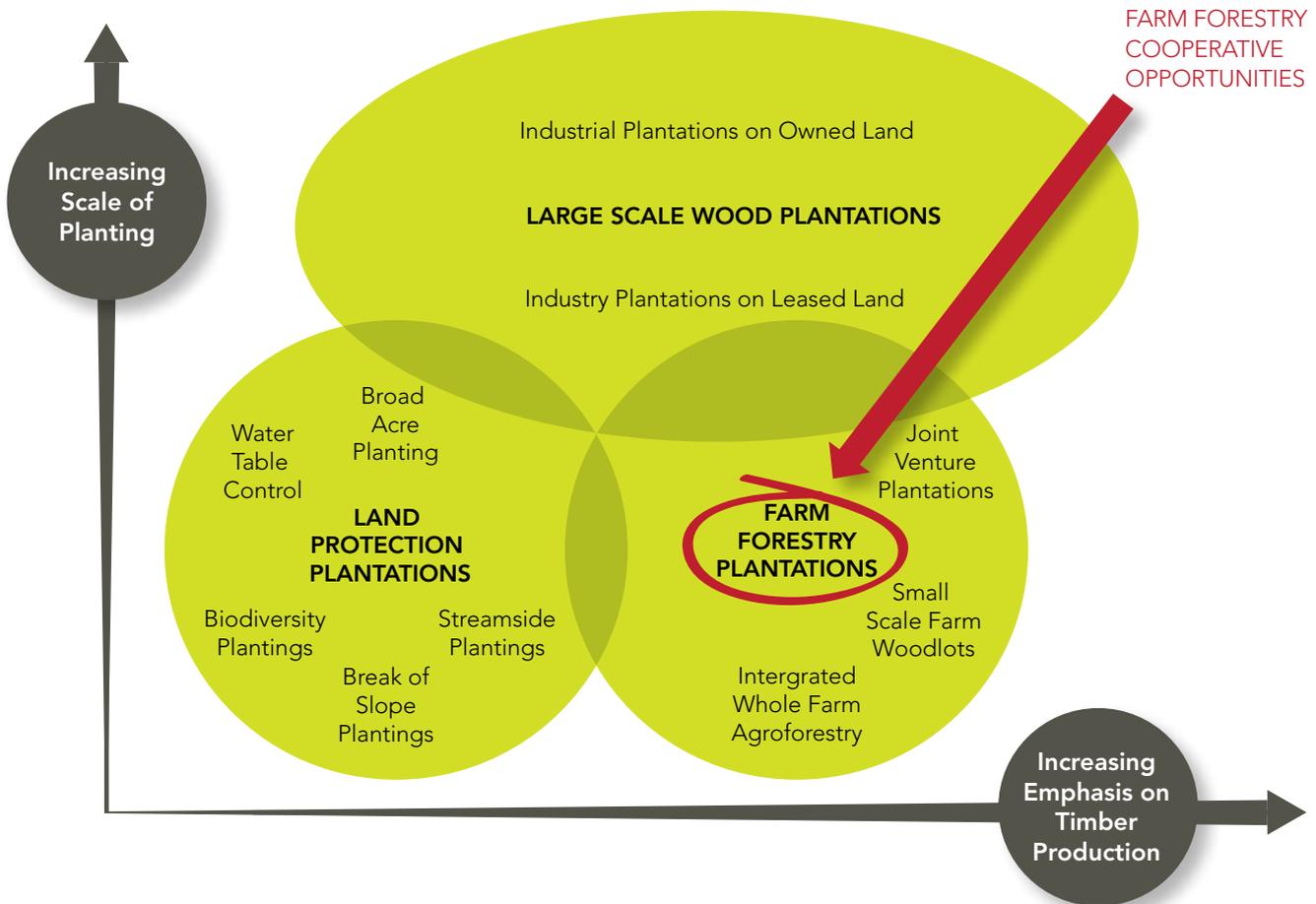
is a local initiative of farm foresters marketing small quantities of plantation and native forest products.

There are lessons that can be drawn from overseas and local experience to build better linkages between the farm forestry sector and the broader plantation growing and processing industry.

This new policy proposal would allocate \$3 million of seed funding for the establishment of a national farm forestry cooperative for farmers. This would enable farmers to build on the existing plantation resources and processing within the plantation hubs.

The plantation farm forestry measure would draw on the Agricultural Competitiveness White Paper initiative to provide farmers with the knowledge and materials to develop cooperatives and more innovative business models. A proportion of this \$13.8 million White Paper initiative would be targeted to address farm forestry management, business and marketing needs.

TARGETING THE FARM FORESTRY SWEET SPOT



UPSKILLING ACROSS THE REGIONS



The forest, wood and paper product industries offer diverse careers ranging from entry level work outdoors in nurseries and forest plantations to highly skilled roles operating and controlling sophisticated and specialised processing plants and mobile equipment. In addition to professional skills in forestry,

engineering, administration and marketing, the industry employs a wide range of specialised technical trades such as saw doctors and wood machinists and utilises more than 500 specialised units of competency specific to the industry.

In common with many other sectors, the plantation based wood and paper processing industries are suffering skills shortages. The problem is keenly felt in the forest products industry due to the high expense in training for specialised skill sets used only by the industry.

The Agricultural Competitive White Paper identified similar issues in the farming sector, which is also regionally based and requires a range of technical skills that are high cost to deliver. To address this the Agricultural Competitiveness White Paper provided farming and agribusiness industries priority access to the \$664 million Industry Skills Fund. The Industry Skills Fund aims to provide up to 250,000 training places to meet specific business needs.

This new policy would improve the ability of the vocational education and training sector to deliver skills and training programmes for the industry, by prioritising the necessary resources where they are needed most – in the plantation hubs. The policy would direct \$25 million in funding from existing programmes for skills training providers and businesses located within the plantation hubs.

AN ESSENTIAL REGIONAL INDUSTRY

The forest, wood and paper products industry has a total sales turnover of \$21 billion with an industry value added of \$6.3 billion. The industry represents 6% of total manufacturing output in Australia and directly supports 80,000 jobs as well as a further 40,000 jobs in downstream value adding such as the frame and truss sector. The plantation forest industry also accounts for more than 80% of total logs harvested and the industry has a large geographic spread that provides much needed jobs and skills in many rural and regional areas across Australia.

