

Submission to the

Review of the Taxation of Plantation Forestry

Gwenda Sheridan,
54 Auburn Road,
Kingston. 7050
Tasmania.
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I have post graduate research qualifications in landscape, recreation and land planning and am a corporate member of the Planning Institute of Australia, (PIA -formerly the RAPI). I started life as a junior academic teacher with ten years spent in the geography departments of Sydney University and the University of New England. Later I became a land planner and my work across decades has covered many types of planning including statutory, environmental, recreation, historical and landscape planning across two states. I now work part time as a heritage landscape consultant, have completed a considerable number of major reports in this area, some of which have been published or won awards, have delivered papers at relevant conferences and published in relevant journals. I have lived in Tasmania 18 years, both in the north and now in the south of the island. I have completed entries for the recently published *Companion to Tasmanian History*, (2005) including that for *cultural landscapes* for this state.

In a private capacity I have researched the forest industry for four years, writing a number of major submissions, for example to the Senate in 2002: Rural and Regional Affairs and Transport References Committee: *Australian forest plantations: A review of Plantations for Australia: The 2020 Vision*¹ (90 pages), to the state government, its agencies and elsewhere. In my opinion what is happening in Tasmania is a land conversion tragedy akin to that of original white settlement. The Senate Committee directly quoted from my work in their final document.

Terms of Reference

1. The commercial viability and current tax treatment of plantation investment,
2. Whether the operation of the Income Tax Assessment Acts impedes investment in longer term forest rotations which produce higher value products,
3. the role of State and Territory Governments in plantation industry development as investors, growers and land managers, and any implication this has for competitive neutrality with regard to tax liabilities and incentives,
4. the capacity to adapt existing tax policies to contribute to achieving the Australian and State Governments desire to achieve a greater integration of plantation and natural resource management policies to improve the management of salinity and water quality,
5. the relative roles and effectiveness of tax system and expenditure programmes in the delivery of assistance to the industry.

Preface

Civilisations often fall quite suddenly – the House of Cards effect – because as they reach full demand on their ecologies, they become highly vulnerable to natural fluctuations. The most immediate danger posed by climate change is weather instability causing a series of crop failures in the world's breadbaskets. Droughts, floods, fires, and hurricanes are rising in frequency and severity.

The most compelling reason for reforming our system is that the system is in no one's interest. It is a suicide machine.

If civilisation is to survive, it must live on the interest, not the capital of nature. Ecological markers suggest that in the early 1960s humans were using about 70% of nature's yearly output; by the early 1980s we'd reached 100% and in 1999 we were at 125%. Such numbers may be imprecise, but their trend is clear – they mark the road to bankruptcy.

Taken from Ronald Wright: *A Short History of Progress*.²

Are the current tax incentives and product rulings taking the road in Tasmania towards bankruptcy?

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General comments

1.0 It can be anticipated that the submissions which address the Terms of Reference of this Review will reflect – in Sheridan’s opinion one kind of capital, - namely economic, financial and monetary capital. For this reason the submissions will most likely be directed to that end. It has proved almost impossible to introduce other types of capital into the discussion, given the way in which the terms of reference have been constructed. For this reason I have deliberately stepped outside of that “box” in order to introduce other vitally important considerations into the discussion.

1.1 As one critic³ of the system noted May, 2005,

when an industry seeks to raise \$1 billion in the last two months of every financial year it is time journalists and Treasury boffins stop being ‘puppets on a string’ and seriously look at what’s happening.

What needs to happen is that the triple bottom line so often referred to must become a quadruple bottom line, such that economic capital, biophysical capital, social and cultural capital, or *quality of life capital*⁴ are factored in and the scenario becomes more balanced in its approach. That is instead of looking at one type of parameter in isolation, as though not linked elsewhere to the environment an holistic approach must be taken when considering new initiatives and ways forward. This submission argues that this approach is imperative when considering changes to taxation regimes, the taxation acts and product rulings.

1.2 The submission considers that there needs to be changes made to the tax incentives and product rulings which better reflect the peculiarity of the Tasmanian situation, its total land size in relation to its plantation expansion, the nature of its short term rotation regime, its subsidisation of the plantation sector by the clearing of native forests, (which includes Old Growth forests) as well as other factors. The loss of Tasmania’s natural capital, social and cultural capital, quality of life and tourism capital cannot just be siphoned off into some corner as though not important or irrelevant to this review.

1.3 Tasmania it is suggested must be considered as a special and unique case in this review. What might hold true for other Australian states, may not hold true for Tasmania. What is happening here is different from what is happening in other parts of Australia. The Senate Committee Plantations Report saw fit to consider this island as a quite different in its review, assigning an entire chapter to the issues here. It is suggested that this be implemented for this Review as well. Tax incentives, product rulings may have to be adjusted specifically to suit the longer term requirements of Tasmania, given the quadruple bottom line objectives put forward in this submission.

1.4 The Senate Committee’s Plantations Report in 2004 noted that at 8.51:⁵

Tasmania's total plantation estate, while not the largest in Australia, covers comparatively more land than in any other state,

and at 3.44 of the same Report:⁶

The rate of new plantation establishment in Tasmania exceeds that in all other states...

1.5 This island is only just over 6.8 million hectares in total areal extent. Significant portions of it are taken up with coastal heaths, alpine vegetation, and button grass moors, (the latter occupies an area of over 1 million hectares). Where are new plantations from MIS supposed to go? In the next 10-15 years, are we to become the island state of plantations? Tasmania simply cannot compete on an areal basis, (let alone a cost efficient one) with other countries such as Brazil⁷ for example which already has over 5 million hectares in bluegum plantations, or Argentina which has in excess of 1 million hectares. As well, other Australian states such as Western Australia have a much larger total areal extent compared to this island so their plantation estates, (W.A: 360,788 ha. of which 251,542 is hardwoods⁸) – as a use of the land – occupy a relatively small proportion of their land area.

1.6: In giving evidence to the Senate Committee,⁹ Judy Clark, Research Economist at the Centre for Resource and Environmental Studies, (CRES) at the Australian National University (ANU) noted that,

Encouraged by the 2020 plantation vision and tax effective investment schemes, Australia's eucalypt plantation industry has, in my view, planted a wood glut.

One of the recommendations of the Senate Committee which apparently took considerable note of Ms. Clark's evidence was in fact to conclude that,

Recommendation 1. 3.35: The revised 2020 vision be amended by deleting all references to trebling the acreage by 2020 or plantation acreage of 3 million hectares. Should be replaced with the target of increasing the acreage of plantation forests at a sustainable and economic level.¹⁰

1.7: If indeed Ms. Clark is correct, then the wood glut (in Tasmania) dominated primarily by present plantation tree species such as *E. globulus* or *E. nitens* face an uncertain future if conversion to longer term solid wood rotation timber is desired. Facts which are only fleetingly beginning to emerge in the public press concerning problems connected with possible short term rotation timber conversion to longer term plantations¹¹ would be known by those involved in the forest industry. The 2005 FWPRDC Report,¹² which included three Tasmanian authors, noted for example,

it is unlikely that existing plantations being managed for fibre production will yield significant sawlog suitable for most profitable solid wood products, or respond to late silvicultural treatment, (after about age 4) in a way that improves log quality for solid wood products significantly.

and,

Growing a suitable resource for solid wood products involves,
Selecting species that have growth and wood quality characteristics suited to producing solid wood products on relatively short rotation times,

Pruning the trees several times from an early age, (about age 2 to 3) to reduce the size of the knotty core and encourage the growth of clear wood.

