


June 24<sup>th</sup> 2014



# Four Year Rolling Review: Landcare Research Manaaki Whenua 2014

*Report from the Review panel*



## TABLE OF CONTENTS

1. FOREWORD.....	3
2. EXECUTIVE SUMMARY.....	4
3. BACKGROUND .....	7
4. HOW WELL IS LANDCARE RESEARCH MANAAKI WHENUA DELIVERING NOW AGAINST ITS SCP? .....	9
5. LEADERSHIP AND DIRECTION IN LANDCARE RESEARCH MANAAKI WHENUA .....	16
6. ANALYSIS OF MATTERS INFLUENCING THE ABILITY OF LANDCARE RESEARCH MANAAKI WHENUA TO DELIVER TO THE SCP IN FUTURE .....	21
6.1. Financial viability and sustainability .....	21
6.2. Commercialisation of intellectual property.....	25
6.3. Working with Māori.....	27
6.4. People and culture .....	29
6.5. Policies, processes and practices.....	32
7. OPPORTUNITIES FOR LANDCARE RESEARCH MANAAKI WHENUA .....	36
ANNEXES .....	38
Annex 1: Brief biographies of the members of the review panel .....	38
Annex 2: List of information provided to the panel.....	40
Annex 3: Stakeholders whom the panel met with or spoke to .....	44

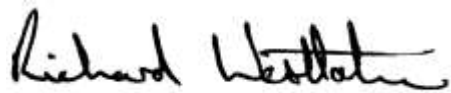
# 1. FOREWORD

---

The review panel records its thanks to the Board, management and all those we met with from Landcare Research Manaaki Whenua for the support and open, positive attitude that we experienced during the review process. We were impressed by the professional standard of the information sourced and the way additional information requests were handled promptly. Given the substantial volume of material, the ease of access and navigation of the portal were greatly appreciated.

The support provided to the panel by MBIE in making the two month process seamless was also very much appreciated.

Having rolling four-year reviews of the CRIs is a useful initiative in focusing attention on the longer-term performance and capacity of these Crown-owned companies. We hope that this report will assist Landcare Research Manaaki Whenua to flourish over the next four years, and that the report also provides appropriate support for the Ministry and Government in its decision making.

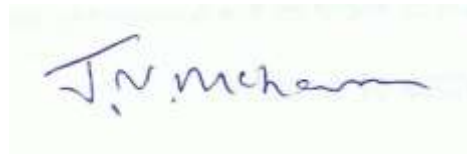


Richard Westlake

**(Chair)**



Anake Goodall



Jim McLean



Tricia Harris

**(Panel Members)**

## 2. EXECUTIVE SUMMARY

---

Cabinet has agreed to evaluate the performance of each Crown Research Institute (CRI) against its Statement of Core Purpose. These reviews are intended to provide Ministers with assurance on the operational effectiveness of the CRI in delivering outcomes that benefit New Zealand, an assessment of governance effectiveness, financial viability and sustainability, together with identification of opportunities and barriers to success.

Two evaluation reviews are being undertaken each year and the cycle of reviewing the seven CRIs will be completed every four years. Landcare Research Manaaki Whenua is the third CRI to undergo such a review. A panel of four independent reviewers undertook the review between March and June 2014. The panel reviewed a significant amount of documentation provided by Landcare Research and received input from the Chairman, Board, Chief Executive, senior leadership team and science leaders together with a number of external stakeholders.

The Statement of Core Purpose for Landcare Research states *“Landcare Research's purpose is to drive innovation in New Zealand's management of terrestrial biodiversity and land resources in order to both protect and enhance the terrestrial environment and grow New Zealand's prosperity.”* The Statement of Core Purpose further elaborates on the key outcomes, scope of operation and operating principles for Landcare Research and it is against all these that the panel makes its report.

The identity statement – “Manaaki Whenua, Manaaki Tangata / Care for the land, Care for the people” – adopted at Landcare Research’s establishment, refers to the indigenous concept that the health of the natural environment is fundamental to the welfare of the people living in that environment and vice versa. This is a strong point of connection to the Māori dimension of its work and resonates deeply with that community and many Landcare Research staff alike. The review panel acknowledges the effectiveness with which the organisation utilises “Manaaki Whenua, Manaaki Tangata” as a statement of genuinely integrated purpose and a measure of the value it aspires to create.

The panel found that Landcare Research Manaaki Whenua has a unique, valuable and valued position in its ‘markets’. A strong commitment for science benefiting New Zealand is embedded throughout the organisation. Landcare Research has an excellent reputation with its key customers for providing quality science and being responsive, open and honest. Its financial processes and controls are generally good and its activity is underpinned by solid practices, processes and policies.

In particular Landcare Research:

- has a strong record of partnering and knowledge transfer across central and regional government, with some new partnerships developing in the private sector as a result of recent initiatives;
- has a strong focus on its need to maintain capability for long-term national needs and on maintaining its science at world standard;
- has built a key competence in collaborative research both internally and when working with other research organisations;
- appropriately supports Government programmes in the Pacific Islands, China and Indonesia as well as supporting key science staff who have been elected to international panels and technical working groups;
- effectively manages and seeks advice from both its Science Advisory Panel and its Outcome Advisory Panel, with the Board taking an active interest in both relationships so as to realise organisational value from them; and
- is an effective and responsible manager of its nationally significant databases and collections together with its broader infrastructure.