EXAMPLES OF REGIONAL CENTRES DEPENDENT ON FOREST INDUSTRY EMPLOYMENT

REGION/TOWN	DIRECT FOREST INDUSTRY JOBS (PERSONS)	DIRECT AS A % OF REGIONAL EMPLOYMENT	TOTAL DIRECT AND INDIRECT JOBS FROM FOREST INDUSTRY
Oberon NSW	257	24.9%	642
Tumbarumba NSW	110	19.5%	275
Tumut NSW	462	17.8%	1155
Myrtleford VIC	134	12.5%	335
Mount Gambier SA	1224	10.7%	3060
Derwent Valley TAS	310	10.6%	775
Eden NSW	108	9.2%	270
Traralgon VIC	590	5.2%	1475
Colac VIC	253	5.0 %	632
Gympie QLD	278	4.3%	695
Morwell VIC	182	3.9%	455
Maryborough QLD	269	3.6%	673

Source: ABS Census 2011.

Like any large industry, it is shaped by the broad macroeconomic and national social and environmental policy settings of the day. These settings have provided the rules and opportunities for investment and business growth in areas such as taxation policy, environmental management, research and development, industrial relations and foreign investment. However, for a regionally dispersed industry such as the plantation forest products industry, there are a range of locally specific needs and requirements.

This new policy proposal would complement the existing macroeconomic policy settings with policies that support critical investment needs in the plantation hubs.

As outlined in the recent Forest Industry Advisory Council Strategic Directions Issues Paper (FIAC 2015), a strengthened regional approach:

'would allow the sector to focus its development in line with the resource and value-chain characteristics of a particular region'.

This would enable the industry to continue to grow and address a number of shortcomings with previous national policies that have led to an actual fall in investment in plantation resources in recent years.

The 2011 Federal Parliamentary Inquiry into the Australian forestry industry also identified the strategic national importance of plantation forests and recommended that:

'the Australian Government lead a process through COAG to create a national plan for plantations, to ensure that: plantations of appropriate species are planted in appropriate locations; and appropriate regional infrastructure exists or is planned and funded.'

REGIONAL CASE STUDIES: UNLOCKING THE POTENTIAL

CASE STUDY: BATHURST STRATEGIC PLANTATION HUB

POTENTIAL REGIONAL BENEFITS:

Creating up to **286 new jobs**.

Up to **24,000 ha increase in softwood plantations** to meet future needs of processors.

Developing farm forestry initiatives including extension and grower co-operatives.

Road infrastructure improvements (bridges, pavement width or corner configurations) and gazettal of local roads to allow safer, longer vehicles to operate in the network.

Skills development and training of mill employees to ensure optimisation and value recovery from the high quality timber requires the best training and skilled operators.

EMPLOYMENT OPPORTUNITIES

Current forest industry employment:
3,301 people

Potential new employment with NPP:
286 people



THE BATHURST PLANTATION REGION

The plantation resource in the region is centred around Bathurst, approximately 200 km West of Sydney. The Region's plantations are primarily managed for timber production to supply logs to sawmills and other processing plants within the region. The main forest product industry towns include Bathurst, Blayney, Lithgow, Oberon and Orange. **Oberon is a major integrated processing centre that utilises both pulplogs and sawlogs for engineered wood products and sawntimber production.**

PLANTATION AREA: Total Plantation Area 82,000 ha
81,500 ha *P. radiata*
500 ha other.

PLANTATION FORESTRY:

The **Forestry Corporation of NSW** is the major grower in the region, managing around 80% of the *Pinus radiata* resource in the region. Private grower, **Hume Forests** also manage some softwood plantations. There is a notable area of farm forestry operations, with many farmers recognising the benefits of planting trees for timber production.

FOREST PRODUCT INDUSTRY:

Bathurst: Allied Timbers Products (sawmill), log export (PF Olsen)

Oberon: Borg Panels (MDF plant); CHH Wood Products Australia (particleboard plant); Highland Pine Products (sawmill)

Burruga: Australia United Timbers (sawmill)

CASE STUDY: TUMUT AND TUMBARUMBA STRATEGIC PLANTATION HUBS

POTENTIAL REGIONAL BENEFITS:

Creating up to **465 new jobs**.

A **30,000 ha increase in softwood plantations** to meet future needs of processors.

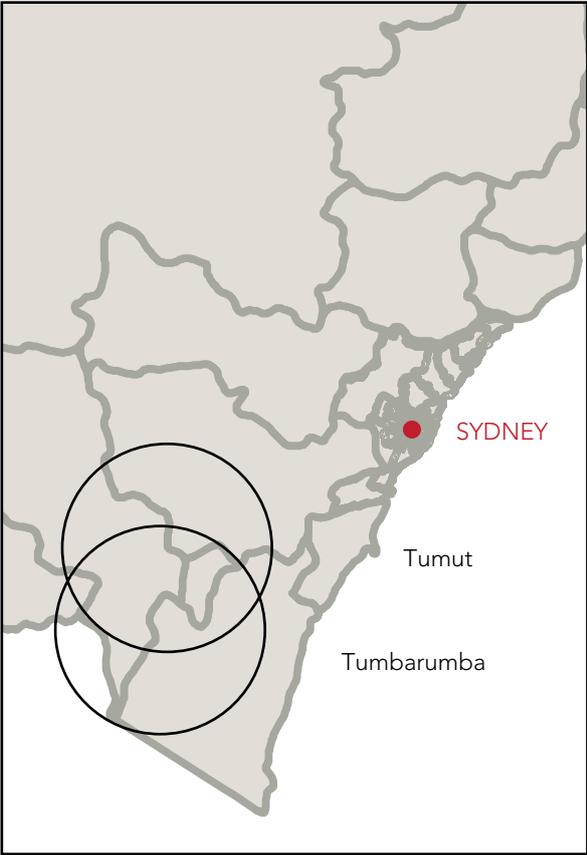
Improving key road infrastructure to meet standards required to support heavy vehicles (inc. B-doubles), and improve efficiency and safety, including Coppabella, Bobs Creek and Bombowlee Roads, Tumbarumba-Taradale complex and Elliott Way complex.

Career orientated training programs through Riverina Institute, TAFE NSW.

EMPLOYMENT OPPORTUNITIES

Current forest industry employment:
6,340 people

Potential new employment with NPP:
465 people



THE TUMUT-TUMBARUMBA PLANTATION REGION

The plantation resource in the southern slopes of NSW is centred around Tumut and Tumbarumba, approximately 100 km and 150 km respectively (as the crow flies), west of Canberra. The Region's plantations are primarily managed for timber production to supply logs to sawmills and other processing plants within the region. The main forest product industry towns include Tumut, Tumbarumba, with Wagga Wagga and Albury just outside the 100 km radius but utilising the resource from the region.

PLANTATION AREA: Total Plantation Area approx. 100,000 ha
100,000 ha Pinus radiata

PLANTATION FORESTRY:

State owned **Forestry Corporation of NSW** is the major grower in the region, managing around 80% of the Pinus radiata resource in the region. Private growers, **Hume Forests** and **Murray River Forests** also manage some softwood plantations in the region.