Term of Reference No. 1.
**The commercial viability and current tax treatment of plantation
 Investment**

2.0 It is clear from the literature on this subject that it is the various taxation schemes, along with product rulings which have fuelled, and are fuelling the dramatic increase in monocultural plantations in Tasmania. It is also clear that the increase has been directed towards short term rotations and that the driver is primarily for the production of woodchips and paper pulp.¹³

2.1: The effectiveness/driving nature of the tax incentives/product rulings for the plantation companies can be seen by a brief historical analysis. Noted business economist Alan Kohler in 2000 thought that 'Australia's tax induced tree-planting binges may have been coming to an end.'¹⁴ It appeared that the '13 month rule' was to be abolished. Prepaid costs and expenses were to be disallowed, costs and expenses could only be deducted as the scheme promoter spent the money.¹⁵ Kohler noted that a view going round was that the product rulings themselves would end; but while the number might fall away, it was the schemes themselves that had been ringbarked, not the rulings that guaranteed them deductibility.¹⁶

2.2: In this article, intimately tying taxation incentives to plantation tree farms, Kohler wrote,¹⁷

172 rulings guaranteeing 100% deductibility for investments in a dazzling array of schemes, blue gums, vineyards, olives, tea-trees, films, cotton, sandalwood, lemons, cricket bat willow... gum trees, cashews? Whatever. Just get me the tax deduction.

2.3: Kohler noted as well, that somewhere between a third and a half of the money had gone into the pockets of the promoters and marketers of the schemes.¹⁸ The article reported that,

Researcher David Marshall has looked closely at about half of them at random and has concluded that 80% are not viable, largely because of the huge fees scooped off the top. He says \$600 million has been invested in blue gum schemes; of that \$240 million has been taken as profit by the companies, often listed, that run them, and \$90 million has gone on commission to the financial planners who flog them. On the money left to actually go into planting trees, the yield is below the bond rate. It is beautiful business for merchant banks, accountants and financial planners because the clients barely glance at the number and often have only a vague idea of what the crop is.

This then was 2000.

2.4: The Forest Enterprises Group which operates in Tasmania was seen in this time period, (ie. by 2001) in some quarters to be Timb-e-r-r-r going down.¹⁹ Said Pierpont:

What the Tasmanian forestry industry mainly comprises, it seems is tax-minimisation schemes.

and further,

A skilled reader would have realised that ... FEA made more of its money from flogging woodlots and managing tax minimisers' trees than from growing its own. The real major assets of the group were not the blue gums but an 'extensive network' of financial advisers around Australia who were flogging woodlot schemes to punters trying to dodge tax. Of the \$70 million raised in the prospectus, \$10 million would be trousered by the vendors, (mainly directors) and the rest mainly used for buying more land to be sold as woodlots to tax-dodging merchant bankers and lawyers. The vendors still hold 65 % of FEA.

At this point in time too, FEA was having a dispute with ASIC over possible contravention to the Corporations Law.²⁰ While Tony Seymour, the Managing Director of FEA was not gaoled, he was convicted in Launceston 16.1.2002 on two charges brought by ASIC which related to operating an unregistered managed investment scheme, and for offering interests in a scheme without a registered prospectus. He was fined \$2,500 and the conviction implied that he could not manage any company for five years.²¹

2.5 The ATO revised product rulings appeared however to have saved the day. Investors could have confidence, but a sting was provided with some schemes under the catch-all Clause 1VA. Getting over this hurdle, some timber investments carried in their prospectuses tax office "product rulings" which specifically exempted the investment from Clause 1VA.²²

Term or Reference No. 2.

Whether the operation of the Income Tax Assessment Acts impedes investment in longer term forest rotations which produce higher value products.

3.1: While at least one journalist²³ writing on agribusiness noted that the 12 month pre payment rule for forestry managed investment schemes had been extended until June 30, 2008, elsewhere²⁴ it has been noted that,

if the 12 month rule is terminated it is highly likely to substantially reduce the current rate of plantation establishment, (both short and long term rotation) as well as the replanting of areas as they are progressively harvested. Continuing uncertainty about the future of the 12 month rule will also discourage new entrants to the MIS plantation sector including those with an interest in establishing and managing long rotation plantations. Since the MIS plantation sector is currently driving most new plantation investment, it is imperative that this investment is not threatened or impeded by adverse changes in tax treatment.

In the light of the FWPRDC's reports²⁵ that the development of high quality long rotation plantations (20-30 years) was being held back by impediments to private investments (these included investment time frames), and that current fibre plantations could not be easily converted to longer rotation times, the extension granted to 2008 seems a curious one indeed.

3.2: Les Baker²⁶ of Gunns Plantations Ltd, noted in 2002, that,

The amount of investment in the industry would be significantly lower if it were not for the taxation incentives for individuals. In the last 10 years it has been very much the incentives that have applied to individuals that have certainly fuelled the expansion of plantations in Australia. This has been very effective.

Mr Baker's view was that the current tax laws as they then were needed to continue. He noted that it was quite difficult in the industry if the tax laws changed.²⁷

3.3 The FWPRDC's 2005 *Report into Impediments to Investment in Long Rotation Timber Plantations* has clearly outlined that the industry faces challenges to get investors interested in longer term rotation programmes. This fact was corroborated by Paul Cowper Smith,²⁸ Assistant General Manager, FT, in 2002 at a Senate Committee hearing into plantations in Australia.

Currently investors are reluctant to commit to 20 – to 25 years for eucalypt solid wood plantations and those longer rotations are required for pruning and to get the value.

3.4: The taxation laws have seen a staggering rise in plantation development in Tasmania. Overall the number of hectares in plantation tree farms in the state as at December 2003 was 222,750 ha. The majority 197,000 ha or over 88% is privately owned or in joint ownership. An average of 13,470 ha²⁹ of new areas were planted each year since 1999.³⁰ If these figures are consistent, then possibly a further 27,000 ha has been added since that time giving a total somewhere in the order of a quarter of million hectares, (250,000 ha). Given that the private market is a most significant driver of the plantation sector, the market has gone to the place where, - as might be expected – there is less risk. Perceived better rainfall, perceived fertile soils, a self regulated system that essentially manages the enormous land use change taking place, is what one finds in Tasmania. Company prospectuses advertise such advantages. Hardly surprising then that so much plantation acreage occurs here.

3.5: If the Report: *Rural Land Use Trends in Tasmania*³¹ and Table 21 is consulted (p. 36) the increases in hardwood forest plantations can be worked out as a percentage basis over what existed in 1985. Thus across the time period, 1985-2002 the increase given on the figures presented in Table 21, would be 5,132%. The Bureau of Rural Science however lists an increased total, (222,745 ha) (with 146,641 ha of hardwoods)³² which would raise the hardwood percentage totals to a higher level again. By July of 2005 it could be anticipated that the increase is something in the order of 6,000%. Gunns Limited – just one plantation company – is proposing to develop a plantation estate of 200,000 ha under management by 2011.³³ Near the end of 2002, Gunns recorded that it had 170,000 ha of land, and that 80,000 ha had plantation on it.³⁴

3.6: Tasmania has just signed the Tasmanian Community Forest Agreement, (May 2005), an adjunct to the 1997 Regional Forest Agreement for this state. Clause 45, dotpoint 3 of the Agreement makes provision to end land clearing on private land by 2015. It can be anticipated that the rate of land clearing will accelerate prior to that date. Figures such as those stated in (3.5) above are only a part of the story of

plantation conversion whether this is from native forest to plantation or from farmland to plantation. The other side of the coin is the creation of Private Timber Reserves in Tasmania. There are now 403,321 ha. in Private Timber Reserves in Tasmania,³⁵ thus a figure racing towards the half million mark, signalling a potential status for forest to be cleared or for land in the future to be planted up into plantation hectares, (see also 3.7, 4.5 of this submission). The Senate Committee looking into plantations and the 2020 Vision, reported that DIER³⁶

had reiterated the importance of Private Timber Reserves, describing the system as an important feature of the Tasmanian legislative framework and part of the reason for Tasmania's successful plantation sector.³⁷

An alternative opinion to this view is taken up elsewhere in this submission.

