



9 November 2021

Ms Wendy Cohen
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Dear Wendy,

I am pleased to respond to you on behalf of the Board of Directors of Forestry Australia.

Forestry Australia, formerly known as The Institute of Foresters of Australia (IFA) and Australian Forest Growers (AFG), is a professional association with approximately 1,000 members. Our members are forest scientists, professionals, managers and growers operating in all aspects of forest and natural resource management across the spectrum of production of forest products to conservation and protection of forested landscapes throughout Australia.

We advocate for and provide professional development to ensure balanced, integrated forested land use, as well as sustainable management that meets community and environmental needs. Our prime interest is in the development and application of Forest Science in all Australian forests.

As a Forestry Scientist with a research career starting in 1979, I have addressed the questions posed below and would be pleased to provide additional information or clarifications that you would find useful.

Questions for Consultees

1. Is there a need for increased investment in, national level, forest sector R&D? Why or why not?

YES.

Since the divestment of most State Governments in Forestry R&D over the last 2-3 decades, along with CSIRO's exit from Forestry and Forest Products R&D, Australia's Forestry R&D investment and capacity has waned to appallingly low levels (refer page 5 of the AFPA and Utas Policy Proposal document). Comparisons with New Zealand and Canada (pages 14 and 15 of the policy proposal) highlight this.

State Governments in most states used to fund substantial R&D programs with QLD and NSW supporting around 120-150 positions each. As State plantation management rights have been sold off to private investment companies, or State entities have been corporatised into streamlined business structures, this public funding of Forestry R&D and extension services has been greatly reduced. This contrasts with New Zealand and Canada where publicly funded competitive R&D funding investment has been maintained to underpin Scion and Forintek R&D capacity by supporting a much larger shared investment model with the forest industries than we have in Australia. This has been done on a more



modest scale in Australia with the R&D funding pool reducing from over \$100 million to around \$20 million over the last 15 years (refer to page 5 of the Policy Proposal).

2. Is there a need to maintain or expand forest research capability in Australia?

YES

The Australian Government supported many recommendations proposed in the 2016 FIAC Report ("Transforming Australia's forest products industry") by addressing these in the 2018 National Forest Industries Plan ("GROWING A BETTER AUSTRALIA -A billion trees for jobs and growth").

More recently the Government has committed to a Net Zero Carbon Reduction target for 2050 that matched targets announced by most developed countries in the world at the current COP26 meeting in Glasgow to address international responses to climate change. The Australian Govt target is based on achieving technological developments and substantial R&D investment is urgently needed to produce these technological breakthroughs.

Forestry can make a very significant contribution to achieving the Australian Govt target by:

- improving the productivity of our planted forests
- more active management of our native forest estates to reduce their susceptibility to catastrophic wildfires
- new and improved engineered timber and composite product development to greatly increase the quantum of carbon stored in both domestic house construction and multi-level domestic and commercial buildings
- new fibre and chemical based product development from trees to provide alternative products to current plastics and other materials based on fossil fuel processing
- increasing the use of biochar and other fibre-based products that will enhance the health of agricultural and forestry plantation soils by increasing soil carbon levels with flow on benefits of increased productivity and reduced need for fertiliser use
- It is ironic and disappointing that at a time when we need Forestry R&D capacity to deliver these benefits to Australian society successive Australian governments have not maintained public funding in Forestry R&D to support this capacity. Funding this Australia-wide NIFPI provide the Australian Govt with a substantive opportunity to turn this decline in Forestry R&D around.

3. Can Australia's current and future research needs be delivered through existing research models without the establishment of an Australia-wide NIFPI?

NO

One of the great strengths of the established State Forestry R&D groups and CSIRO was their record keeping capacity and establishment of long-term research experiments to ensure data was maintained and added to over time and the propensity for 're-inventing wheels' was reduced. This has largely disappeared with the demise of these long-term R&D groups that had continuity over many decades.



Most Forestry researchers in Australia over the last 3 decades have been blessed to work on a suite of large and diverse experiments established in the previous 3 decades (1950's through to the 1980's) covering genetic improvements and a diversity of silvicultural practices. Few of these long-term trials still exist or have been replaced as they reached their use-by or relevance date as improved genetics and silvicultural practices became available. Current research in New Zealand is showing very significant 'legacy effects' for productivity gains when historic treatments and practices are re-evaluated in their long-term trials using the detailed records held by Scion to assess current knowledge of practices from nursery through to harvest age.

Universities and private companies are less able to invest in such long-term trials or maintain the extensive databases needed to gain the most from them. Teaching Universities tend to be focussed on capturing data and results in thesis outputs of students but don't have the capacity to maintain the large extensive databases that underpin these thesis projects over time. The situation is improved in the University sector where dedicated research schools or centres are established and maintained with longevity of decades rather than years. The focus of private companies tends to be on researching immediate problems or challenges that impact their costs and returns and moving on to the next one - few have the capacity or investment capacity and priority to establish and maintain long-term databases of results. This is not a criticism of either Universities or the Private sector but an important recognition of their realistic capacity to support and improve Forestry R&D capacity in the long term.

Additionally, and importantly, as Forestry R&D funding and capacity has decreased this has been reflected in decreased Forestry student numbers and course offerings. Establishment of an Australia-wide NIFPI would send an important signal to new students that Forestry Science is important and relevant as a study and career choice.