FOREST PRODUCT INDUSTRY:

Tumut: Visy Industries (pulp mill & cardboard/ packaging), CHH Wood Products Australia (sawmill & particleboard)

Tumbarumba: Hyne Timber (sawmill and engineered wood)



CASE STUDY: GYMPIE AND MARYBOROUGH STRATEGIC PLANTATION HUBS

POTENTIAL REGIONAL BENEFITS:

Creating up to **415 new jobs**.

A **24,000 ha increase in softwood plantations** to meet future needs of processors.

Improving key road infrastructure including upgrades, realignment and sealing of Maryborough-Cooloola Rd, Cooroy-Curra Rd and Tin Can Bay Rd to support heavy vehicles reduce haulage distance, and improve safety on roads shared with local and tourist traffic, and improved mobile communication infrastructure on the Bruce Highway, as well as widening and deepening of the berthing area at Bundaberg port.

EMPLOYMENT OPPORTUNITIES

Current forest industry employment:
5,461 people

Potential new employment with NPP:
365 people

THE SOUTHEAST QUEENSLAND PLANTATION REGION

The plantation resource in Southeast Queensland is centred around Gympie and Maryborough, approximately 150 km and 220 km respectively, north of Brisbane. The Region's plantations are primarily managed for timber production to supply logs to sawmills and other processing plants within the region. The main forest product industry towns include Gympie, Maryborough, Tuan, Toolara and Walligan.

PLANTATION AREA: Total Plantation Area 96,500 ha
78,000 ha Southern Pines,
16,000 ha Araucaria
2,500 ha hardwood plantations.

PLANTATION FORESTRY:

The plantations in the region were originally established by the Queensland government, but the management and harvesting rights were sold to **HQPlantations** in 2010 on a 99 year lease.

FOREST PRODUCT INDUSTRY:

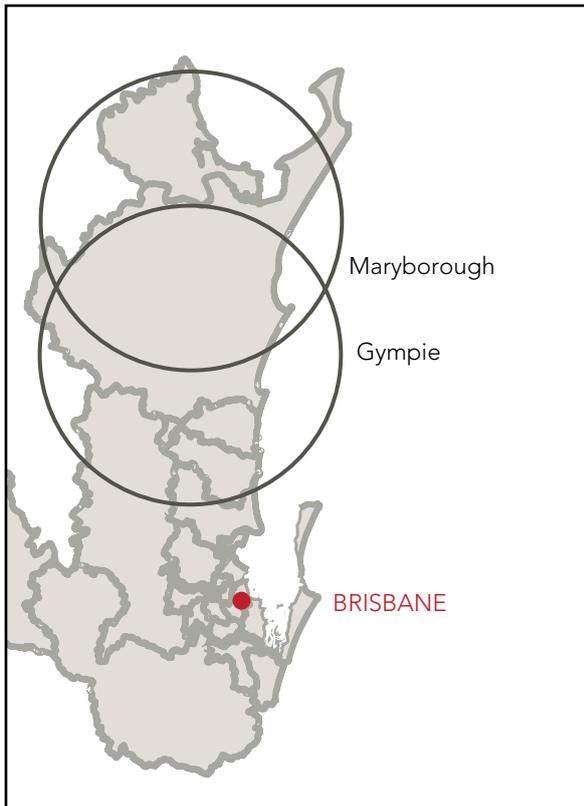
Gympie: CHH Wood Products Australia (particleboard plant), Wades (sawmill)

Tuan: Hyne Timber (sawmill and engineered wood)

Toolara: Laminex (MDF)

Maryborough: Wades (sawmill)

Walligan: Koppers wood products (treated timber)



CASE STUDY: MORWELL STRATEGIC PLANTATION HUB

POTENTIAL REGIONAL BENEFITS:

Creating up to **511 new jobs**.

Up to **8,000 ha increase in softwood plantations** and **12,000 ha increase in hardwood plantations** to meet future needs of processors.

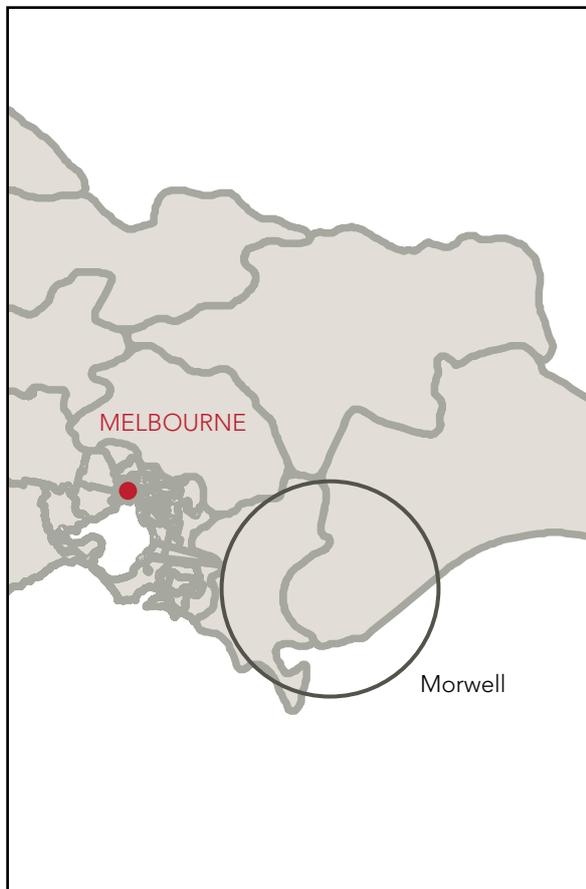
Improving rail infrastructure to avoid a transition to road in the future, including an upgrade to the spur line and container park servicing the Maryvale pulp and paper mill.

Career orientated training programs through TAFE Victoria.

EMPLOYMENT OPPORTUNITIES

Current forest industry employment:
6,617 people

Potential new employment with NPP:
511 people



THE GIPPSLAND PLANTATION REGION

The plantation resource in Gippsland region of Victoria is centred around Morwell, approximately 150 km east of Melbourne. The Region's plantations are primarily managed for timber production to supply logs to sawmills and the Maryvale paper mill within the region. The main forest product industry towns include Morwell/Maryvale and Yarram.

PLANTATION AREA: Total Plantation Area 93,000 ha
59,700 ha Pinus radiata
33,300 ha Eucalyptus spp.

PLANTATION FORESTRY:

The plantations in the region were originally established by the Victorian government, but the management and harvesting rights were sold to HVP Plantations in 1996. There is a notable area of farm forestry operations in the region.