3.7: This year alone, Sheridan has noted that 424 UPI³⁸ land parcels have been advertised as potential Private Timber Reserves (PTRs), or parts of PTRs in the local press. If 50 hectares is assigned theoretically to each UPI, that represents a total of 21,200 ha. to date, for 2005. Gunns in management of the Evercreech property, (formerly a notable dairy farm) listed a total of 69 UPIs³⁹ which at 50 hectares per UPI would equal 3,450 ha alone. It would appear that a projected industry increase to at least 847,000 ha. in 2002 noted as 'suitable for the development of plantations'⁴⁰ - plus what is in the ground already- could feasibly take the industry total to over one million hectares by 2020 if present scenarios continue. Such PTR figures help illustrate that the industry projection appears to be well on target. There is still, it is to be noted, fifteen years to 2020.

Term of Reference No. 3.

The role of State and Territory Government in plantation industry development as investors, growers, and land managers, and any implication this has for competitive neutrality with regard to tax liabilities and incentives.

4.1 Commercial industry plantation rotation⁴¹ times are apparently just 13 years and 20 years⁴² the focus on woodchips rather than sawlogs. Forestry Tasmania is a Government Business Enterprise and either it or the government have consistently noted that it has sawlog quotas that must be met.⁴³ However it is interesting to compare the volume of woodchips exported in 1984, compared with those exported in 2004. In 1984, following an Amendment to its Forestry Act,⁴⁴ the then Forestry Commission's quota was 317,000m³ eucalypt sawlog annually; exported chips then totalled 2.7 million tonnes.⁴⁵ Now, following the RFA, Forestry Tasmania has to produce 300,000m³ of high quality eucalypt/veneer sawlogs⁴⁶ per year. The export chip total is now over 5 million tonnes. Has the tree volume and quality changed so drastically that now twice the chip volume is required to reach the smaller sawlog quota?

4.2: The nexus between Forestry Tasmania and Gunns has often been criticised by Green groups. Mr. Rolley,⁴⁷ CEO for FT noted in 2003 that,

70 percent of our bulk transactions are with one principal customer and that is Gunns, a Tasmanian business.

At a Senate Committee⁴⁸ hearing into Plantations in 2002, the following figures were offered;

that Gunns bought an estimated 70% of sawlogs and 95% of woodchips sold by FT, making an estimated 80% by value of wood sales (revenue from the GMO joint venture and other minor sources is excluded). In 2001/02 Forestry Tasmania's Forest Sales Revenue was \$95.9 million out of the total revenues of \$144.2 million. If Forestry Tasmania had earned 5% return on equity, (equal to the bond rate) it would have had to earn an additional \$28 million in forest sales, if it had earned a more commercial return of 7% - modest in business terms – on equity it would have had to earn an additional \$39 million in forest sales. Gunns would have had to pay 80% of the increase price (\$22 million for a 5% return; \$31 million for a 7% return.)

Forestry Tasmania has in addition it appears made an in-principled heads of agreement contract with Gunns Ltd for potential wood supply to the latter's proposed pulp mill, currently at the commencement of the planning stage.⁴⁹ One of Forestry Tasmania's senior management team, - Bob Gordon – heads the pulpmill task force, having been seconded from FT.⁵⁰

4.3: In Tasmania the government presides over and watches being destroyed what are described as special species timber in Tasmania. These occur in rainforests but as well in wet sclerophyll forests which comprise for example understorey species of Myrtle, (*Nothofagus cunninghamii*), Sassafras (*Atherosperma moschatum*), Blackwood (*Acacia melanoxylon*), and Celery Top Pine (*Phyllocladus aspleniifolius*). Leatherwood (*Eucryphia lucida*) also occurs and is most significant as an attractor to bees, which results in the famous Tasmanian Leatherwood honey only produced in this state. Celery Top Pine is native to Tasmania, can possibly live for up to 900 years⁵¹ but is currently being trashed or sold cheaply in a forest programme which doesn't appear to value such timber. In the recent past for example it was sold at tender for \$27.50 tonne,⁵² much cheaper than firewood, yet is a prized and beautiful wood used for joinery, craft, and house building. Myrtle can live for up to 500 years⁵³ and belongs to the ancient Gondwana flora, is related to the South American beeches, but is different; it too is a sought after timber for joinery, craft and house building. Graham Green of Timber Workers for Forests⁵⁴ in 2002 researching a logging coupe in southern Tasmania estimated that,

Just 1% of the combined special species timbers was removed by the harvesting contractors. The remainder of the timber in the coupe, largely myrtle, celery top pine and sassafras has either been felled and left behind, or piled into windrows awaiting to be burned in the regeneration fire planned for March 2003.

Tree ferns, which include *Dicksonia antarctica*, form a prominent part of the old and ancient forest understorey, are notable in the cultural history of the state⁵⁵ and can live in excess of 350 years.⁵⁶ The incredible aesthetic contribution of the understorey trees and ferns to the forest whole has to date not been even considered.

4.4: The Special Species destruction which arises in Tasmania, follows from the fact that the bipartisan governments at all levels have allowed, in fact endorsed an

industry which is self-regulating. Tasmania is really the only state where the RFA was given the imprimatur of the Parliament.⁵⁷

4.5: There are two systems of land use planning in operation in Tasmania. One is the Resource Management and Planning System, the other the forest self regulated system.

Forest operations on State Forest [Crown land managed by Forestry Tasmania] are exempt from the RMPS planning processes.

As well, private land owners can apply to the Forest Practices Board to have their land declared a Private Timber Reserve [PTR] which then,

exempts the forestry operation from the local planning scheme thus avoiding the necessity for local government planning approval.⁵⁸ The Forest Practices system can be distinguished from the RMPS in two important aspects:

- (i) it is self-regulatory.... policy and regulations governing forest practices are set primarily by the industry, for the industry and enforced by the industry.
- (ii) There is an absence of public participation. Members of the public, no matter what their grounds or how they might be affected cannot object to, or appeal any aspect of a forest practices plan.⁵⁹

The Tasmanian Division of the Planning Institute of Australia (PIA) considered the forest problem such a serious planning one that it convened a conference in conjunction with the Environmental Defenders Office 23rd August, 2002. Among other resolutions was that the forest industry be brought into line with the Land Use Planning and Approvals Act 1993. This was not acted upon by the government.

4.6: Other significant voices have been raised in respect of the Tasmanian forestry regime. Pertinent comments were made in a public broadcast in August 2004 by noted forest ecologist David Lindenmayer,⁶⁰

In Tasmania wood harvest levels have been set too high – they do not allow for the flexibility needed for ecologically sustainable forest management.

and again,

The clearing of native forest outside the reserve system to establish plantations was the perverse result and an outcome not in the interests of Tasmanians and other Australians, not good forestry, ultimately not good for the forestry industry, and not good policy-making – an absurd outcome of Tasmania's Regional Forest Agreement process.

and still further,

Ultimately solutions to Australia's tree and other environmental problems, be they in Tasmania... cannot be tackled seriously until the nation's leaders and its inhabitants engage in robust and wide-ranging debates on the pivotal and inter-twined human/environment problem.

What appears to happen instead when issues are raised, is that people are marginalised. The robust, wide-ranging debate on the pivotal and inter-twined human/environment nexus, the sense of place, the significance of values vanishes into

the ether. In Tasmania division is particularly vicious. A public newspaper article⁶¹ just over a week ago noted that,

The industry is a series of fiefdoms, dominated by Gunns, Forestry Tasmania and the Forest Industries Association of Tasmania. They all protect their own territory and are conservative people who don't appreciate being given advice on what needs to be done to improve the industry's image.

