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Dear FIAC Committee,

The Forest Industries Research Centre (FIRC) at the University of the Sunshine Coast (USC) was very encouraged to see the establishment of the Forest Industries Advisory Council (FIAC) and even more encouraged by the opportunity to contribute to the process through the issues paper. As a research centre with close collaborative ties to industry, FIRC is a part of the Australian forest industry and as an applied research and knowledge provider in the industry hope to add that valuable perspective to the discussion.

The discussion paper was circulated to the 30+ researchers associated with FIRC and below is a summary of their thoughts on the 26 questions raised in the paper. I have also encouraged them to submit their individual views if they felt they had a strong opinion or position to present on any or all of the question raised.

Q1 What should the vision be for the forest products sector in the coming decades?

The overarching view is that Australia needs to capitalise and enhance the strengths it has to take a leadership role in the region in the area of sustainable forest management.

We have a strong resource of commodity based timber products in the Pine and Eucalyptus plantations that currently have strong, though cyclical, markets for building materials and fibre. There is further opportunity to build local manufacturing that takes advantage of this sustainable and reliable resource both for its traditional uses but more importantly for new higher values products and solutions.

Bringing the native forest resource into the equations further expands the sustainable resource base but also adds an array of high value timbers well suited to high value niche applications. Better understanding these timber characteristics and values will add to the opportunities for high value production industries linked to the unique Australian native timber resource.

The modern trend is that increased use and demand for wood results in more trees in the landscape. In the reality of a carbon constrained world economy, more trees and increased timber use will result in increased carbon storage: a sustainable resource for timber, fibre, chemical and energy production that has a positive impact on climate change.

Building on the natural values of the Australian timber resource and the internationally recognised sustainable forest management skills is an opportunity to position the Australian timber industry as a producer of sustainable, high value products and solutions, establishing it as a leader in the Australasian region exporting products, knowledge, skills and solutions based on sustainably managed timber resources.

Q2 What specific objectives should underpin this vision?

1. Establishment of an industry lead and government supported innovation program targeted at the development and adaptation of new high value wood based manufacturing industries and the related supply chains from seed to market.
2. Industry and government collaborative development of sustainable afforestation linked to a long term wood manufacturing (timber, fibre, chemical, energy, etc.) strategy.

3. Improved connectivity and engagement between the forest industry and end-users to produce well developed innovative solutions to emerging market demands.
4. Development of improved strategies for the in effective, efficient and sustainable integration of wood production with other land uses (i.e. agro forestry, water management, etc.)
5. Develop a better characterisation and understanding of Australian timber qualities as they relate to new and innovative uses of timber in engineered building solutions, biochemical/biofuel production, carbon storage, etc.

Q3 What forest products does Australia have a local and/or international competitive advantage in producing?

Based on the industry experience and track record in sustainable forest management the ability to supply certified sustainable wood fibre is and increasingly important advantage in world markets. As noted above there is likely to be natural advantage inherent to the range of Australian timbers as well as advantages that can be added through effective management strategies but efforts need to be made to clearly understand those values and how they relate to existing and emerging products and solutions from wood. As a high cost operating environment, Australia will need to focus on high value opportunities that can be developed and delivered as a solutions (i.e. building systems rather than building components)

Q4 What is the potential demand for forest products in the coming decades?

All global projections are for increasing demand for wood. Driven by increasing population and increased interest for sustainably sourced materials, international trade in wood is projected to double by 2030. With mass timber construction systems using more wood and introducing wood to multi-story construction, increasing bioenergy production in developed countries, and emerging uses for wood fibre in efficient chemical and nanomaterial production the range of applications for wood is increasing.

Many of the new applications are early in development and often rely on low cost supply to provide cost effective solutions while the technology matures and even into the future cost pressures will continue to require timber producers to have innovative and efficient supply systems to be profitable.

In the coming decades the challenge will be less about finding markets and more about ensuring the supply can meet sustainability requirements of the market which clearly puts the Australian industry on the front foot, particularly if emphasis is placed on developing and growing the industry around solution based development in the coming 5 to 10 years.

Q5 How can Australia best position itself for this demand, both nationally and internationally?

