



Committee Secretariat
Standing Committee on Agriculture and Water Resources
Timber Supply Chain Constraints
PO Box 6021
Parliament House
CANBERRA ACT 2600

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Dear Committee Secretariat,

HVP Plantations Pty Ltd Submission

House of Representatives Standing Committee on Agriculture and Water Resources
Inquiry into the Timber Supply Chain Constraints in the Australian Plantation Sector

HVP Plantations (HVP) is a plantation forest owner and land manager based in Victoria. HVP is a private company owned by US and Australian pension and superannuation funds.

HVP owns or manages around 237,000 ha of land spread across the state. HVP's estate comprises approximately 155,000 ha of softwood plantation, 15,000 ha of hardwood plantation and 48,000 ha of native forest (custodial land; managed for conservation values with no harvesting). The remaining area comprises roads, firebreaks and other supporting infrastructure. HVP's head office is in Melbourne and regional offices are located in Ballarat, Mt Gambier, Churchill and Myrtleford. All of HVP's log production is from plantation grown sources.

HVP produces over 3 million cubic metres (m³) of harvested logs each year, which support a vibrant sawmilling and wood processing industry in Victoria, the Green Triangle area of South Australia and the Hume-Snowy (South West Slopes) region of NSW. HVP is a fully sustainable and renewable forestry operation. All areas harvested are subsequently replanted. The annual harvest and replanting program is around 6,000 ha.

HVP is a member of the Australian Forest Products Association (AFPA) and a foundation member of the Victorian Forest Products Association. HVP was a foundation member and is on the board of the Gippsland Forestry Hub and the Green Triangle Forest Industries Hub and is a member of the South West Slopes Forestry Hub. HVP actively contributes to forestry research projects and forest industry activities undertaken by the Forest and Wood Products Association (FWPA), and research projects through the National Institute of Forest Products Innovation (NIFPI) centres.

HVP's operations are certified under Forestry Stewardship Council (FSC) and Responsible Wood.

Responses below address each of the Terms of Reference of the Inquiry.

1. The nature of wood supply from Australia's plantation sector, including projected timber volumes available over the next 30 years and the potential grades of logs available

Softwood plantation management

HVP's typical management regime for *Pinus radiata* (softwood) plantations, which comprise over 90% of its estate, is as follows:

- i. Plant seedlings (typically around 6,000 ha per year) - age 0
- ii. First thinning at age 11-13 (depending on site quality) - open up the stand and thin poorer quality trees, producing only pulpwood grade logs
- iii. Second thinning around age 20 - thin poorer quality logs and provide growing space for the best trees; produces pulpwood grade logs and small sawlogs
- iv. Final harvest around age 27 to 30 - produces essentially all of the medium and larger sawlogs, as well as pulpwood logs from the tops and poorer sections of final harvest trees
- v. Replant and repeat the management regime.

There are some key points to highlight about management of softwood plantations:

- (a) It takes 11-13 years from planting before you get any saleable products and 27-30 years from planting before you produce the types of logs that form the bulk of supply to a mill producing structural timber for house frames etc., or structural plywood.
- (b) Pulpwood grade logs are used for manufacture of pulp and paper, as well as the production of reconstituted wood panels such as particleboard and medium density fibreboard (MDF). There are strong domestic markets for pulpwood grade logs in Gippsland and NE Victoria but no market for pulpwood grade logs west of Melbourne (i.e. for any of HVP's Western Region).
- (c) Unless you have a market for pulpwood grade logs, it is very difficult to produce sawlogs and very difficult to achieve a commercial return - you get no return from the costs incurred in providing the space for the best trees to grow, you get less quality sawlogs and any cash return is delayed until final harvest.
- (d) To be able to produce a regular supply of pulpwood grade logs or sawlogs to sustain a mill, the combination of thinning and final harvest of logs needs to be replicated year after year. For example, if a mill requires 500,000 m³ of sawlogs every year, there must be sufficient areas that are subject to final harvest (supplemented by small sawlogs from areas that are second thinned) to supply that volume of sawlogs every year. This means that, if it takes 27 years until final harvest, then on average there needs to be 28 ages classes (ranging from age 0 to age 27), each large enough to supply close to 500,000 m³ of sawlogs from final harvest.