FOREST PRODUCT INDUSTRY:

Maryvale (Morwell): Australian Paper (pulp mill & printing/writing papers), CHH Wood Products Australia (sawmill)

Yarram: CHH Wood Products Australia (sawmill)

A critical aspect of commercial viability in all productive forests is the utilisation of residual wood (i.e not suitable quality for sawlog), which can make up a high proportion of the wood in a plantation. Gippsland is well served by the Australian Paper mill, which converts all plantation residual wood within a 100km radius, into high value paper products.



CASE STUDY: MT GAMBIER SA AND PORTLAND VIC STRATEGIC PLANTATION HUBS

POTENTIAL REGIONAL BENEFITS:

Creating up to **625 new jobs**.

A **30,000 ha increase in softwood plantations** to meet future needs of processors.

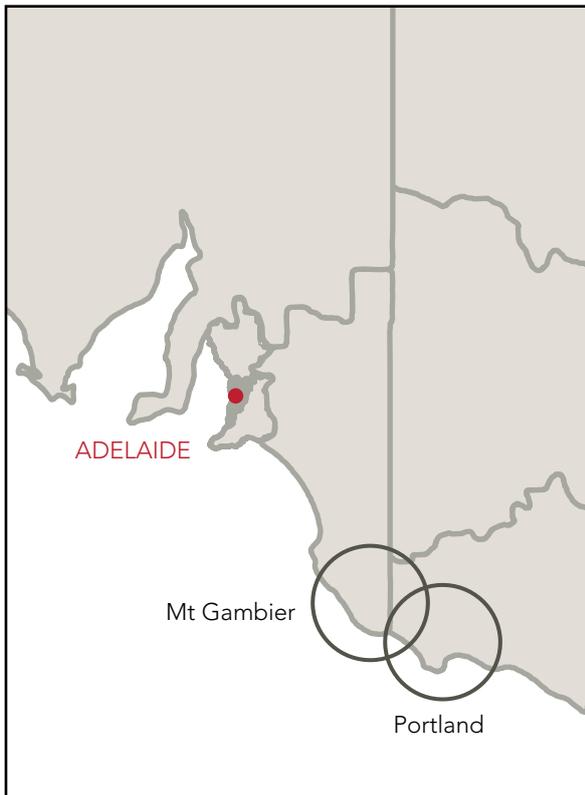
Improving key road infrastructure to improve safety and better support heavy vehicles traffic on roads, including Henty Hwy Upgrade and, overtaking lanes on the Riddoch Hwy, broadband connectivity in Portland and surrounds and improved mobile network.

Career orientated training programs through TAFE SA to enable workers to build on their experience and expand their skill sets.

EMPLOYMENT OPPORTUNITIES

Current forest industry employment:
6,165 people

Potential new employment with NPP:
625 people



THE GREEN TRIANGLE PLANTATION REGION

The plantation resource in the Green Triangle region is centred around Mt Gambier SA and Portland Victoria, approximately 350 km southeast of Adelaide and 300 km West of Melbourne (close to the South Australia/Victorian border). The Region's plantations are primarily managed for timber production to supply logs to sawmills and other processing plants within the region. The main forest product industry towns include Mt Gambier, Millicent, Tarpeena and Nangwarry in South Australia and Portland and Myamyn in Victoria.

PLANTATION AREA: Total Plantation Area 275,000 ha

P. radiata — 104,300 ha SA,
55,000 ha VIC

E. globulus — 33,300 ha SA,
80,000 ha VIC

1,000 ha other

PLANTATION FORESTRY:

Softwood plantation owners

OneFortyOne Plantations
Green Triangle Forest Products
New Forests

Hardwood plantation owners

Australian Bluegum Plantations
New Forests

OneFortyOne Plantations, Green Triangle Forest Products and Australian Bluegum Plantations manage their own forests.

New Forests rely on Timberlands Pacific (softwood) and PF Olsen (hardwood) to manage their plantations.

FOREST PRODUCT INDUSTRY:

Mt Gambier (SA): CHH Wood Products (sawmill and particleboard), NF McDonnell and Whiteheads (sawmills)

Millicent (SA): Kimberly-Clark Australia (tissue)

Tarpeena (SA): Timberlink (sawmill)

Nangwarry (SA): CHH Wood Products (LVL)

Myamyn (Vic): South West Fibre (woodchip mill)

Portland (Vic): Port for hardwood and softwood woodchip exports

CASE STUDY: BOYER STRATEGIC PLANTATION HUB

POTENTIAL REGIONAL BENEFITS:

Creating up to **130 new jobs**.

An **8,000 ha increase in softwood plantations** to meet future needs of pulpmill.

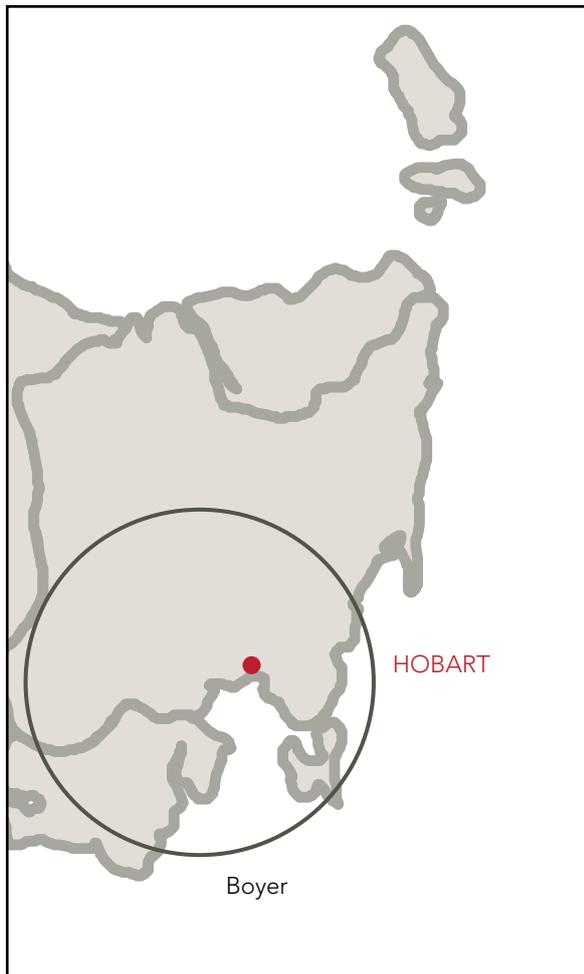
Improving key road infrastructure to meet standards required to support heavy vehicles, improve efficiency and safety.