4.7: The Senate Committee's Plantations Report stopped short of a major overhaul of Tasmania's forest practices. However its Recommendation 13⁶² did note that the Committee would conduct a review of operations under, and enforcement of the Forest Practices Code within twelve months of the publication of its Final Report. The Committee expected co-operation of both State and Commonwealth governments. In the absence of full cooperation the Committee foreshadowed that it would recommend an immediate independent review with more compelling and drastic powers. That review could be expected to be forthcoming, September 2005.

Term of Reference No. 4.

Adapting the existing tax policies to contribute to achieving the Australian and State Government desire to achieve a greater integration of plantation and natural resource management policies to improve the management of salinity and water quality.

5.1: What this term of reference does not address, is that there needs to be a greater integration of plantation and natural resource management policy, NOT just for salinity and water quality, but for all forms of natural capital and ecosystem management, for social and cultural capital or for *quality of life capital* as outlined 1.1-1.2. This is not happening in Tasmania. The triple bottom line so easily and often referred to, has in the eyes of many people become a single bottom line of economics and the market place in which industry dominates and the government of the day gives the green light. The Tasmanian Review of the Permanent Forest Estate Policy, (January 2004)⁶³ is a very good example of this type of thinking, noting at 1.9 in the discussion document that,

the size and location of the plantation estate within Tasmania should be determined by market forces and should not be subject to government regulation,

The natural capital argument; the Tasmanian RFA and its self regulated system. Issues not addressed in the Terms of Reference but intimately tied to them. Overdraft? Natural capital bankruptcy?

5.2: The Tasmanian Regional Forest Agreement (RFA) doesn't - in my view -, address wholes. It fails to balance out the various capital equities that are undergoing radical changes. Its inflexibility across its twenty year time frame now, - given climate change and global warming - is in my view a nonsense. The precautionary principle seems to be missing as policy.

For example where in the Tasmanian RFA does one find clauses that address,

- (i) The whole forest and what replacement of, or change to that might mean given global warming;
- (ii) the whole countryside rural pattern of settlement upon which plantations are imposed and dramatic change to the traditional patterns,
- (iii) the whole quality of life capital which includes the tourism industry in Tasmania and what the real cost of the land use change is to tourism.

How is natural capital (or its potential loss) being rigorously addressed? For example where are/is the

- (iv) the biophysical *ecological* ecosystem capital values adequately protected,
- (v) policy with subsequent reflection in the document which canvasses global climate change issues (and the stress this will cause existing forest ecosystems); that the JANIS 15% target for vegetation communities may not adequately reflect changes caused by global climate change,
- (vi) adequate clauses which address possible raised bushfire risk where wet sclerophyll forests are replaced by plantations,
- (vii) adequate clauses which address the long term protection of total water yield in small and large catchments, (together with the vital importance of ground water),
- (viii) adequate clauses which provide for long term ecologically sustainable soil health given present short term monocultural rotation tree farms,
- (ix) acknowledgement and appropriate protection for the vital interconnections and interrelationships with existing ecosystem soil-tree, or tall tree-understorey tree and shrub relationships which can have evolved across hundreds of years in the native forest; how subsequent “replacement” ecosystems do not reflect such diversity,
- (x) acknowledgement and subsequent dearth in the document to address the dearth (in reality) of a complete scientific biophysical audit and the need for the precautionary principle to be applied given what is not known about what is being systematically destroyed?.

Where was the requisite longitudinal research data prior to the decision making?

The responsibility of governments, bureaucracies at all levels, in this process; does it have integrity? Lord Robert May’s comments, (see 5.5) seem most relevant.

5.3: Industry argues that it operates under the auspices of the RFA, but in my opinion, ‘science’ has been being seriously hi-jacked. Sheridan’s submission to the Senate Plantations Committee pointed out significant holes from policy proposed by expert consultants to the RFA process or the Independent Expert Advisory Group.⁶⁴ The forest industry regulates itself. It does this by means of Acts, a Tribunal, an Advisory Council, the Forest Practices Code 2000, and Forest Practices Plans (FPP). The system has been weighted heavily towards the requirement needs of the forest industry⁶⁵ with the Code even admitting that in most cases it ‘provides the minimum standards that are to be achieved.’⁶⁶

5.4: Alan Kohler⁶⁷ just over a year ago, (June 2004) had observed that,

the companies are selling trees, but their customers are buying something else – a tax deduction. This mismatch between the sale and the purchase motivation means the price is unrelated to the product.

Herein lies the problem. Under current tax incentives/product rulings natural capital, (the ecosystems) are being treated as though they are inert, lifeless, a product, a commodity, tradeable, no more or less than a stockmarket share. Natural capital in Tasmania, the ecosystems upon which the plantation increase is being played out, could – in Sheridan’s view – be in serious overdraft. We are constantly being reminded that this is not just the case in Tasmania, but is a world wide phenomenon, ‘humanity’s “massive overdraft” with Earth.’⁶⁸ Tasmania has a peculiar situation, where native forest is cut down in order to plant, tree farms and industrial plantations.

5.5: The overdraft scenario reached new heights in 2005. In an interview⁶⁹ in April 2005, between the ABC’s Mark Colvin and Lord Robert May, former chief scientific advisor to Tony Blair, and President of the Royal Society, a warning was issued. It came via the then released *Millennium Ecosystem Assessment*, backed by more than 1000 scientists from 95 countries. Human pressure had bitten into two thirds of the natural machinery that supports all life on earth. It said that the wetlands, forests, estuaries, coastal fisheries, savannas and other habitats that recycle air, water and nutrients for all living creatures were being irretrievably damaged and it argued among other things for a new way of calculating the economics of environmental degradation.

Specifically Lord Robert May noted:

We don’t amazingly even know how many different species have been named and recorded. It goes to ask questions like,

Quite apart from how many species there are, how crucial is biological diversity in the functioning of ecosystems as a whole?

How much in this ecosystem or that region can we lose and still have ecological services that we as humans depend upon to pollinate plants, to clean the water, breeding grounds for fish, and that ultimately is an economic question?

Further and of relevance for those conducting this Review he noted also,

Well let me take the first step. At the moment many of the people that are engaged in this business feel what would be really nice would be to have some ecological analogue of the economist’s measures of the health of the economy and the quality of life and in particular some costing of -as it were- GDP, Gross Domestic Product terms similar to that for conventional economics that include these environmental costs. Once you put it that way, it really brings home to you some of the shortcomings in this supposedly accurate indices we have of economics.

5.6 The State of the Environment Report Australia [2001] too, noted that land clearing and loss of biodiversity was a significant pressure on the environment. On the world scale of land clearing, Australia came in 5th after Brazil, Indonesia, the Republic of the Congo and Bolivia. In the first ten countries, no other western

country except Australia is listed.⁷⁰ Tasmania has the highest rate of land clearing in Australia when taken as a percentage of its land mass.⁷¹

One then asks, what is Gunns Ltd planning to do with its 80,000 ha of native forest?

5.7: The private forest Comprehensive Adequate and Representative (CAR) reservation component is supposedly integral to the success of the Tasmanian RFA system. The JANIS benchmark called for the reservation figure of 15% for any particular vegetation community but on private land what operates is a voluntary system. Private forests in Tasmania total just over a million hectares. What has been reserved to date is approximately 3% of the total private forest base. When figures are examined within the various Tasmanian RFA vegetation communities, it becomes readily apparent that their occurrence, (and possible subsequent reservation) on private land is fraught with uncertainty. For example, communities⁷² such as Grassy *Eucalpytus viminalis* have 96.29% of their occurrence on private land, Inland *E. tenuiramis* forest has 84.18% and so on.⁷³

How then does the current taxation incentives/current product ruling procedures protect with integrity the natural capital values of the private forest areas of Tasmania?

5.8: The possible water yield overdraft has been raised a great deal in Tasmania of recent years, given dramatic plantation increase. The Senate Committee⁷⁴ on plantations reviewed evidence before it on water yields and concluded,

The Committee recommends that the Commonwealth urgently fund the conduct of a water audit in both the mainland and Tasmania, to assess the impact of plantation forests on both water quantity and quality.