Potential volume by log grade

The volume of potential grades of logs produced from a particular softwood plantation estate can be strongly influenced by the availability of a market for logs of particular grades and the quantum of logs that the market demands for commercial viability. For example, the volume of logs required to sustain the Australian Paper mill in Gippsland means that both pulpwood grade logs and sawlogs are supplied to what should be a processor that only takes pulpwood grade logs. As a result of bushfires over several years, HVP was not able to supply enough logs to meet the demand for both pulpwood grade logs and sawlogs at commercially viable levels. The Carter Holt Harvey sawmill in Morwell closed several years ago as a consequence. Now, most of the sawlogs formerly used by that mill are required by Australian Paper to ensure their commercial viability, including to replace woodchips that would have been supplied from the sawmill.

For HVP's Western Region (around Ballarat, Colac and the Green Triangle), there is no market for pulpwood grade logs, either in Victoria or South Australia, apart from a small volume sold as export woodchips from Geelong in a joint venture with AKD Softwoods. HVP has found markets for predominantly lower grade logs via export through Portland and Melbourne, mostly to China. If HVP did not have access to these export markets, first and second thinning operations would not be commercially viable. Consequently, the capacity to thin the plantations to promote growth of sufficient sawlogs for its customers, both now and in the future, would be at risk. Additionally, the volumes available from thinnings differ significantly from year to year, depending on the age profile of the estate.

The specifications for logs differ amongst customers. Some sawmills can take smaller and lower grade sawlogs than others. Some can take a proportion of smaller and lower grade logs, as long as there is a sufficiently large volume of higher quality logs for the bulk of their processing. Some mills cannot take any logs below specific sizes or quality specifications. Consequently, prediction of potential grades of logs for future supply varies depending on required volumes by quantity, size and quality specifications for particular processors.

Production for HVP's estate

From its current hardwood estate, HVP will produce on average around 340,000 m³ of eucalypt logs (predominantly of pulpwood grade) for the next 20 years, after which no more eucalypt logs will be produced (based on HVP's current strategic position). From its current softwood estate, HVP will produce an average of around 3 million m³ of softwood sawlogs and pulplogs per year for the next 12 years. From that point forward, available volume fluctuates between 3 million and 4 million m³ for the following 30 years.

It should be noted that this supply picture is based on the estate prior to the 2019-2020 bushfires. Calculations are not yet complete on the impact of these fires on future supply. These calculations also assume that there is no future loss of resources to bushfires. While clearly an unrealistic assumption, it is not possible to predict the timing, area of loss or impact on specific age classes from future bushfires.

Increasing supply of plantation logs

HVP would actively pursue increasing its plantation estate by planting and managing new areas of softwood plantation, if it was commercially attractive to do so. Given the price of land, the high upfront cost of plantation establishment, and the lack of any cash return until modest returns from first thinning around age 12, it is currently not possible to achieve commercially acceptable rates of return from "greenfield" plantations aimed at softwood sawlogs.

HVP is clearly not alone in its assessment of the commercial attractiveness of new softwood plantations. There was a substantial increase in eucalypt (hardwood) plantations via Managed Investment Schemes (MIS) in the 1990s and 2000s, but the vast majority of these were short rotations plantations for pulpwood as woodchips. Logs from these plantations are totally unsuitable as structural timber for residential and commercial construction. The net softwood plantation area across Australia has increased by barely 10% since 1990 (926,000 ha to 1,036,000 ha); of this total increase, only 17,000 ha have been added to the estate over the last 10-12 years. Almost all of the softwood plantation area established up to 1990, plus a significant proportion of that established since 1990, has been established by state government agencies, prior to privatising the plantations.