Career orientated training programs

EMPLOYMENT OPPORTUNITIES

Current forest industry employment:
1280 people

Potential new employment with NPP:
130 people



THE SOUTHERN TASMANIA PLANTATION REGION

The plantation resource in southern Tasmania is centred around Boyer/New Norfolk, approximately 20 km (as the crow flies), northwest of Hobart. The Region's plantations are primarily managed for timber production to supply logs to the Norske Skog pulpmill and other processing plants within the region. The main forest product industry towns include Boyer and Hobart. With the closure of the Triabunna woodchip export facility in 2009, effort is being made to develop an alternative port near Hobart to enable woodchip export.

PLANTATION AREA: Total Plantation Area
approx. 55,000 ha

25,000 ha *Pinus radiata*,
30,000 ha *Eucalyptus* spp.

PLANTATION FORESTRY:

The softwood resource in the region is owned as a joint venture between Norske Skog and Forestry Tasmania, and was developed to support the Boyer pulpmill. The hardwood resource was developed by Gunns and is now owned and managed by Forico.

FOREST PRODUCT INDUSTRY:

Boyer: Norske Skog (pulp mill, newsprint and light-weight coated paper)

Hobart: Port (woodchip export)

APPENDIX A: LOCATION OF 29 STRATEGIC PLANTATION HUBS

STATE	PLANTATION HUB	MAJOR COMPANIES	MAJOR PROCESSING, MANUFACTURING FACILITIES AND INFRASTRUCTURE
Queensland	Maryborough	Hyne Timber (Tuan)	Sawmill and Engineered Wood Products
		Laminex (Toolara)	Medium Density Fibreboard (MDF)
	Gympie	Carter Holt Harvey	Particleboard
	Yarraman	Finlayson	Sawmill
	Caboolture	Carter Holt Harvey	Sawmill
	Gladstone	HQPlantations	Log and woodchip export /port
	Mareeba	Mareeba Softwoods	Sawmill
New South Wales	Kyogle	Hurfords Hardwoods	Sawmill
		Boral	Sawmill
		Boral (Murwillumbah)	Sawmill
	Koolkhan	Boral	Sawmill
	Hérons Creek	Boral	Sawmill
	Nundle	Simmons	Sawmill
	Bathurst	Allied Timber Products (Bathurst)	Sawmill
		Borg (Oberon)	Medium Density Fibreboard (MDF)
		Carter Holt Harvey (Oberon)	Particleboard
		Highland Pine (Oberon)	Sawmill
	Tumut	Carter Holt Harvey	Sawmill and Particleboard
		Visy Industries	Pulp and paper (packaging)
	Tumbarumba	Hyne Timber	Sawmill and Engineered Wood Products
	Albury	Norske Skog	Pulp and paper (newsprint)
Bombala	Dongwha Timbers	Sawmill	
	South East Fibre Exports (Eden)	Woodchip export / port	
Victoria	Wangaratta	Alpine MDF	Medium Density Fibreboard (MDF)
	Myrtleford	Carter Holt Harvey	Sawmill
	Morwell	Australian Paper (Maryvale)	Pulp and paper (printing and writing; sack paper)
	Geelong	Port of Geelong	Port
	Colac	Associated Kiln Driers (AKD Softwoods)	Sawmill
	Portland	South West Fibre (Myamyn)	Woodchip export
Port of Portland		Port	

APPENDIX A: LOCATION OF 29 STRATEGIC PLANTATION HUBS CONT'D

STATE	PLANTATION HUB	MAJOR COMPANIES	MAJOR PROCESSING, MANUFACTURING FACILITIES AND INFRASTRUCTURE
South Australia	Mt Gambier	Carter Holt Harvey	Sawmill and Particleboard
		Carter Holt Harvey (Nangwarry)	Laminated Veneer Lumber (LVL)
		Timberlink (Tarpeena)	Sawmill
		NF McDonnell	Sawmill
		Whiteheads	Sawmill
	Kimberly-Clark Australia (Millicent)	Pulp and paper (tissue)	
	Lofty Ranges	K&S Industries (Nuriootpa)	Sawmill
Tasmania	Burnie	New Forests	Woodchip export / port
	Bell Bay	Timberlink	Sawmill
		New Forests	Woodchip export / port
	Boyer	Norske Skog	Pulp and paper (newsprint; lightweight coated)
Western Australia	Collie	Wespine	Sawmill
		WAPRES / Marubeni	Woodchip export / port
		Bunbury Fibre / Mitsui	Woodchip export / port
	Laminex (Dardanup)	Particleboard and Medium Density Fibreboard (MDF)	
Albany	Albany Plantation Export Corporation	Woodchip export / port	
Northern Australia	Darwin	Port of Darwin	Port