The vision and objectives above are valuable to this positioning. The emphasis needs to be on developing and growing around a sustainably sourced, solutions based industry targeting efficacies for low cost supply chains that deliver high value solutions.

Q6 What are the other drivers or disruptions that will potentially affect supply and/or demand?

This will largely be influenced on how well the Australian timber industry progresses its development and innovation. There will be the usual international market pressures as well as development in solutions competing with wood in addition to wood industry development in other parts of the world. A key concern is that Australia is already behind in the wood industry innovation race compared with places like Europe and North America that currently have effective investment in wood product innovation.

Again the key to avoiding negative impacts of the drivers and disruptions is to focus on a sustainably sourced, solutions based industry targeting high value solutions.

Q7 Which emerging forest products have the greatest potential for Australia?

Increasingly markets are seeking solutions as opposed to products. As a high cost operating environment, Australia will need to focus on high value opportunities that can be developed with end users and delivered as a solutions.

Q8 What are some of the barriers to the development and/or uptake of these emerging forest products in Australia?

A critical barrier is the lack of a well-defined and coordinated industry innovation agenda. Short term market and product focus in the industry limits the opportunity to clearly identify and develop innovation opportunities. Without a coordinated industry vision, policy settings around the industry are far more influenced by other factors in the community and the combination makes it difficult to attract investment to research and innovation for the forest sector.

Q9 What opportunities exist to better utilise wood resources?

A solution based approaches that effectively exploit the wood qualities can lead to much higher value uses, multiple products contributing to a solution and more components of the tree having a productive use. Many of the emerging wood based products and solutions are productive with smaller trees and smaller parts of the trees with things like bioenergy and biorefinery making productive use of woody material that was, until recently, left as waste in the production of other wood products. With new wood products and wood solution that drive different supply chains it is critical that the supply chain technology and management are included in the development and innovation to ensure an overall effective and sustainable solution.

Q10 What is required to ensure the plantation estate is able to meet future demand for forest products?

Australian has a plantation resource that has plateaued and in the case of the Eucalyptus is even starting to go backwards. A perceived lack of value in recent years has reduced investment in managing pest and disease risks as well as reestablishment. Market pressure will have a key role to play in sustaining, managing and more importantly increasing this plantation resource, as noted above the more demand there is for wood the more trees we will see in the landscape. This effectively means there needs to be value in trees through things like high value solution based markets, carbon sequestration and biochemical/biofuels. Having an economic value with the right policy settings will drive better management of pest and disease risk to existing plantations and sustainable afforestation both through plantations and integrating trees into other land uses, will go a long way to ensuring a growing plantation estate into the future.

Q11 What is required to ensure the native forest estate is able to meet future demand for forest products?

All those mentioned for the plantation estate will apply to the native forest estate with the very critical addition of securing and maintaining public support/permission to make sustainable use of native forests. This is less about educating the public and more about truly engaging with the public to understand their priorities for the forests and finding ways to include and enhance those priorities through timber management.

Q12 What opportunities are there to increase wood supply from farm forestry, private native forestry and Indigenous owned and managed lands?

There are ever increasing pressures and demand on land use. As such any increase of trees in the landscape needs to be done as much as possible in collaboration with other land uses rather than in competition. Often these “non-industrial” wood sources like agroforestry and private native forests are categorised as high costs wood sources due to their dispersed nature and not being properly engaged in exiting supply chains. There is significant opportunity for farm forestry and private native forests to make a real contribution to the wood supply in the future but much like the introduction of new timber products and solutions, the supply chains and supply chains management need to be developed and innovated in a situation where wood is contributing to high value solution based outcome. A whole of supply chain approach (seed to market) will be critical for these alternatives of integrated wood production to develop to their potential.

Q13 What are the future research and development needs for Australia’s forest products sector, and which of these needs are specific to strengths and opportunities in the Australian context?