4. If there was no Australia-wide NIFPI established:

- a. **Where or how could Australia's forestry sector obtain the R&D it needs?** Some Australian Forestry R&D is contracted to researchers in NZ, Canada, Asia and internationally where capacity no longer exists in Australia or collaborations are needed for successful project delivery.
- b. **Would forestry R&D undertaken internationally suit the needs of Australia's domestic forestry sector? Why or why not?**

NO

There are great difficulties with contracting capacity internationally for both strategic reasons and the timeliness of project initiation and completion. International Forestry researchers (as well as in other fields) largely depend on local sources of research funding and their familiarity and long history of research on local species in local environments. It is difficult to contract any spare capacity they may have for overseas work on timelines that ideally suit our R&D needs. Again, this is highlighting the practical difficulties of sourcing capacity internationally – not impossible but anything but ideal in most cases.



5. If you (or your organisation) consider there is a need for an Australia-wide NIFPI:
 - a. What should be the mandate (i.e., policy direction, strategic intent, research themes) of an Australia-wide NIFPI?

Recommend that the mandate should include:

- establishing and maintaining a repository of R&D records and data to build on over time for long term future use (decades not years)
 - establishment and maintenance of long-term research experiments of key species replicated over a range of environments in key current and potentially future environments to assess climate change resilience and adaptation over time
 - priorities and research themes should be set through wide consultation with the forestry sector and reflect current R&D outcomes from the existing NIFPI's, university programs, FWPA and GRAC supported R&D projects and the small research groups that are still actively maintained (e.g. QLD DAF, Forico, PF Olsen, STT, NSW Forests).
- b. How should an Australia-wide NIFPI interact with other forestry sector research entities?

It should complement their R&D investment and scope and, to the extent possible, look to partner with them to build and support this capacity. Such partnerships are essential to maximise the NIFPI capacity by being able to access existing research infrastructure around the country without having to replicate it.

6. Should an Australia-wide NIFPI be established, what are some of the considerations which should be taken into account in developing its governance, funding and operating framework?

For the Australia-wide NIFPI to be nationally supported it needs national governance representation and distribution of funding around the country with an open and transparent competitive project funding process.

7. Considering the AFPA/UTAS proposal:

- a. **What are the strengths of the proposal?** Basing the NIFPI at UTAS means that the universities existing experience with managing and delivering contracts under a governance framework provides efficiencies in establishing this proposed NIFPI. So that the NIFPI had a substantial base to be established on someone had to put their hand up to host this proposed NIFPI and we applaud UTAS for making this commitment.

The university has experience with the delivery of national Forestry R&D programs from their past involvement in Forestry CRCs and National Centres of Excellence. UTAS has an existing history of working with the forest industry in the current TAS



NIFPI and these past centres in providing industry placements of students to work on current and relevant industry research issues. This placement and partnership model provides enhanced opportunities for R&D capacity building as industry partners often employ graduates when they complete their degree as they have existing knowledge of their skills and experience and ability to work in their company teams. The latter model reflects the highly successful USA Land Grant University model based on industry co-operative research centres (e.g. Nth Carolina State, Oregon State, Florida State, Texas A&M, Ohio State, Virginia Tech, Georgia Tech) and the Canadian Centre for Advanced Wood Processing at Uni of British Columbia.

- b. **Are there areas that could be enhanced in the proposal?** From past experience UTAS will be aware of State concerns and rivalries that need to be addressed by good governance and transparent processes in the allocation of resources and location of key infrastructure investments. The National coverage of the NIFPI needs to be emphasised, entrenched in NIFPI management and communicated well.
8. **Are there lessons and aspects from international models (for example, Scion in New Zealand and FPInnovations in Canada) which should be considered as part of establishing an Australia-wide NIFPI?**

The New Zealand Govt (MBIE) conducts several rounds of R&D applications annually to competitively allocate Govt funds to Crown Research Centres (such as Scion) and universities. These are across all fields of science and medicine, and they have a pool of both local and international expert assessors to provide assessments on the quality of the research proposed, the quality of the proposed research team and partnerships and the potential scientific and \$\$\$ impact of the research. A review of this model may provide some useful experience to incorporate into an open and transparent R&D project funding allocation model for the NIFPI.

9. ***Are there any other issues, opportunities or risks the Feasibility Study Team should consider as part of its remit to investigate the feasibility of an Australia-wide NIFPI***

The key issues, opportunities and risks are discussed in the answers above.

In summary:

- Australian Forestry R&D capacity has been greatly reduced at a time when substantial opportunities are available for the forest sector to contribute to carbon sequestration to address climate change
- Long term research capacity needs long term investment especially in a forestry crop that takes decades to grow to harvest
- Investment in an Australia-wide Forestry NIFPI has potential to reinvigorate much needed interest in studies and careers in forestry science
- Development of industry placement models to enhance capacity building for improved employment and career opportunities for graduates from Australian universities with both graduate and higher-level degrees.



- International contracting of Forestry R&D, while not impossible, is very difficult and unlikely to deliver on ideal timelines for local industry investment while not addressing the need to re-build Australian Forestry R&D capacity.

Yours faithfully,

A handwritten signature in black ink, appearing to read "K. Harding", is placed over a light green rectangular background.

Dr Kevin Harding, BSc(Forestry), PhD (NCSU), MIFA, GAICD
VICE PRESIDENT

cc. Mr Bob Gordon
Dr Michelle Freeman
Ms Jacquie Martin

President, Forestry Australia
Vice President, Forestry Australia
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