Australia is already a significant importer of softwood structural timber. The volume of imported softwood sawnwood has grown steadily from 470,000 m³ (\$240 m) in 2008-9 to 780,000 m³ (\$404 m) in 2018-19. Demand for softwood sawnwood is predicted to grow substantially as demand for housing and commercial construction increases and the net greenhouse and psychological wellbeing benefits of timber construction

is increasingly valued. Australia's softwood processors cannot meet Australian demand now; with little increase in the Australian softwood plantation estate likely under current investment frameworks, the gap between demand and domestic supply will steadily get worse.

The inability of Australia's softwood processors to secure larger levels of supply, which would enable them to increase production capacity, will also place their international competitiveness at risk. Sawn softwood is a commodity; international processors can already compete with Australian processors, as evidenced by the quantity of sawn softwood imports. Hence, Australian sawn softwood processors need to be able to grow to an internationally competitive scale to remain viable.

The 2018 National Forest Industries Plan (NFIP) proposed the planting of an additional 1 billion trees. It is worth noting that, even if every one of those trees was planted tomorrow, it would take another 20 years before any significant volume of logs suitable for processing was available, and 27-30 years (until the time of final harvest and depending on growth rates) before large volumes of desirable medium and large sawlogs were available in substantial quantities. It is impossible to plant 1 billion trees in one year - a more likely timeframe is 10 years or more. Therefore, even if a mass new planting program commenced today, we will continue to have a shortfall in available wood fibre grown in Australia for the next 15 to 20 years.

Notwithstanding the NFIP commitment, no new additional plantings under the NFIP have yet occurred - 2 years after the plan's release. Further support is required to enable the required expansion.

2. The plantation wood supply available for domestic softwood processors, including current and future demand for logs for domestic processors and any shortfall in current processing industry demand for logs.

There is currently significantly more demand for logs from HVP's plantations than there is capacity to supply. The only exception to this is for pulpwood grade logs in HVP's Western Region. Further, there is reduced capacity to supply logs in all regions as a consequence of bushfires, particularly since 2009.

As noted in the previous section, all of HVP's customers for sawlogs and several customers for pulpwood grade logs are actively seeking additional supply. In some cases, additional volume is sought to increase capacity and thereby competitiveness. For others, the issue is reduced supply from traditional sources as a consequence of bushfires, and the need to underpin their existing level of log supply to maintain their current level of competitiveness.

As also noted above, HVP has only limited capacity to increase supply of logs to customers. The combination of little new greenfield plantation establishment and losses from bushfires means that increases in supply come predominantly from improved forest management and genetic improvement, despite HVP continuously replanting all of its areas after final harvest or after bushfire losses. The predicted availability of additional volume is also typically around 12 years into the future, and even after that time, availability is variable depending on the pattern of age classes.

The exception to demand for logs from HVP exceeding supply is for pulpwood grade logs in Western Region. There is significant scope for a new processor to use this material, as well as to source additional logs of similar grade from the South Australian side of the Green Triangle region.

HVP has addressed the need for a market for lower grade logs from its Western Region, to enable thinning to occur and thereby produce quality sawlogs, by developing a log export market. HVP sells logs to several customers, predominantly in China, and those logs cover a variety mix of log grades. Parcels of logs are also

regularly offered to other domestic customers (potentially in lieu of export), but the prices offered for these logs almost invariably produce a lower return for HVP compared to export, even allowing for the risks around payments, foreign exchange rates and shipping costs. HVP as a private commercial entity does not accept that it should subsidise any domestic processors. This issue is explored in more detail under Terms of Reference #3.