Unlike in other parts of Australia, Tasmania's plantations often replace native forest in mountainous and hilly upslope areas, between the agricultural and pastoral lands at lower elevations and the higher peaks and mountains. They are thus located in the upper watersheds of major and minor river and stream catchments. An independent study done by Launceston City Council on the North Esk July 2002, found that low flows were affected most in the 20 year logging tree farming scenario, (NB: this was the shortest time frame in the modelling; industry is operating on a 13 year turnaround rotation system). By the second rotation in the model, there was a 33% reduction in water yield.⁷⁵

Again how is the present system of taxation benefits protecting with integrity the natural capital water yield in Tasmania's river systems?

5.9: The present process of cutting down and land clearing of native forest and its replacement with immature young trees, may contribute to a reduction of the local rainfall totals in particular areas where it covers wide areas.

Australian scientists say they have found proof that cutting down forests reduces rainfall.

About one in every 500 water molecules had its second hydrogen atom replaced by a heavier version called deuterium. And one in every 6500 molecules included a heavy version of the oxygen atom.

While the heavier water molecules were slower to evaporate from rivers and groundwater, they were readily given off by the leaves of plants and trees, through transpiration.

Once the forest cover is removed, the heavy molecules were no longer being returned to the atmosphere to fall again as rain.

Forests played a vital role in keeping the heavy molecules and their far more common relatives moving through the water cycle.

This is the first demonstration that deforestation has an observable impact on rainfall.⁷⁶

An example then of the another part of the earth's natural capital -rainfall- under pressure, the observation of which has been with us for centuries as shown by the extract below.

Letter XXIX: Selborne, Feb 7, 1776.

Trees perspire profusely, condense largely and check evaporation so much, that woods are always moist: no wonder therefore that they contribute much to pools and streams. That trees are great promoters of lakes and rivers appears from a well known fact in North America: for since the woods and forests have been grubbed and cleared all bodies of water are much diminished; so that some streams that were very considerable a century ago, will not now drive a common mill.⁷⁷

5.10: The health and capability of the soil base is another part of natural capital, a vital part of ecosystem viability and stability. Currently in Tasmania, a total of 86% of plantation⁷⁸ has proceeded on land with a Capability Class of 5-7⁷⁹ or on a proportion of land that under the State's Land Capability (soil) Assessment regime was identified as land that should have been retained under its natural vegetation cover.

Back in 1987, Dr Peter Attiwill⁸⁰ delivered a paper to the Tasmanian Institute of Foresters. Critical to the discussion was the loss of nutrients from the soils across rotations. Critical to this Review discussion was the length of rotation times given in that paper, what is happening in Tasmania in 2005 with its turnaround 13 year rotation times, and how another parameter of the earth's natural capital is potentially – in my view - being compromised. Attiwill put the replacement times following clear-felling and burning of,

100 years for nitrogen and phosphorus, 50-60 years for calcium and potassium and 25 years for magnesium. Turner and Lambert (1986) stressed the need to recognize the equilibrium between organic and inorganic pools of phosphorus. They estimated that, with the most-limiting assumptions of no inputs of phosphorus, more than four rotations of 320 years of intensive harvesting would be required before the run-down of phosphorus and calcium in the soil became critical. Reserves of potassium and magnesium were even greater.

Carbon was not mentioned, but the current thought in Tasmania is that residue from the forest floor containing carbon will be sent to biomass fired power stations. This despite the fact that the ash forests of Victoria (in Tasmania not dissimilar tall wet forests) were found to be amazingly rich storage pools of carbon by David Lindenmayer and his team.

5.11: Global warming is now accepted by most governments as reality. What is less accepted are ways to mitigate against its effects. Rainfall is cited as one of the parameters which may well change in Australia, (and Tasmania) given the onset of global climate change. Changes can occur in distribution throughout the year, while given totals for any location can also change. The FWPRDC Water Study cited in the Senate's Plantations Report, (see p69: 5.16-5.18, 5.24-5.25) appears not to have considered the rainfall changes which could likely occur given global warming. Tasmania is not generally thought of as having low rainfall totals, nor distribution rainfall problems when compared to the rest of Australia. Currently its dams in 2005 are at record low levels, (22%) and electricity rationing may occur in the following summer. A possible telling forecast of what might be in store for future Tasmania appeared in *Tasmanian Country*⁸¹, March 2003. The title of the article was "C'mon rain." Shown was a map of rainfall. The entire S.E. of Tasmania had recorded 'lowest on record falls,' surrounding this large area, the Midlands, east coast and ranges, 'very much below average,' with much of the rest of the entire state shown as 'below average.'

The precautionary principle could be put in place while more research is completed in respect of total rainfall, rainfall distribution particularly in the autumn months and global warming modelling predictions for Tasmania.

5.12: The Institute of Foresters, Tasmania⁸² were delivered a paper on global climate change in 1987. Those present were told,

Trees in Tasmania are at present limited in their growth rate mainly by temperature as is evident from the sensitivity of annual ring-width in several species to summer temperature at such elevated temperatures as are expected in Tasmania by 2030 ... other factors may come into play, namely summer heat stress and soil aridity, fire and changes in species composition.

Nothing appeared however in the Tasmanian RFA in respect of global climate change. One asks, if this was superior science, why not?

5.13: With increased possible summer temperatures, comes the associated increased risk of bushfires. Or more possibly plantation tree farm fires. Where there are even aged crowns and where across swathes of land a monocultural pattern predominates, replacing former complex forest systems.

Urgent research into both fire incidence and intensity in Australian native forests and forestry plantations is critical. Recent wildfires have also occurred in Tasmania emanating from plantation tree farms.⁸³ Since 1984 scientists have warned that the clearfell, slash and burn regeneration techniques of the forest industry 'increased the risk of wildfire damage rather than the reverse'.⁸⁴ An edition of *OnWood*⁸⁵ presented some critical information for those involved with the plantation industry. Jim Gould from the CSIRO and others concluded that,

extending rotations beyond an age of around ten years will increase the risk of losses in the event of a fire because of the greater amounts of litter and bark fuel present in these older plantations,⁸⁶

with a fuel loading

similar to that in dry eucalypt forest 8-10 years after [the] last fire..⁸⁷

CSIRO and the Country Fire Authority research from the area known as the Green Triangle area of Victoria and South Australia indicated that young plantations could still exhibit large fuel loads. Researchers discovered that beyond seven years the eucalyptus plantation had a continuous litter cover with a fuel load of over eight tonnes per hectare with bark streamers of bark peeling from the trees; this added to the fuel load. The research concluded that,

extending rotation[s] beyond 10 years on a broad scale could result in an escalating fire hazard across the landscape. Silvicultural treatments to reduce the hazard level in older plantations need to be examined.⁸⁸ The authors also suggest that 'new models that provide fire and plantation managers with a better basis for planning pre-suppression and suppression activities are required,⁸⁹

and again that large plantation blocks of hundreds of hectares,

raises concerns that the risk of fire associated with plantations in the future will differ significantly from the historical fire risk associated with agriculture activities.⁹⁰

It appears that the type of plantation forest species used, their age and management are critical in determining the wildfire risk occurring and affecting adjoining properties. The research suggested that,

the cost of fire management must be an integral part of plantation establishment and management and aim to produce 'least cost-plus-lost' outcome for the plantation growers.⁹¹

Do the current industry prospectuses contain the recommendations as outlined above?