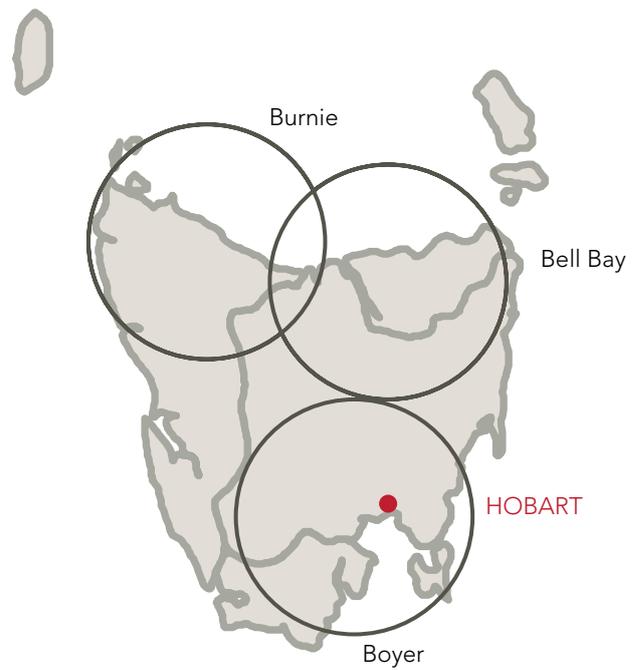


APPENDIX B: STATE LEVEL MAPS OF PLANTATION HUBS

WESTERN AUSTRALIA

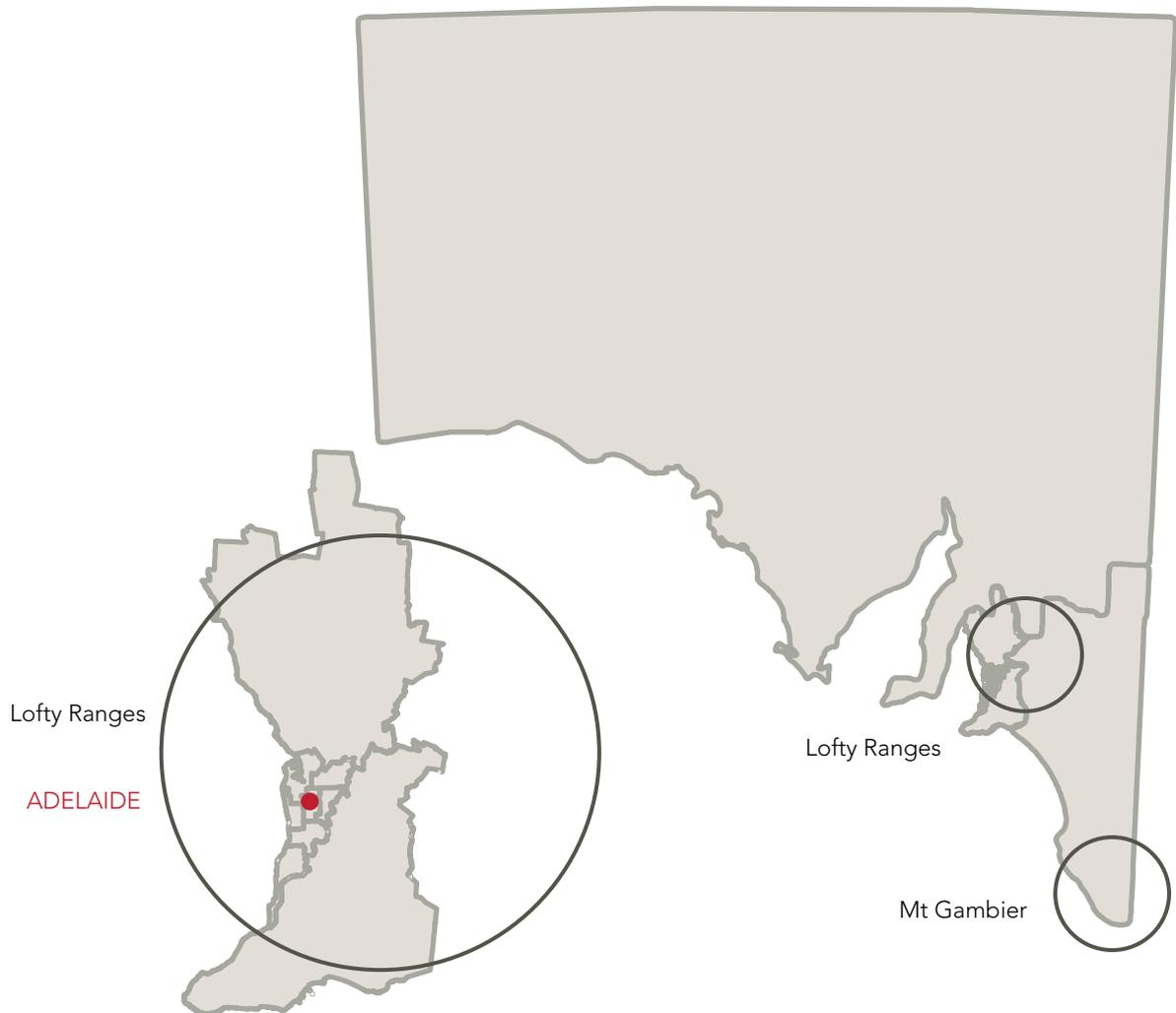


TASMANIA



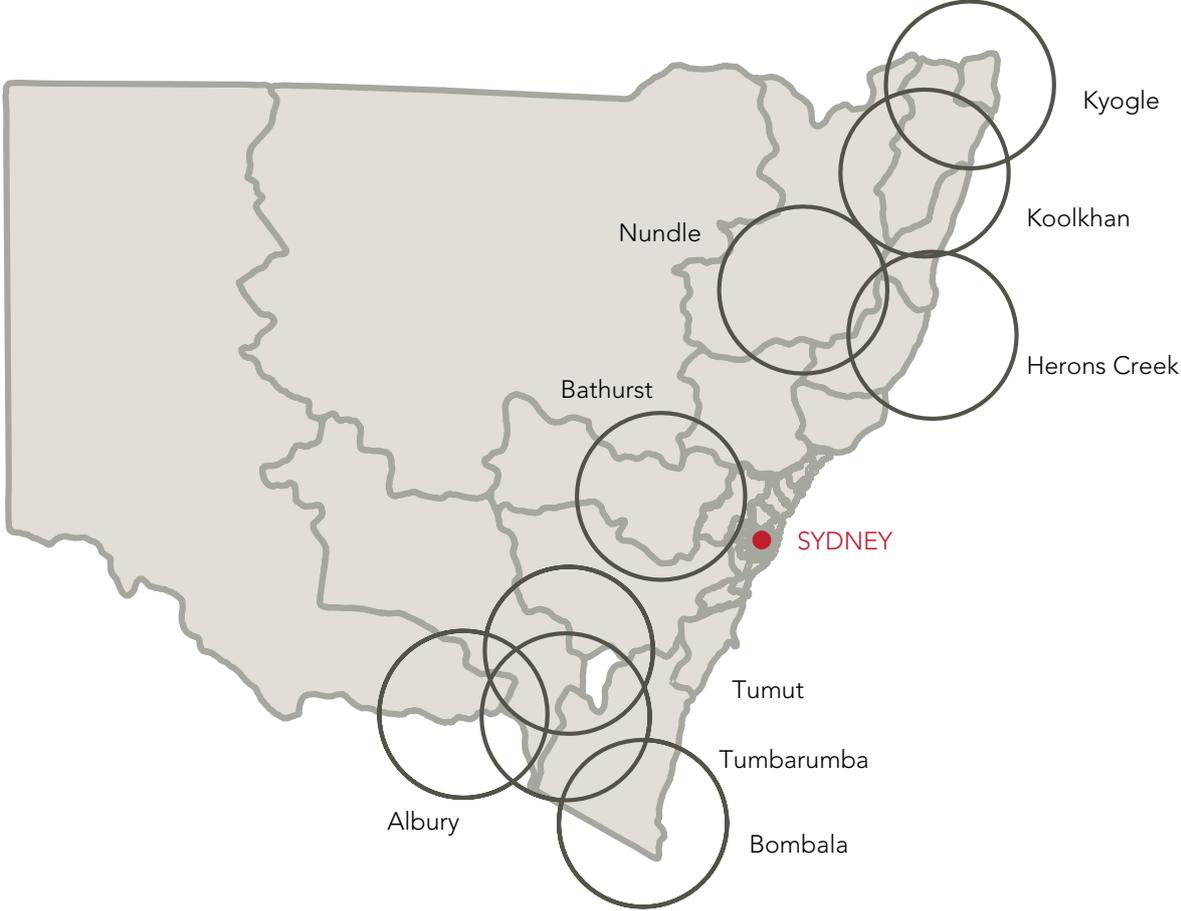
APPENDIX B: STATE LEVEL MAPS OF PLANTATION HUBS