There is another situation in which domestic demand for logs may be at a level below capacity to supply - salvage following bushfires. Despite a huge effort on the part of domestic processors to use logs salvaged from burnt plantations, the sheer volume of logs may exceed processors' capacity to use them. Storage of logs under sprinklers or in water bodies (to keep logs in a condition suitable for future processing) requires large quantities of water than can be used and recycled without environmental impact, or water bodies where storage and retrieval of logs is physically and economically viable. Such situations are scarce, almost never in ideal locations and expensive to operate. Under these circumstances, export of logs provides a mechanism for growers to recover some of their losses from the fires, as well as reducing the volume of damaged logs left on site after a fire that need to be cleaned up before a site can be replanted.

There is material produced from softwood plantations that is not currently used, or where higher value uses would be preferable. Branches, damaged sections of logs and damaged but felled trees remaining after harvest, as well as processing residues such as bark, sawdust and pulp liquors, are all potentially suitable for production of a range of biomaterials. Markets for these products are still being developed, and much of this material either remains on site or is burnt at a mill for steam. Conversion of these kinds of residue material into higher value products has the capacity to significantly increase the overall recovery of fibre from softwood logs.

3. The competitiveness of log pricing between domestic and export market.

HVP sets prices for domestic logs via market pricing. Logs are most commonly offered to domestic processors on either a medium (typically 5 years) or a short term (1-3 years) basis. Shorter term contracts of 1 to 3 years are typically offered where there is a lack of certainty over longer term availability of that product volume or log grade. The offering is competitive through a tender process - processors submit offers for prices by log grades, any price adjustment mechanisms for medium term contracts and including any associated conditions of purchase such as delivery location, log specifications and management of reject logs. Long term contracts are also offered to customers when processors are seeking a long term commitment to underpin a large corporate investment in processing. Such contracts are informed by prices achieved for medium and short term sales, as well as incorporating price adjustment mechanisms that balance changes in market prices for logs and processing outputs with changing costs in growing logs.

Export log prices are essentially spot prices. Delivered prices in China by log grade are set at a port in China. Sellers from Australia need to assemble sufficient logs for a shipload (typically 30,000 - 40,000 tonnes), secure a ship, secure a letter of credit from China for a sale, have the ship loaded, fumigate the load, then have the logs shipped and unloaded. Every step of this process incurs costs and some costs are difficult or impossible to control, including foreign exchange risks, weather and delays in loading and unloading. This underlines the fact that growers do not enter into commitments to export logs lightly - there are significantly more risks than selling logs domestically. Further, softwood logs are a commodity and prices are determined by markets - there is no mechanism by which Australian growers can influence net export log prices.

HVP is a commercial enterprise and, as is the case for any commercial business, is entitled to sell its products in a market that is open and competitive. Companies that are seeking to secure logs for domestic processing expect that the markets in which they sell their products are open and competitive. It would clearly be a market distortion and anti-competitive practice if growers were forced to sell their logs at lower commercial return to domestic processors, while at the same time requiring that markets for products produced by those same processes are open and competitive.

HVP has offered parcels of logs from its Western Region to domestic processors several times in recent years. Some smaller and larger domestic processors have been successful in these tenders where their bids have been competitive. Logs not attracting competitive domestic bids are exported.

HVP will continue to offer opportunities for domestic processors to secure logs from its estate as a priority. Those opportunities can expect to be successful if competitive prices are offered, taking into account all specifications and conditions of sale.

HVP will continue to pursue export markets for logs for a range of reasons:

- export prices frequently provide a good return from HVP's investment in plantations;
- export markets provide sales opportunities where domestic markets either don't exist or are not large enough - the market for lower grade logs in Western Region is a good example;
- export markets can accommodate sales that are of variable size, duration and specification - this creates much needed flexibility in managing a softwood estate, particularly around thinning for future sawlogs;
- export markets provide opportunities to sell logs salvaged from fire and storm damage that are unable to be utilised by domestic processors.

4. The term of log supply contracts needed to support the processing sectors.

The term of log supply contracts has not been a significant issue among HVP's customers. Longer term contracts create certainty of supply for processors and a clear mechanism for log price adjustment, but they come with obligations to purchase a minimum volume of logs every year, which may limit their flexibility for processors. From the grower's perspective, longer term contracts provide certainty of income but risk prices falling below prevailing market prices or not reflecting the cost of growing the logs during the term of the contract.