Advancement through R&D and innovation requires a multidisciplinary, whole of supply chain approach. Products and solutions from wood need to be directly linked to an end user demand/need and effectively be perceived to be the best way to address the problem. This required expertise beyond the traditional forestry space in the building industry, fuel industry, chemical industry, etc. to set the research focus or priority to delivering an effective solution. The research then can explore trees, management systems, supply chains and technology best suited to effectively, efficiently and sustainably deliver a solution to the market. This does not preclude or replace the “traditional” research topics, which will continue to be important, but requires that they come together in highly collaborative teams exploring issues like genetics, silviculture, pest & disease, harvest technology, logistics, processing and fabrication through the prism of delivering a defined wood solution to market. Equally it will require strong collaboration across different industries and industry stakeholders to ensure effective innovation.

Q14 What are the current inhibitors to private sector investment in research, development and extension and what role, if any, does the Australian Government potentially have in addressing these?

The change in ownership in the Australian forest industry we have seen over the last 5 to 7 years has created an even greater emphasis on return on investment. In order for RD&E to thrive in a return on investment environment, transition of research results to industry innovation and effectively recognising its impact is critical. It is also important that organisations be able to recognise and support research investment and innovation payback that will likely occur on very different time horizons. This transition to innovation is an expertise unto itself that is often overlooked in the planning, funding, delivery and reporting of RD&E. As the transition to innovation is not executed and/or not recognised, industry cannot justify investment in RD&E without returns to be reported on the other side of the ledger.

Addressing this inhibitor to investment requires strong collaborations between industry, the RD&E community and government to create communication, policies and funding environments that support RD&E and more importantly transition to innovation. Funding and policy mechanisms to help mitigate the risk of investment and help shift current investment cost impacts to match the time frame for likely returns in the future are some of the ways government can contribute to this dynamic. Under a favourable government policy and funding environment it is important that mechanisms are in place that facilitate industry to take leadership in RD&E and actively engage with the research community throughout the

RD&E process, to provide a strong understanding of the outputs and outcomes and strong ownership that will underpin the transition to innovation.

Q15 How can the framework for coordinating Australian forestry research and development be strengthened?

An industry owned/lead framework is quite important in the interests of having well defined industry objectives and priorities that can then be developed and delivered through collaboration across expertise. Such a framework needs to have long term vision that supports both continual improvement opportunities in the industry as well as underpinning step changes and industry changing innovation. In addition to being structured long term and thereby providing a stable foundation for innovation, the framework needs to be adapted to ensure positive RD&E outcomes are carried all the way through to implementation so the value of RD&E investments are properly realised.

Q16 How can domestic and international consumers be better engaged on the environmental, economic and social credentials of Australian forest products?

It will be important to effectively engage in the conversations with the public. While industry has a great story to tell with well managed, certified forests that play a positive role in many elements of society and the environment, issues about social acceptance are rarely only based on fact but heavily influenced by perception. By engaging in the conversation it is important to hear and really understand what the concerns are so that they can properly address the questions/concerns being raised. Forming effective partnerships with other land users, community groups and conservation groups will be valuable.

Q17 How important are consumer awareness programs to the future prosperity of the sector?

Consumer/end-user awareness is very important to future prosperity. Sustainability of products and services is of increasing importance in society and demonstrating sustainability in a way that is believed by consumers is critical. The message needs to come from more than industry and is better delivered through key partner industries that are at the consumer end of the supply chain (i.e. builders, architects, chemical producers, etc.) and needs to be introduced earlier to the younger members of the community through school programs.

Q18 Can forest certification be better leveraged to achieve stronger demand and better prices for Australian forest products and, if so, how?

While certification is not likely to create price premiums it has a role to play in leveraging greater demand. It will be important to continue to build brand recognition for the certification programs so consumers recognise and associate it with sustainably and responsibly managed forests. The communication also needs to put in a context the general public can relate to the difference in the environmental, social and economic impacts between wood products sourced from certified vs. non-certified forests.

Q19 How could forestry hubs better utilise resources and promote greater efficiencies and innovation?

From an operational perspective hubs tend to develop and emerge around commercial drivers like improved logistics and improved scale of operations. Examples like The Green Triangle, Gippsland and Tumut come to mind. Artificially trying to develop such hubs is not likely to deliver benefits to industry but supporting them and targeting industry development where they occur is important.