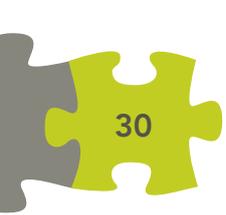
SOUTH AUSTRALIA



APPENDIX B: STATE LEVEL MAPS OF PLANTATION HUBS

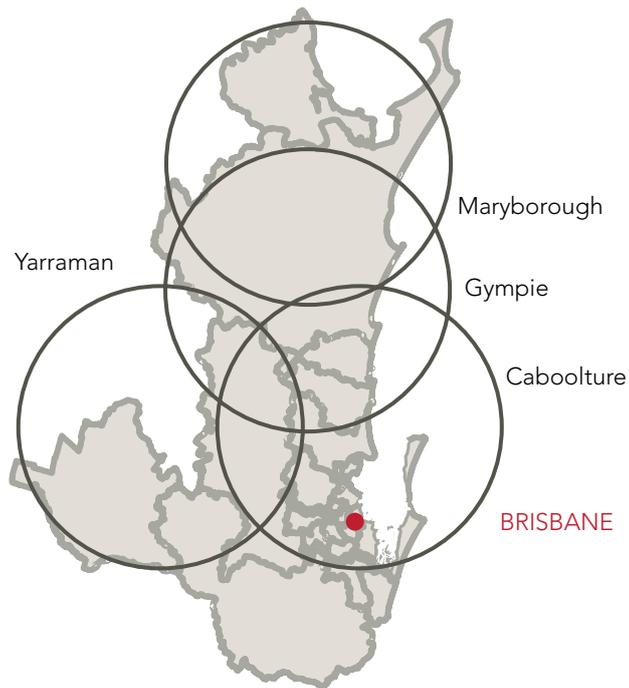
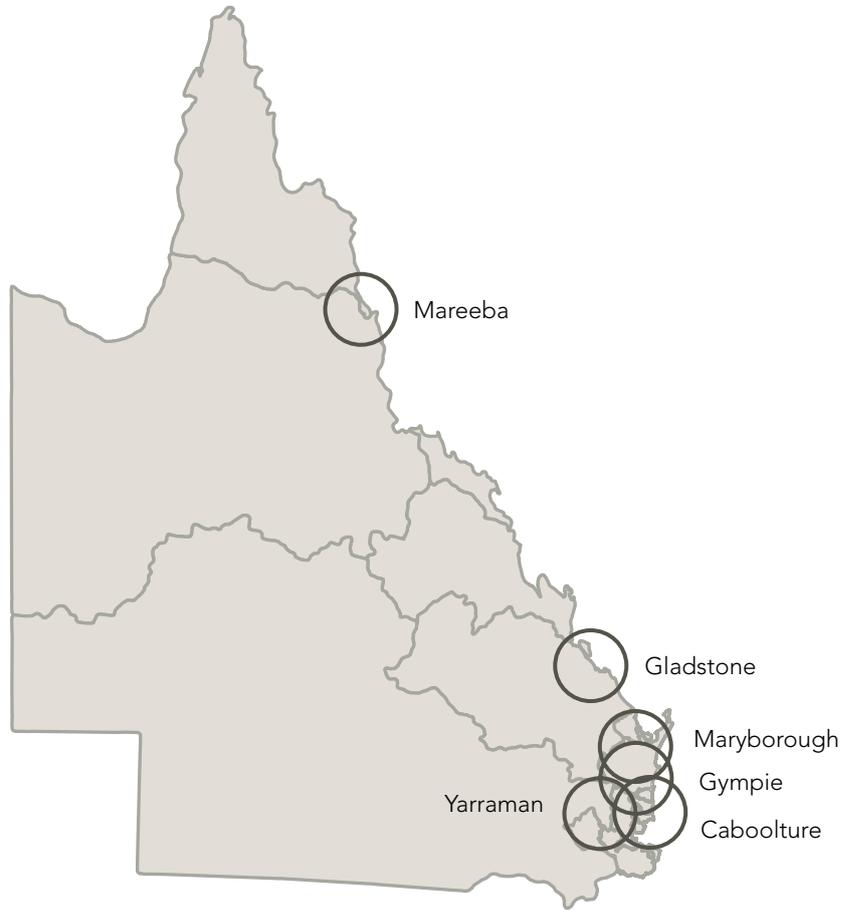
NEW SOUTH WALES





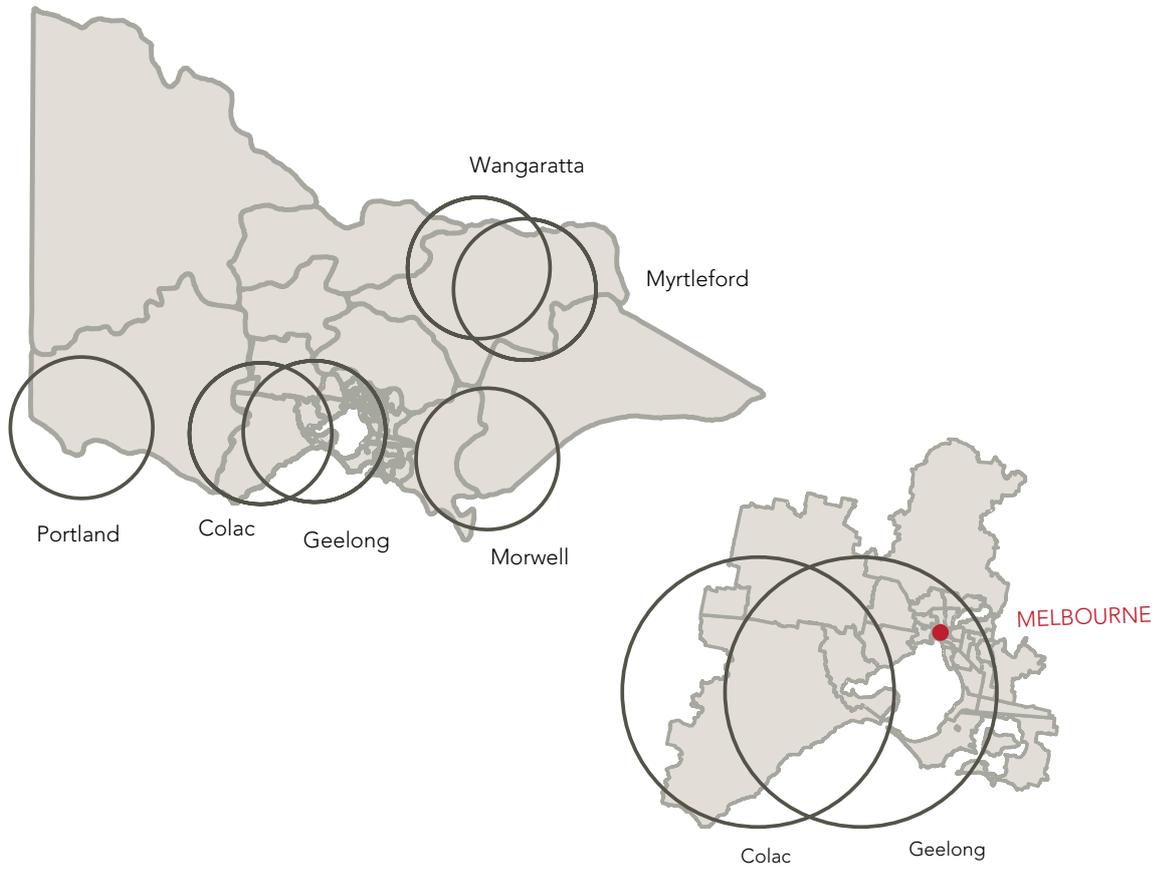
APPENDIX B: STATE LEVEL MAPS OF PLANTATION HUBS