Processors have generally accepted the principles used by HVP to sell logs: long term only where requested to support large capital investments in processing; medium term for larger parcels to customers at market prices, but of sufficient term to provide stability to processors; short term for typically smaller parcels over 1 to 3 years, typically where uncertainty exists about availability of the product volume or log grade.

5. Opportunities to increase Australia's wood supply, including identifying and addressing barriers to plantation establishment.

As noted under Terms of Reference #1, current policy and commercial settings have not resulted in any meaningful increase in Australia's softwood plantations sector for some 15 years or more.

The target of 1 billion trees set out in the National Forest Industries Plan (NFIP) equates to around 400,000 ha of additional plantations. An expansion of this size would underpin Australia's capacity to have

internationally competitive processors supplying timber products that will go a large way towards meeting future timber demands. The net greenhouse gas benefits from implementation of this plan are also very significant.

Capital to fund plantation expansions is readily available in the marketplace. The difficulty lies in sourcing suitable land and the current outlook of low economic returns for greenfield sites.

There are several issues that need to be addressed to encourage expansion of the plantation estate, some of which are noted in the NFIP:

- (a) The cost of land is too high to achieve acceptable commercial returns from an investment over the long time scale of a softwood plantation.
- (b) State government and community support for plantation expansion is limited, due to lack of understanding of economic, environmental and social benefits, misconceptions about the scale of plantation expansion, and mis-information about the regional impact on converting what are typically lower profitability grazing enterprises into plantations.
- (c) There is insufficient cash flow during the first two-thirds of a softwood plantation rotation to sustain the cost of buying land and establishing and managing a plantation. There is a large return at final harvest, but it is 27-30 years from the high initial outlay to that return, with significant risks of bushfires and pests and disease impacting the return during that period.
- (d) Prices received for logs reflect limited and traditional markets. The more components of a tree that can be used to produce commercial products, the higher the value of that tree becomes. High value uses for all components of a tree, as well as unused portions of harvested trees, have not been achieved to date.
- (e) If retail and wholesale timber prices were increased by a small amount, the returns flowing through to growers could make new greenfield site investments viable.
- (f) A more nuanced, landscape level approach is needed for bushfire prevention and suppression, including recognition of forestry plantations as a priority asset for protection.

Without these changes, it is likely that the current situation will continue with no increase in available wood supply.

It is worth re-stating that even if a mass new planting program commenced today, we will continue to have a shortfall in available wood fibre grown in Australia for the next 15 to 20 years, until such time as the additional resource has grown to a commercial harvest age.

Cost of land

In most areas within economic haulage distance of existing forestry hubs and processors, the cost of land for new plantation establishment is simply too high, particularly with on-costs such as stamp duty and (for many of the large commercial grower companies in Australia) Foreign Investment Review Board costs. When you add the high cost of plantation establishment and the length of time before cash returns are achieved, the investment is not commercially attractive. In essence, this has always been the case, and is the reason that almost all of the existing softwood plantation estate was developed by state governments before the estates were privatised.

Growers are not seeking subsidies for land purchases - such actions almost always distort markets. However, one option that might be considered is a measured program of land purchases by governments, at market prices and in the vicinity of forestry hubs, over a time frame that did not drive up land prices. That land could then be leased to growers at rates consistent with forestry being the highest and best use. This

provides the Government with an asset - land - and a return on the investment in that asset, while spreading the cost of land to growers over the time frame of the plantation rotation.

Community support

There is ample evidence from a range of studies that plantations provide very substantial economic and social benefits to rural and regional communities. Far from reducing the population and economic viability of rural areas, locations supported by substantial forestry harvesting, haulage and processing have proven themselves to be significantly more viable, vibrant and resilient than communities supported only by rural industries based largely on other agriculture alone.