**Quality of Life Capital and the Tasmanian RFA:
Community, Sense of Place, Tourism, Heritage and Cultural Landscape issues.**

Where in the RFA for this state does one find,

- (i) the concepts of cultural landscapes adequately protected,
- (ii) the need for rural community involvement,
- (iii) a mechanism which addresses and connects with social and cultural capital issues,

5.14: The researched response which is emerging at the community level to plantations is varied⁹² but there would appear to be significant community negativity in Victoria at least of the new emerging landscapes, particularly where it is blue gums which comprise the plantation landscape.⁹³ In the Tasmania Together⁹⁴ document, Tasmanian people overwhelmingly asked that Old Growth logging be terminated by 1 January, 2003. This was not acted upon by government. In Tasmania, newspapers consistently report local community responses to plantation development; this is not usually positive. Requisite independently conducted research on this issue is urgently required.

5.15: The negative loss to the Tasmanian tourism and agricultural industries hasn't - to my knowledge - been calculated if industry projections proceed. In 2003, tourists to Tasmania spent \$1.35 billion.⁹⁵ The number of tourists rose to 742,900 and 4,000 new tourist jobs were created across the state.⁹⁶ Even in 1998 over 18,000 people were employed in the tourism industry, (over 10% of the workforce);⁹⁷ given the surge in tourism 2003/2004, these figures could be expected to be now very much higher. Tourism dollars, combined with those of agriculture (\$2.70 billion – 2002 figure)⁹⁸ totalled approximately \$4.06 billion. Forest products totalled \$1.2 billion in 2001.⁹⁹

There are agricultural services such as honeybee pollination services to the tune of \$110 million per annum.¹⁰⁰ Such bee services involve Leatherwood trees- part of the understorey species of the wet sclerophyll forests - not replaced in plantation tree farms, not always replaced in regrowth forests. Critically the Leatherwood flowers at a crucial time for the bees, and helps tide them over the winter period. Tasmania is the only Australian state producing Leatherwood honey for export.

5.16: What is being commodified across parts of Tasmania is its landscape, with one land use dominating as though peoples, land and place are irrelevant. For future tourism the landscape change now accompanying the land use change can be anticipated to have deleterious consequences. Tasmanian tourism has to remain competitive; it has to compete with other Australian places as well as overseas. Tourists move around the state along its A, B, and C class roads though their exact patterns are not mapped by Tourism Tasmania. Increasingly they are able to witness the effects of the state's industrial logging practices. Tasmania is increasingly concerned with its Brand image in respect of its tourism industry. Landscape beauty is certainly a vital part of this and has been across centuries. Beattie, a Tasmanian well-known photographer at the turn of the nineteenth to the twentieth century summed it up well:

The beauties of the Tasmanian scenery have been the subject of endless eloquence... Interviewed tourists have spoken of them in the highest terms treading often on what to a sceptic would appear to be the verge of extravagance in language.... One of the charms of Tasmanian scenery is undoubtedly its infinite variety. No other island in the world perhaps combines so many natural attractions within so small a scope.¹⁰¹

Tourism Tasmania in its 2003 booklet *The Tasmanian Experience* (2002) in fact noted that Tasmania's three core attributes were natural heritage, cultural heritage and fine wine and food. In an even more telling analysis, in a 'New Tasmania' lift out from *The Weekend Australian*,¹⁰² it was concluded that 'we discovered wildlife, waterfalls, rainforests and ourselves' (Sheridan's emphasis). A large slice of such visionary 'ideal places' however, especially on private land, are currently inadequately protected.

5.17: From earliest times the beauty of this island has been commented upon. There is an intimacy in space and place in Tasmania, not found elsewhere in this country. It appears to have been perceived as something of a mythical 'Arcadia' in the human mind, - a paradise of beauty, grandeur and scenic authentic wonder. Nowhere else in Australia can such a scenic mythical diversity and antiquity in landscape be experienced juxtaposed within such a short distance; that is the paired opposites of the Sublime, (the wild primeval Arcadia found in western alpine areas but in the ancient

forest especially its understorey) and the Picturesque, (the transplanted, but peculiarly Tasmanian version of English rural Arcadia found in the countryside).¹⁰³ Such cultural landscapes were, and still are, tied to a viable and growing tourist industry.

*Tasmania's evolved rural cultural landscapes include some of the most extant nineteenth century cultural landscapes in Australia.*¹⁰⁴

However under current legislation - the Historic Cultural Heritage Act (HCHA) - they are not protected.

5.18: The evolved cultural landscapes – particularly in Tasmania's rural countryside - have emerged after two hundred years of white settlement. It is here, in the rural countryside, (which also embraces native forest areas as a backdrop) that plantation development is occurring. While forestry remains self regulated, loss of rural landscape can be rapid and sudden,¹⁰⁵ as the traditional 'picturesque' countryside is replaced. Colonial painters and photographers perceived such landscapes to be an archetypal Arcadia; the apparently gentle, comfortable, securely familiar known countryside idyll for which England was then famous. More than anywhere else in Australia, that re-created English ideal is still able to be interpreted in the broad cultural landscapes that remain in Tasmania. From the former hop farms of the upper Derwent Valley, to the apple orchards of the Huon, the small fruit and orchard farms of the Channel, the pastoral landscapes of the Midlands, the north west dairying and vegetable growing farms, a particularly Tasmanian cultural landscape ideal emerged across time; one which combined the naturally occurring landscape elements with those of evolving built structures in unique patterns. What emerged from the mix was and is quintessentially Tasmanian;¹⁰⁶ such landscapes don't appear elsewhere in the world. Significantly, 'wildness' and forested upper hill slopes were seen as a backdrop to the settled districts; heightening the juxtaposition of the known to the unknown, the wild archetype and the settled farmland archetype each a feature of this island's landscape pattern.¹⁰⁷ The characteristic nineteenth century landscape ideal of the 'long prospect' occurred in abundance, realised by visitors and settlers alike, while farm lot sizes were more of the order of those in the old country and afforded great visual diversity. Water was a very visible landscape presence either at the shoreline or within the river valley and authentic Georgian architecture abounded.¹⁰⁸ Marked out by hedges, by exotic or indigenous tree lines, certain parts of the landscape took on a distinct 'chequerboard' effect,¹⁰⁹ parts of it still intact in 2003.

5.19: The linkage of beauty, archetypal Arcadian myths, tourism and cultural landscapes is a demonstrated one across more than one and a half centuries,¹¹⁰ so that a detailed current tourism response to plantation farms and cultural landscape change is urgently required. Tourism Tasmania does not gather such information.¹¹¹ Tourists appropriate scenery and 'prospects' as they have done since the Grand Tour of Italy in the 1700s and it is the scenery and 'prospects' which are changing rapidly in certain areas of this state.

5.20: Cultural landscapes and quality of life capital are nowhere mentioned in the forest self regulated system; not in the management tools nor in the policy documents, the forest industry even ignoring its own heritage advice, whilst clinging to site appraisal, and with no cultural landscape officer employed on staff.¹¹² Elsewhere,

particularly in heritage circles, discussion is attempting to move beyond the narrow heritage site focus,¹¹³ to a broader cultural landscape heritage based, approach.

Conclusion

Clearly those who have the responsibility for reviewing the submissions to this Taxation discussion have choices. Is the choice to be one which

- (a) ratifies the current taxation/product ruling system and status quo,
- (b) takes an alternate path which factors in the other types of “capital” which have been referred to in this submission,
- (c) identifies that Tasmania is a special place and has special needs,
- (d) takes a path of integrity for intergenerational equity and long term vision?

Ronald Wright and Jared Diamond¹¹⁴ have both written books on the collapse of past civilisations, - one a short, concise read, the other longer and with a chapter specially devoted to Australia. Both insightful books have been published 2004/2005. When interviewed Diamond¹¹⁵ noted,

In Tasmania for example the logging of old-growth forests has already had an impact. Japan is a first world country which has devoted 74% of its available area to forest. The largest in the first world. Australia is a first world country with the lowest percentage devoted to forest. When you look at the price Australia is getting from the Tasmanian forest products something like 99% per cent of value is added on in Japan. Australia is getting just a rotten deal economically from Tasmanian trees. The economic relations with Tasmanian logging are like the economic relations between Britain and India in the middle of the 1800s when Britain forced India to export raw cotton to Britain so that Britain could send back the finished products at high prices.

