From:	no-reply@mbie.govt.nz
To:	Research, Science and Innovation Strategy Secretariat
Subject:	Draft Research, Science and Innovation Strategy submission
Date:	Friday, 8 November 2019 11:03:07 a.m.

Submission on Draft Research, Science and Innovation Strategy recevied:

Are you making your submission as an individual, or on behalf of an organisation?
Organisation

Name
Venise Comfort

Name of organisation or institutional affiliation
FOA - Forest Owners Association

Role within organisation
Advisor

Email address (in case we would like to follow up with you further about your submission)
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Which of the below areas do you feel represents your perspective as a submitter? (Please select all that apply)

If you selected other, please specify here:

Gender

Ethnicity

Name of organisation on whose behalf you are submitting, if different to the organisation named above
FOA

In which sector does your organisation operate: (Please select all that apply)
Industry

If you selected other, please specify here:

How large is your organisation (in number of full-time-equivalent employees)?
8

Please indicate if you would like some or all of the information you provide in your submission kept in confidence, and if so which information.

Please upload your submission document here
Science-and-Innovation-MBIE-Submission-FOA.pdf - Download File

FOREST OWNERS ASSOCIATION

Submission

Draft Research, Science and Innovation Strategy

MBIE

Submission to: MBIE via consultation website

10 November 2019

Growing Your Future

Contents

Introduction – The Forest Owners Association (FOA)

The New Zealand Forest Owners Association Incorporated (FOA) is the representative membership body for the commercial plantation forest growing industry. FOA members are responsible for the management of approximately 1.2 million hectares of New Zealand's plantation forests and over 80% of the annual harvest. FOA is submitting on behalf of our national membership.

Contribution of Research, Science and Innovation

Response to questions 1 to 3

To achieve this vision toward building a clean green carbon neutral economy will require a sustained focus on integrated land-use, increasing carbon sequestration, being smart on how we grow trees, create value from plant derived material and create and use renewable energy. Highly interactive with these initiatives is a focus on environment and community health and how we shape our future built environment.

The above is not just about new products or industries and services it is also about ensuring we protect those industries we have and overcome what are challenging issues for New Zealand. For example, how we protect ourselves from the impact of climate change, increasing exposure to pests and pathogens and the changing global consumer markets and activities that challenge our access to many of these markets.

New Zealand also needs to access those R&D activities being undertaken internationally as we must leverage that knowledge in areas such as big data, remote sensing, biotechnology and so on.

The RSI system can therefore contribute to that New Zealand vision by:

- An increased focus on the land-based industries to ensure they are future-proofed, able to leverage greater value for New Zealand, build on our strengths in wood, fibre and food production and support their focus on diversification.
- Support leveraging knowledge from other nations so it can be adapted for New Zealand.
- Take a whole of Government approach through including education and creating talent that can feed into our industries. This includes encouraging youth into STEM subjects, research led education.
- Reducing the focus on domestic competition in Government funding e.g. Endeavour fund so more longer-term programmes can be developed that are genuinely best team.

Researching and innovating towards the frontier

Response to questions 4 to 9

If this is an RSI strategy for New Zealand, then it should be focussed across all the activities in RSI. Not only creating new knowledge but how do we use knowledge to create opportunity. We have to leverage the knowledge developed internationally as our RSI buckets are very small. The latter should be the greatest part of the RSI spend.

The greatest opportunities for New Zealand are in solving the problems that New Zealand's survival relies upon.

- Protecting our borders from the invasion of pests and pathogens.
- Dealing with extreme weather and related events (e.g. fire)
- Increasing productivity
- Overcoming our small size and dispersed natural resources and being able to manufacture competitively on a small scale.
- Being the world's most sustainable producer of natural, renewable materials.
- Adding value through design (e.g. build solutions, packaging solutions)

Unique opportunities for the RSI system are that we have purpose-built entities that must focus on sectoral needs (the CRIs) and be able to take a strategic approach to supporting critical sectors. However, are the operating models working as well as they could?

The New Zealand private sector challenges are that we mostly deal with many small enterprises. Forest growing industry seeks to overcome this by working in cooperative approaches leveraging ability to invest and share knowledge and work in partnership with science providers and government investment. Short term programmes and what seems a focus on bidding detracts ability to build the resilience into the programmes that are needed and sustain critically important skills.

Our key challenge – Connectivity

Response to question 10

It is in all our interest that there are strong connections between scientists and between science and industry. This is especially important in key areas of international activity as we must leverage off the knowledge created elsewhere.

Guiding Policy – Excellence

Response to questions 11 to 13

We need to be excellent in all we do. Whether it is in discovery or technology transfer.

The New Zealand science sector is already diverse with many different nationalities represented within it. Ensuring that we encourage a focus on the STEM subjects from an early age, across New Zealand would provide the opportunity for the science sector to best represent New Zealand.

Of course, the quality of science must be viewed on an international basis. New Zealand is a small nation with a small R&D spend and this is unlikely to change. We must do excellent science so we can be part of large international collaborations and be able to bring something to that collaboration.

Strong collaborations are part of contributing to excellence but not on their own. We must pick our areas where we want to focus and be deliberate about building the right relationships.

Guiding Policy – Impact

Response to question 15

There have been many methods developed that measure the impact of research.

If we are clear on what success looks like, then we have a basis for measurement.