Despite this evidence, the value of forest-based industries to rural and regional areas is not widely understood. There is ample scope for governments to increase community support for plantation forestry. Such support would include improving the approval processes for plantation establishment and management, improving the capacity of farmers to grow commercial plantations on their farms as an integrated enterprise, improving understanding of the small scale of plantations versus traditional agriculture, and improving the infrastructure that supports forestry and timber processing activities.

Early cash flow early from plantations

Plantations provide ecosystem services that are only just beginning to be monetised. The most significant of these is carbon sequestration.

Forests in general and new plantations in particular are recognised internationally for their ability to take carbon dioxide out of the atmosphere and store it in long-lived timber products, most of which are in high demand. In many parts of the world, plantations are a key part of emissions reduction activities. Despite this, it is only in the last few months that new plantations on land receiving at least 600 mm of rainfall per annum (meaning essentially all commercial forestry plantations) were even eligible to bid for carbon sequestration benefits under the Federal Government's Emissions Reduction Fund, unless they went through an onerous process of seeking approval to use the rainfall that fell on the plantation land. The "600mm rainfall rule" has now been considerably streamlined and simplified around forestry hubs, with the notable exception of the Victorian part of the Green Triangle. This area is a long established forestry hub, but the Victorian Government has not yet approved application of the revised rule to this area; debate is continuing on applying rules around rainfall interception for forestry plantations that do not apply to any other agricultural activity.

The removal of rules that make plantation forestry ineligible for generating carbon sequestration credits is a necessary but not sufficient step for potentially generating early cash flow in plantations. There are two other requirements. The first is that the net value of carbon sequestration credits needs to increase. This can occur through a combination of higher prices, lower accreditation and management costs for bringing carbon sequestration credits to market, and ability to sell carbon sequestration credits internationally. The second is more robust accounting that recognises the long-lived capture of carbon in wood products. Current accounting treats this issue much more conservatively than evidence indicates is appropriate. In essence, carbon sequestration credits are more valuable if they are recognised as taking carbon dioxide out of the atmosphere for longer.

Higher returns from selling logs

Plantation expansion will be more attractive as an investment if returns from logs can be increased.

As stated earlier, softwood logs are a commodity. Prices for those logs can only increase if the products produced from those logs are more valuable. There is a range of ways in which this could occur:

- A market-led increase in general timber prices.
- New timber products such as engineered wood products are developed and are widely adopted by the market. Governments can help in this area by supporting research in clearly understanding the properties of new products and in developing efficient construction techniques to maximise their use to best advantage. Governments can also actively encourage the use of wood in new residential and especially commercial construction by having a “Wood First” policy.
- New products are developed that use those parts of a tree that are currently either not saleable or generate only low value products. Biomass for heat and power generation is one possibility that could be made more attractive - in many cases the renewable energy nature of this use is not recognised in government policies. A more desirable and potentially much higher value use is in various bio-materials. These might include replacements for plastics, solvents, pharmaceuticals and entirely new products based on sustainable and bio-degradable products from trees. Governments can actively support research and development to bring such products to commercial reality.
- The cost of harvesting and transport of logs can be reduced. There are many opportunities for efficiencies across the entire log supply chain. Government can assist in this area through improved infrastructure and streamlined adoption of more efficient approaches to and types of log and product transport.

Bushfire prevention and suppression

An expanded area of forestry plantation will only achieve maximum benefit for timber growers and the industries that depend on those logs if the plantation grows to final harvest without being burnt. Bushfires are becoming more frequent, more severe and more likely to cause widespread damage. A different approach is needed to bushfire prevention and suppression. In particular, a landscape level approach to prevention and suppression is required, that recognises how fires start, move and are able to be controlled across all areas of the landscape in an integrated way. It is also important that the value of forestry plantations to rural and regional economies needs to be given higher priority when assessing fire suppression decisions.