QUEENSLAND



APPENDIX B: STATE LEVEL MAPS OF PLANTATION HUBS

VICTORIA



APPENDIX C: THE AARNET CONNECTION



AARNet supports the plantation hubs proposal to improve regional education and training services through the deployment of broadband telecommunications for forest sector innovation and learning.

Digital technologies and broadband networking services provided by AARNet into regional Australia enables education and training institutions in regional communities to mitigate many of the traditional issues of isolation and disadvantage common to many regional organisations.

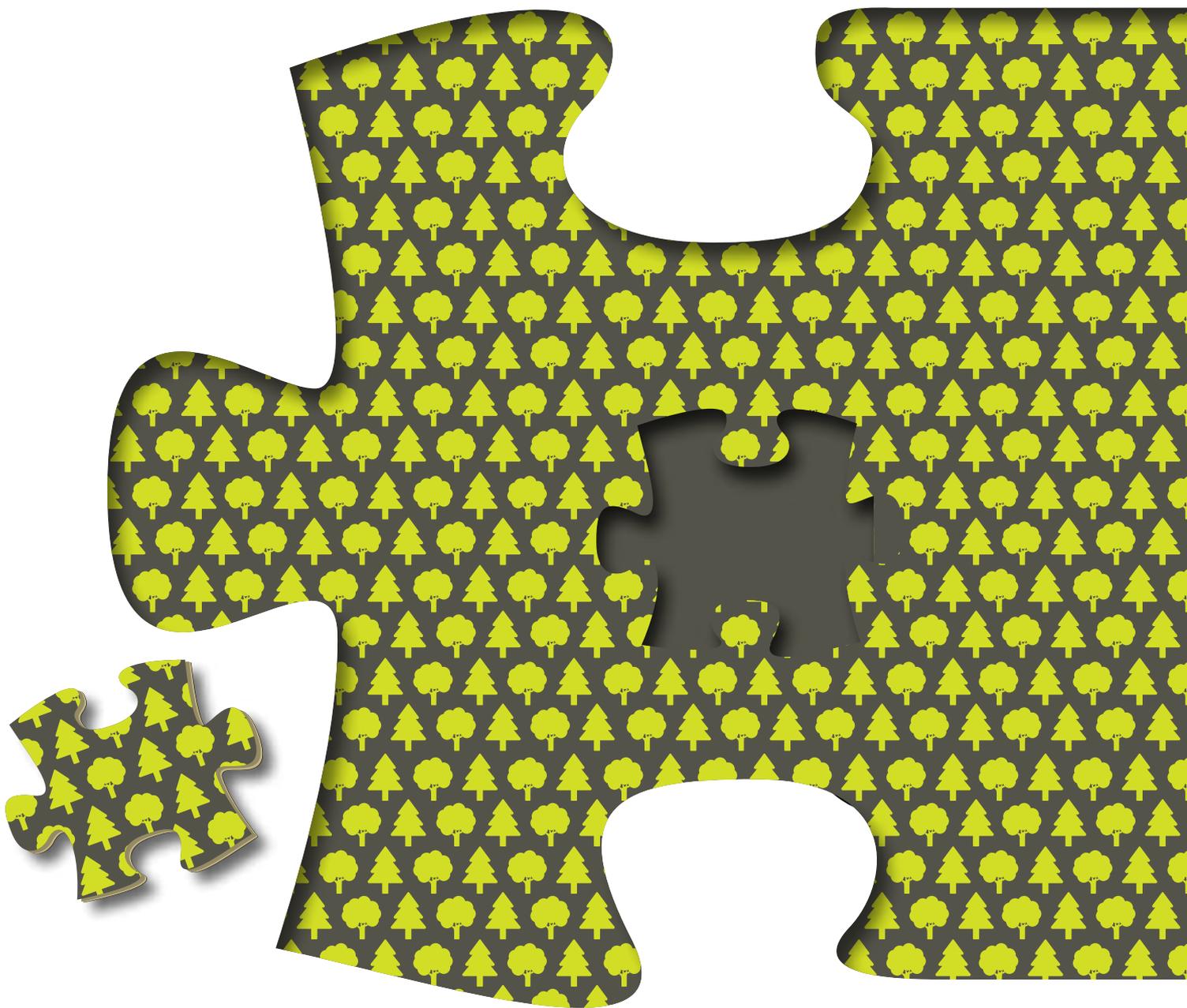
Connectivity and the rapid adoption of new digital modes of learning unpins access to content, resources, and people that enable the creation and delivery of new digitally-enabled educational experiences. For educators and trainers, in an increasingly globalised and digitally-enabled world, AARNet removes barriers to innovation.

The Australian Academic and Research Network (AARNet) was established in 1989 by the Australian Vice-Chancellors Committee and CSIRO to create Australia's National Research and Education Network (NREN). Like other NREN's around the world, AARNet interconnects its members' institutions nationally, and provides international connectivity via other NRENs to the global research and education community. AARNet brought the Internet to Australia and pioneered the use of Internet technologies and applications. AARNet has over 200 directly connected member and customer institutions. Major digital modes of learning include:

Blended or On-Line Learning: makes many of the learning resources available online, including Podcasts, video and other forms of media. Blended learning supports collaborative tools and remote participation through video conferencing.

Flipped Classrooms: are structured so that students consume one-way lecture style content via video whilst at home, within the workplace or on the move, and whilst at school or TAFE, work through hands-on exercises and collaborate with peers.

Massive Open Online Courses: allow hundreds or even tens of thousands of students to participate in an online course of study completely remotely.



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