History will determine whether their theses have validity. There is an urgent caution to change direction from our given status quo.

In respect of the Tasmanian forest industry this submission has argued that such a changed direction is urgently required. Taxation, - acts, incentives, product rulings – lies at the heart of that change.

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- ¹ Released September 2004. 207 pages.
- ² Ronald Wright: *A Short History of progress*. Text Publishing. Melbourne. Australia. 2004. 129-130. Massey lecturer.
- ³ Dean Logan: CEO Patrick Russell Consulting P/L. in Letters to the Editor, *The Mercury*, May 7, 2005.
- ⁴ For an explanation of this see CAG Consultants and Land Use Consultants 2001: *Quality of Life Capital*. English Heritage Environment Agency, Countryside Agency and English Nature Cheltenham.
- ⁵ The Senate Committee Report: Rural and Regional Affairs and Transport References Committee: *Australian forest plantations: A review of Plantations for Australia: the 2020 Vision*. September 2004. 110.
- ⁶ Ibid. 39.
- ⁷ Kelly M; Tredinnick J; Cutbush G; & Martin G: Forest and Wood Products: Research and Development Corporation, (FWPRDC): *Impediments to Investment in Long Rotation Timber Plantations*. Project No. PN05.1011. 17. Released March 2005.
- ⁸ DAFF: *National Plantation Inventory*, Australia. 2004 update.
- ⁹ The Senate Committee Report: Rural and Regional Affairs and Transport References Committee. See 3.38: Evidence Ms. Judy Clark, RRA & T, 21 February 2003, p. 301, Senate Committee Report. 38.
- ¹⁰ Ibid. 2004 p.ix and also at 37.
- ¹¹ ABC: *Tasmanian Country Hour*. 28.6.2005: Nick Pedley, Rosemary Grant, Sally Dakis: Plantation forestry review.
- ¹² Nolan G; Greaves B; Washusen R; Parsons M; and Jennings S: *Eucalypt plantations for solid wood products in Australia: A Review: If you don't prune it we can't use it*. FWPRDC: 2005; v.
- ¹³ See for example *Impediments to Investment in Long Rotation Timber Plantations*. Project No. PN05.1011. Op. cit. 13.
- ¹⁴ Kohler Alan: Tax bill to ringbark tree schemes: *The Australian Financial Review*. Weekend. 10-12 June, 2000. 64.
- ¹⁵ Ibid. 64.
- ¹⁶ Ibid. 64.
- ¹⁷ Kohler Alan: *Australian Financial Review*. 10-12 June 2000. 64.
- ¹⁸ Ibid. 64.
- ¹⁹ Pierpont: Timb-e-r-r-r! It's FEA going down: *The Australian Financial Review*. Friday 27, July 2001.
- ²⁰ Ibid.
- ²¹ Warner Georgia: \$2500 fine for plantations boss: *The Mercury*: 17.1.2002.
- ²² See Gottliebsen Robert: Putting wood on taxman. *The Weekend Australian*. September 29-30, 2001.
- ²³ Dury Barbara: Woodstocks: Agribusiness: *The Sydney Morning Herald*: May 25, 2005. 8-9.
- ²⁴ Kelly M; Tredinnick J; Cutbush G; & Martin G: Forest and Wood Products: Research and Development Corporation, (FWPRDC): *Impediments to Investment in Long Rotation Timber Plantations*. Project No. PN05.1011. 3. Released March 2005.
- ²⁵ Ibid. and Nolan G; Greaves B; Washusen R; Parsons M; and Jennings S: *Eucalypt plantations for solid wood products in Australia: A Review: If you don't prune it we can't use it*. FWPRDC: 2005; v.
- ²⁶ Les Baker, Executive Director, Gunns Plantations Ltd in evidence to the Commonwealth of Australia Senate Committee: Rural and Regional Affairs and Transport References Committee, 29th November 2002. Launceston. Transcript.
- ²⁷ Ibid.
- ²⁸ Smith Paul Robert Cowper. Forestry Tasmania. Evidence to the Australian Senate: Rural and Regional Affairs and Transport. Inquiry into Plantations Forest Industry. 29th November 2002. Transcript of hearing.
- ²⁹ The Senate Committee Report: Rural and Regional Affairs and Transport References Committee: *Australian forest plantations: A review of Plantations for Australia: the 2020 Vision*. September 2004 gave a very similar figure of 13,500.
- ³⁰ *Farm Forestry Newsletter*: No. 72: July 2004. Private Forests Tasmania. 8. The source of these was given as the National Plantation Inventory Australia, 2004 update.

- ³¹ Davey and Maynard. *Rural Land Use Trends in Tasmania*. A Report prepared for the Tasmanian Department of Infrastructure, Energy and Resources. 2003. Released publicly in March 2004.
- ³² Bureau of Rural Sciences: Department of Agriculture, Fisheries and Forestry, [DAFF]: *National Plantation Inventory*. Australia. 2004 Update. 2.
- ³³ Commonwealth of Australia Senate Committee: Rural and Regional Affairs and Transport References Committee: *Australian forest plantations: A review of Plantations for Australia: The 2020 Vision* September 2004: 112.
- ³⁴ Les Baker, Executive Director, Gunns Plantations Ltd in evidence to the Commonwealth of Australia Senate Committee: Rural and Regional Affairs and Transport References Committee, 29th November 2002. Launceston.
- ³⁵ Pers. Comm.. Private Forests Tasmania, 11.7.2005.
- ³⁶ Dept of Infrastructure, Energy and Resources: Tasmanian government department with a forest policy unit.
- ³⁷ Commonwealth of Australia Senate Committee: Rural and Regional Affairs and Transport References Committee: *Australian forest plantations: A review of Plantations for Australia: The 2020 Vision* September 2004. 106.
- ³⁸ These are shown on the 1:25,000 maps of Tasmania. They were the identifiable mapped land parcel in the past and companies/individual advertised PTR projected gazettals still give the UPI number.
- ³⁹ See the Public Notices, *The Mercury*, February 5, 2005.
- ⁴⁰ Forest Enterprises Group 2002. *Project 2002*.
- ⁴¹ From planting to harvesting.
- ⁴² These are the times cited in the Gunns prospectuses. It is thought that the Forest Enterprises Group have even shorter time lines. To opt for the longer rotation costs considerably more to the investor.
- ⁴³ See for example Paul Lennon, in Parliament of Tasmania: House of Assembly: Government Business Scrutiny Committee. Forestry Tasmania. 18th February, 2003. 49.
- ⁴⁴ Forestry Act: Amendment Act. 1984. Section S.22AA.
- ⁴⁵ Source: ABS Forest Products Tasmania, March quarter, 1990.
- ⁴⁶ Clause 77 of the Tasmanian RFA Agreement.
- ⁴⁷ Parliament of Tasmania: House of Assembly: Government Business Scrutiny Committee. Forestry Tasmania. 18th February, 2003. 25.
- ⁴⁸ These figures were offered by Senator Bob Brown who asked the question to FT's Dr. Drielsma, 'wasn't this a massive subsidisation of Gunns? This question concerning subsidisation was not answered by Dr. Drielsma. See Commonwealth of Australia Senate Committee: Rural and Regional Affairs and Transport References Committee, 29th November 2002. Launceston. Transcript of hearing.
- ⁴⁹ Parliament of Tasmania: House of Assembly: Government Business Scrutiny Committee. Forestry Tasmania. 2nd March, 2005.
- ⁵⁰ Ibid.
- ⁵¹ Tighe PJ. An Introduction to the Cool Temperate Rainforests of Tasmania: Their composition, important species and post glacial distribution. In: Occasional Paper No. 15. Dept. of Geography and Environmental Studies. University of Tasmania. 1982.
- ⁵² Pers. Comm. John Maddock TWFF, who bought some.
- ⁵³ Tighe PJ. Op cit.
- ⁵⁴ Green Graham. *Logging Coupe Inventory: Esperance 74D (EPO74D)*. For TWFF. April 2002.
- ⁵⁵ Sheridan GM.: Is Arcadia under Attack? Cultural landscapes and tree plantations in Tasmania. *Australian Planner*. 41.2.2004. This refereed paper was prepared in 2003, and delivered to the National Planning Institute of Australia's conference, Planning on the Edge, Hobart 23rd February, 2004. Some figures in this report are now dated.
- ⁵⁶ Lindenmayer DB; Cunningham RB; Donnelly CF; Franklin JF; Structural features of old-growth Australian montane ash forests. *Forest Ecology and Management* 134. 2000. 198.
- ⁵⁷ Parliament of Tasmania: House of Assembly: Government Business Scrutiny Committee. Forestry Tasmania. 18th February, 2003. Evan Rolley. 49.
- ⁵⁸ Lawyers for Forests: *Reform of Tasmania's Forestry and Environment Laws: Executive Summary*: February 2002, pp. 3-4. This summary is held by Sheridan. Contact the EDO Office,