While a final report is not yet available, it is expected that recommendations from the Royal Commission into National Natural Disaster Arrangements will provide a clear framework for improving bushfire management. HVP strongly recommends that governments and agencies do not pick and choose among recommendations that they are comfortable with, but rather embrace a fundamental change to the management of bushfires. Establishing new areas of forestry plantation will not achieve the desired benefits if they are burnt down.

6. The role that state governments could have in assisting in addressing any problems identified by the work of this committee.

Areas in which state governments can support improved performance in the plantation growing and processing sectors have largely been addressed in responses to earlier Terms of Reference. These are summarised below:

- (a) Establishment of a suitable land bank of purchased rural properties within economic haulage distance of existing forestry hubs, the land of which is then leased to forestry plantation growers at reasonable cost.
- (b) Improving community acceptance of the benefits of plantations in improving economic and social outcomes in regional communities.

- (c) Supporting farmers to incorporate commercial plantations within an integrated farm management program.
- (d) Improving local and regional infrastructure that supports log and timber product transport and processing.
- (e) Support improved efficiencies in approvals processes around plantation activities and across the log and product transport sector (including across state boundaries).
- (f) Supporting research into improved plantation management, more efficient log harvesting and transport, new timber products and biomaterials, and more widespread and efficient use of wood products in residential and commercial construction.
- (g) Embrace and actively support the scientific approach to bushfire prevention and suppression referenced above.

Another area in which state governments could support a wide range of benefits in growing and managing plantations, while at the same time generating a wide range of additional benefits, is through funding of a state-wide LiDAR capture program. LiDAR (Light Detection and Ranging) is an optical remote-sensing technique that uses laser light to densely sample the surface of the earth, producing highly accurate x,y,z measurements. These are then used to produce a highly detailed and accurate map of the land surface in 3D.

In plantation management, LiDAR outputs enable accurate mapping of slopes, roads, tracks, rivers and creeks, and any other surface features, as well as accurate vegetation identification including height, stocking, and distribution. It can underpin a more efficient and site specific assessment of availability and characteristics of logs available for harvest.

The potential benefits for state and local government and agencies are very far-reaching:

- Accurate mapping of land surface, which greatly improves the accuracy and currency of maps for features such as topography, creeks and rivers, roads and tracks and any surface infrastructure.
- Accurate mapping of infrastructure facilitates identification of type and condition, which improves management of known infrastructure and identification of unknown and/or unapproved infrastructure.
- Accurate mapping of vegetation boundaries and vegetation classification, including height and density.
- An accurate digital model of the land surface greatly improves the efficiency of planning (such as for roads, infrastructure, flood zones, vegetation buffers and so on), identification of property boundaries, condition of existing infrastructure and resolution of issues around cadastral boundaries.
- In general, more accurate and current 3D maps of just about anything on or above the land surface.

7. Make any recommendations around any code of conduct or management mode that could assist in addressing any problems identified by the work of this committee.

Codes of conduct beyond those currently in place are rarely needed and are only used in the timber industry to address a market failure or across sector/industry safety issue.

Calls for a code of conduct around commercial arrangements between growers and processors or for directing logs to specific markets are not justified, as the market currently works appropriately and there is no market failure. The fact that some domestic processors expect to be able to secure logs at rates below

market value is not a market failure. If the Government decides that it wishes to support domestic processors that cannot compete with fair market prices, it should focus on mechanisms to improve the efficiency of those processors, rather than imposing market distortions on growers.

Certification of forestry growers under FSC or Responsible Wood standards already requires that growers support local industry. For example, the Responsible Wood standard states:

"Subject to forest product supply constraints, the forest manager shall:

- (a) engage proactively with local and regional forest products processors and consider their needs for supply;*
- (b) offer supply to local processing and value-added facilities, where commercial viability including price of non-local and local options, are at least equivalent; and*
- (c) make reasonable attempts to establish or support and encourage the establishment of local processing and value-added activities where not currently available."*

HVP contends that no convincing case has yet been made for the need to correct any perceived market distortion by imposing a code of conduct beyond that which already exists via the forestry certification schemes.