Guiding Policy – Connections

Response to questions 17 to 18

Domestic connections do appear to be weak and this may be a consequence of a government funding system that focusses on competition and operating models where winning money is important.

The MBIE partnership model has been a successful model that brings together industry and science. It is disappointing that it was discontinued as it clearly focussed on collaboration across excellence and impact.

The development of large long-term programmes, that bring together science and industry are attractive to attracting talent, succession planning, international experts and all the ingredients to deliver on many agendas.

Actions – Making New Zealand a Magnet for Talent

Response to questions 19 to 22

Talent attraction starts with encouraging youth into STEM subjects, creating exemplars and showing a strong career pathway.

We can only achieve the above when we have long-term programmes, doing fulfilling work, appealing to those who focus on discovery to those who focus on science translation. If a science career pathway has a large emphasis on bidding, then it will be less attractive.

New Zealand does attract a lot of international talent but retaining this is more than just about the science. Are we giving them career options, providing them with the salaries and other benefits that they receive elsewhere?

It is not very clear what the proposed initiatives are? A global statement about being a centre of innovation does not help. We need to be more specific.

Talented scientists are also attracted by connectivity with users or those systems that enable their ideas to be road tested.

Actions – Connecting Research and Innovation

Response to questions 23 to 26

We can only achieve the above when we have long-term programmes, doing fulfilling work, appealing to those who focus on discovery and to those who focus on science translation. If a science career pathway has a large emphasis on bidding, then it will be less attractive.

Actions – Start-up

Response to questions 27 to 29

It is not clear why we need to focus on encouraging start-ups as such.

We also need to be cautious that where we have these or similar, we want to ensure there is a clear benefit to New Zealand. Long-term programmes where end-users and science work together will create the best environment to see new enterprises develop ranging from simply adding new market offerings to an existing product mix, developing joint ventures or classic start-ups. This also creates an environment where those entities that arise are linked to New Zealand strengths and therefore have the best chance to deliver long-term benefit to New Zealand

Actions – Innovating for the public good

Response to questions 30 and 31

Innovation for public good and private good typically go hand in hand. The forestry industry for example, needs strong healthy and resilient communities. Increasing human equity is important to our industry as any other. Quality, high productive jobs are important. Therefore, government investment and industry investment in RSI should work together as the spill over benefits are large at a national level.

An increased focus on developing the best possible models for land use (economic, conservation, environment), increasing productivity and human equity are possible areas for public good opportunity.

Actions – Scale up

Response to questions 32 and 33

Building scale in focussed areas.

We would suggest using a portfolio approach.

1. Programmes that protects those activities that are mission critical for New Zealand to sustain our economic base? e.g. biosecurity, increasing sustainable productivity from our land, increasing sustainable productivity
2. Programmes that will enable us to build on our strengths and make a step change in value e.g. developing design/build solutions based on our natural resources, taking our solutions (e.g. small manufacturing systems) to the world
3. Programmes that open up new customers and new markets for New Zealand.

There is a perception that (3) above is the exciting area to be in. Finding solutions to managing pests and pathogens in a world where using chemicals are banned and so on is not a trivial problem to solve and will require New Zealand to take a world leading approach.

Scale up – Choosing our area of focus

Rather than pick individual or discrete activities we suggest taking a portfolio approach as described above.

Actions – Towards an Extended Vision Mātauranga

Response to questions 34 to 37

Rather than focus on small actions we should take a more holistic approach.

The RSI strategy is focussed on delivering New Zealand's vision. If that Vision integrates a Maori world view then programmes and those entities working inside it must do those things that fulfil that vision, including bringing in Mātauranga Māori, building kaupapa Māori programmes and so on.

Critically we must start to build these approaches at school and enable them to transition into major initiatives. The RSI system does have to create those major initiatives allowing those skill to be nurtured.

Inside the forestry industry there are an increasing number of Maori owned forest enterprises. These are all innovative, well connected to the RSI systems within the industry and government. Many are extremely innovative in the approaches they adopt to grow their businesses and their markets. We are not sure where there is evidence that they are otherwise?

Actions – Building Firm Foundations

Response to questions 38 to 41

The current structures of funding appear to have a greater focus on competition and wining investment. The system also appears quite complicated and with high transaction costs.

The above limit ability to build meaningful collaborations, create long-term partnerships and build in new talent or nurture emerging talent.

The CRI operating model was designed to strengthen connectivity to sectors of national importance. They were in essence, centres of excellence in their areas, able to take a long-term view, build meaningful and robust partnerships with their sectors and with international partners and sustain capability of importance to their sectors. It seems that a substantial amount of their funding must be won from the likes of the Endeavour fund.

The CRI model is unusual in New Zealand and is a strength that we should seek to better use. The system appears fragmented as we have CRIs, overlapping with National Science Challenges. This is very confusing to those on the outside.

Actions - General

Response to question 42

Setting a vision for New Zealand is an excellent start. It could then roll on to see how RSI, education and industry all work to achieve that vision.

Taking an holistic view would be a useful beginning; we need to be cautious about adding more parts without having done that

Thank you for the opportunity to comment on the strategy.

The FOA strategy for science and innovation can be found at

https://fgr.nz/wp-content/uploads/2019/10/Forest-Growing-Science-and-Innovation.pdf

David Rhodes, Chief Executive Officer, Forest Owners Association.