From an RD&E perspective there is scope for development of hubs but would suggest, even with the recent decline in research funding and capacity, there are still key hubs (USC, QDAF and UTAS) that are obvious points to focus the support, development and growth of forestry innovation hubs. Not only do each of these three points already have a critical mass of skills in areas of forest products research, the three are highly complementary in to each other in the skills they have, are well engaged with other applicable expertise nationally and internationally, have exiting strong partnerships with industry and are housed at institutions that are actively seeking to work collaboratively with industry.

Q20 What have been the barriers to the establishment and efficient operation of forestry hubs to date, and what might be the role of the Australian Government in addressing these?

As noted above industry activity hubs need to be established on a commercial basis and industry growth and any support that might come from government should focus on these hubs where they occur.

In the RD&E space the greatest obstacle has been sustainable funding and support. We mentioned earlier the importance caring research outcomes through to implementation to complete the innovation process being key to sustaining industry support. Policy and funding programs that facilitate implementation of new knowledge and technology coming from RD&E would be very valuable to grow support in the existing hubs at USC, QDAF and UTAS. In the funding space, while it is important for industry to take ownership/leadership, if we look globally this is always combined with significant government funding, typically structured to provide long term stability to the RD&E hubs and create incentives for sustained industry contributions.

Q21 If additional forestry hubs are to be established, where would they best be located?

As noted above hubs already exist and emphasis should be on securing and straitening these hubs and provide mechanisms to promote collaboration between these hubs to provide a strong national solution.

Q22 What infrastructure will be required to respond to future demand for Australian forest products?

These needs will be largely dictated by where the innovation process leads in terms of what products, services and solutions emerge as the best use for the Australian forest resources. In current terms a modernisation, upscale (fewer but larger) of processing facilities and a shift to processing systems that recover greater volume from smaller logs for high value products (i.e. veneer products vs. solid timber) would be important infrastructure changes for an improved industry. Emphasis needs to be on new and innovative manufacturing, services and solutions.

Q23 What can be done to ensure better recognition and understanding of the sector's infrastructure needs?

Better definition, understanding and communication of the value and social impact of the industry. Forest development and innovation has a strong fit with regional development and when framed right can be quite complimentary to other regional development strengths like agriculture where products, solutions, supply chains and service systems can leverage of each other for greater impact.

Q24 What are the skills and training needs of the sector over the coming decades, and where are the current gaps?

The demand from students for applied forestry training has declined largely due to a combined real and perceived lack of career opportunity. This reduced demand has seen the higher education offering in the applied forestry space decline. While there continues to be graduates in the area of resource and landscape management, industry experience is they lack the applied forest management skills that need to be trained on the job or sought from experienced workers often trained overseas. The impact of this lack of skills has been reduced and delayed with the changes we have seen in the industry over the last decade where, staff numbers have been reduced and as professionals retire from the industry individuals have moved between companies to fill needs. As the industry has scaled back up in the last 18 months the lack of a new skilled entrants to the work force is becoming a problem and a restriction to industry growth/innovation.

Q25 Are Vocational Education and Training and university training providers well-positioned to meet the future skills and training needs of the sector?

While the institutions are able to meet training needs it becomes a question of economic viability to deliver this training; a demand is required to justify offering the training. This demand then links back to many of the earlier points of supporting industry in driving innovation to deliver new manufacturing, services and solutions; transition from the perception of being a stagnant or declining industry to a new and growing industry well placed to meet future economic, social and environmental needs. In the interim it will be important for education providers to work with industry to identify key knowledge gaps and where possible address them with existing course options in other fields (i.e. business management, logistics, etc.) or leverage training opportunities into research programs that are well targeted on industry needs.

Q26 What improvements are required at an enterprise level to support the recruitment, development and retention of the sector's current and future workforce?

See above about directing and presenting the industry as evolving to a new, innovative and growing industry producing innovative and sustainable products, services and solutions into the future.

FIRC congratulate you on the progress of FIAC and we look forward to this process progressing and future opportunities to be involved. If you have any questions or would like further explanation of the input provided please do not hesitate to contact me to discuss.

Yours Truly,

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