Tasmania. The substance of this document is contained within the 11 Resolutions: See also Sheridan G.M: Submission to the Senate Plantations Committee.

⁵⁹ All of the direct quotes used here are taken from the Lawyers for Forests Executive Summary, held by Sheridan. The substance of this can be found in Sheridan G.M: Submission to the Senate, Commonwealth of Australia. Rural and Regional Affairs and Transport Legislation Committee. *Plantations Australia. The 2020 Vision*. October, Canberra. 90 pages. Available online at <http://www.aph.gov.au/hansard>. A copy is most likely available at the EDO Office in Hobart.

⁶⁰ Lindenmayer David: Australia's Tree Conundrum. ABC/RN: Perspective 17th August. 2004. Lindenmayer is a highly respected forest ecologist at CRES, (ANU), author of 13 books and over 350 scientific articles on forest ecology, forest, wildlife and conservation management.

⁶¹ Neales Sue: Forestry image logjam: Fed-up adviser quits, slams industry resistance to change. *The Mercury*. July 13. 2005. 13.

⁶² Commonwealth of Australia Senate Committee: Rural and Regional Affairs and Transport References Committee: *Australian forest plantations: A review of Plantations for Australia: The 2020 Vision* September 2004. xi.

⁶³ This was the discussion paper.

⁶⁴ See for example the Tasmanian Commonwealth RFA: Independent Expert Advisory Group. [IEAG]: *Final Report, Background Report Part G: Ecologically Sustainable Forest Management Systems and Processes*, 1997.

⁶⁵ Sheridan, G.M. (2002) Submission to the Senate, Commonwealth of Australia. Rural and Regional Affairs and Transport Legislation Committee. *Plantations Australia. The 2020 Vision*. October, Canberra. 90 pages. Available online at <http://www.aph.gov.au/hansard>

⁶⁶ Forest Practices Code: Forest Practices Board. Hobart. 2000. 2.

⁶⁷ Kohler Alan: Buy a tree and by gum, it's a tax deduction: *The Sydney Morning Herald*: June 26-7. 2004.

⁶⁸ See Humanity's massive overdraft with Earth. 9th July 2002. New Scientist.com.news.service. "We are destroying fish stocks, overcultivating soils and felling forests faster than they can regrow."

⁶⁹ ABC/RN: PM, Transcript between Lord Robert May, President of the Royal Society, member of the core writing team of the Millennium Ecosystem team of scientists, April 5, 2005.

⁷⁰ Environment Australia, State of Environment Committee: *State of the Environment 2001*. CSIRO, Victoria 2001. pp. 1, 73.

⁷¹ ABC RN/Earthbeat: *Tasmania's Plantation Juggernaut*: 24.3.2001.

⁷² Under the RFA, vegetation was divided into broad groups, such as Dry Eucalypt forests, Wet Eucalypt forests, Non eucalypt dry forests etc. The Grassy *Eucalyptus viminalis*, vegetation grouping belongs in the Dry Eucalypt forests. For more information on this and the extent of various vegetation communities on private land see Footnote 28, (below).

⁷³ Sheridan GM. Submission to the State Government. 2003. Op. cit. These tables can be supplied to your department if you so wish.

⁷⁴ Commonwealth of Australia Senate Committee: Rural and Regional Affairs and Transport References Committee: *Australian forest plantations: A review of Plantations for Australia: The 2020 Vision* September 2004. 74.

⁷⁵ Sheridan quoted in the Senate Plantations Committee Report. Ibid. 118.

⁷⁶ Taken from: Richard Macey: Fewer trees, less rain: study uncovers deforestation equation. March 4, 2005: <http://www.smh.com.au/news/Environment/Fewer-trees-less-rain-the-forestation-equation>

⁷⁷ White Gilbert: *The Illustrated Natural History of Selborne*: Published in collaboration with the Gilbert White Museum: Webb and Bower, Exeter, 1981. The original Gilbert White was published in 1789.

⁷⁸ Davey and Maynard. *Rural Land Use Trends in Tasmania*. Op. cit. 38.

⁷⁹ The private agricultural lands of Tasmania are currently being assessed by the Dept. of Primary Industries, Water and the Environment and are classed into seven groups, from the land with the best agricultural capability, (Class 1) to that with the poorest potential, (Class 7). One such report is entitled *Land Capability Survey: Tasmania: Derwent Report*. RA Musk and RC De Rose. (authors) 2000.

⁸⁰ Attiwill Peter: Forest soils and nutrient cycling- with reference to forests of North Eastern Tasmania. In *Tasmania's Forests: Beyond 2000*: Papers presented at a public seminar in Hobart on the 4th July 1987 by the Tasmanian Division of the Institute of Foresters of Australia Inc. and ANZAAS. 11.

- ⁸¹ *Tasmanian Country*: C'mon rain. Friday, March 7. 2003.
- ⁸² Pittock Dr. A. Barrie: Forests beyond 2000: effects of atmospheric change. In *Tasmania's Forests: Beyond 2000*: Papers presented at a public seminar in Hobart on the 4th July 1987 by the Tasmanian Division of the Institute of Foresters of Australia Inc. and ANZAAS.
- ⁸³ At Uxbridge in the Derwent Valley and at Saddleback in the state's north east.
- ⁸⁴ *Journals and Papers of Parliament*. Legislative Council Select Committee. State Forestry. Paper 49. 1984. 25. The scientists were Jamie Kirkpatrick and D.M.M. Bowerman.
- ⁸⁵ CSIRO. Forestry and Forest Products. *OnWood 39*. Eucalypt plantations raise new fire management issues. Summer 2002/2003.
- ⁸⁶ Cheney N.P., Gould J.S. McCaw L. Bluegum Plantations – Are we under-estimating the Fire Hazards? Paper supplied to Sheridan from the authors. Presented at the Australian Forest Growers Conference. 2002.
- ⁸⁷ CSIRO and Forest Products. Bushfire Behaviour and Management Team. Development of a Fire Management Strategy for Blue Gum (*Eucalyptus globulus*) Plantations. Research proposal for Country Fire Authority Victoria.
- ⁸⁸ Gould J.S. McCaw L. Cheney N.P. Forest Plantations – Are we under-estimating the Fire Hazards? Paper presented at *Forests in a Changing Landscape. 16th Commonwealth Forestry Conference held jointly with the 19th Biennial Conference of the Institute of Foresters of Australia*. Fremantle W.A. 18-25th April 2001.
- ⁸⁹ Ibid.
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