The panel considers that Landcare Research's current performance may be considered adequate, but its leadership must address and overcome some significant challenges if it is to meet its own aspirations and prosper in the near term future. Some stakeholders described Landcare Research as the 'least changed' of the CRIs, a view that is consistent with the panel's. In an environment of constrained government funding, competitive markets and demand for timely results, Landcare Research will need to demonstrate greater urgency and hunger to succeed than was evident to the panel.

The panel has identified six key opportunities for further organisational development to help achieve this.

**1. Focus Landcare Research's Purpose and Outcomes within the SCP**

The SCP Purpose and Outcomes are very broad and largely beyond the direct control of Landcare Research. However, it is expected to describe its performance and future intentions against this broad canvas within its Statement of Corporate Intent (SCI) and Annual Report. In part because of this breadth, the panel considers that Landcare Research has difficulty in precisely determining its role and the impact its research delivers for New Zealand. The SCP may be described as a licence to operate anywhere within the stated purpose, so its breadth can serve to frustrate efforts to establish focus and set priorities.

Accordingly, the panel strongly believes that Landcare Research should sharpen its internal focus on the Purpose and Outcomes within the SCP. This should follow a deep strategic analysis of its role and limit the key areas in which it operates. This would provide clarity of its role within the national research context, and enable key stakeholders to better understand and support a different style of business. It would also assist with the better articulation, and attribution, of the impact Landcare Research makes. The Panel recognises that formalising such a change to the SCP may take some time and negotiation with MBIE and the Minister.

**2. Clarify strategic direction**

The panel considers that the Board and members of the executive appreciate Landcare Research's operating environment and associated challenges well, and have been working to manage within and to them. The organisation's annual planning framework and control instruments are strong and it has a constructive and open working environment. However, the panel considers that the strategic plan from the Strategy 2017 process will need to convey clearer external focus and specificity of actions and reflect the urgency that will be needed for success. Panel interactions with the leadership generally reinforced this view. There is the opportunity to develop clarity around the size and scope of potential business, the areas where Landcare Research adds the greatest value, and strategies to position it for sustainable strategic advantage so as to capitalise on its value proposition.

**3. Meet or exceed the company's revenue forecasts**

With the exception of the 2013/14 SCI the revenue forecasts of successive SCIs have been ambitious, with the most recent forecast being for a 7% compound growth in non-Core revenue for the next five years. In contrast, actual revenue has been static or declining, although this year Landcare Research may exceed forecast revenue for the first time in several years. The panel understands that there has been considerable effort from members of the Senior Leadership Team in achieving this growth, and to find new business opportunities. To meet the forecast growth this effort will need to be both continued and considerably expanded.

The panel recognises that revenue is only one metric of performance and that the impacts which Landcare Research makes with its research are more important. Nevertheless financial sustainability is vital if the organisation is to deliver the results and retain the key capabilities it

requires in a highly competitive market. Maintaining and enhancing financial sustainability will support the high performance culture attractive to external stakeholders.

#### **4. Build the strategic position of Manaaki Whenua in relation to Māori**

Landcare has a strong history and reputation in working with Māori. All stakeholders spoken to by the panel were aware of Landcare Research Manaaki Whenua's reputation for responsiveness and respect. However, few concrete examples of significant current activity were evident to the panel, with most relationships being transactional or relying on a very few key individuals.

For Landcare Research to realise the Māori dimension of its *Manaaki Whenua Manaaki Tangata* mandate, the panel is strongly of the view it will need to better identify the size and scope of the Māori economic opportunity and then develop strategic linkages, leverage existing relationships and exploit its brand reputation. This will require the adoption of specific goals and active monitoring of progress against them. As importantly, it will require re-building internal capability and commitment across the total leadership.

#### **5. Contract-in resources for intellectual property development**

The great majority of services provided by Landcare Research are directed at public good through open disclosure. Consequently very little commercial intellectual property arises in the normal course from this work. It is the panel's view that the small amount of commercialisable intellectual property that arises does not justify the significant investment in up-skilling the organisation that would be required to commercialise it successfully. The panel considers that any intellectual property commercialisation opportunities should be identified by independent expert external advisers, and that Landcare Research should contract separate organisations to be responsible for the commercialisation.

#### **6. Drive a culture of high performance and strong accountability**

The panel expected to see a higher level of awareness of Landcare Research's limitations, a greater level of specificity and urgency around its strategic challenges, and a greater preparedness to execute its plans. There is a significant gap between the view held by the Board and Senior Leadership Team with regard to the organisation's current positioning, capability and momentum and the panel's views on these same matters. This is of serious concern.

Successfully developing a culture focused on delivering clear strategic priorities that are understood, committed to and driven by the entire organisation will significantly increase Landcare Research's chances of success. Not doing so threatens to continue a slow decline and raises the risk of the organisation starting to believe that targets are always beyond reach and potentially fostering a culture where under-performance becomes acceptable.

The panel encourages Landcare Research to adopt recognised benchmarks of business best practice and further enhance its progress towards a culture of high performance and accountability. This will need to be led overtly from the top so that there are common conversations and aligned incentives throughout the Board, SLT, support services and science engine.

The panel believes that Landcare Research is not delivering to its potential. It has identified and begun to implement some strategies to address this. There is a need for specificity around strategic priorities, with clear external-focus and increased urgency. The challenges for the Board and executive are significant, but largely within their control and, in the panel's view, achievable. Successfully executed, a genuinely strategic focus has the potential to attract new business to Landcare Research Manaaki Whenua, thereby increasing the benefit it delivers to Aotearoa New Zealand.

## 3. BACKGROUND

---

### Context for the rolling reviews

The 2010 Crown Research Institutes (CRI) Taskforce reforms are an integrated suite of changes designed to increase the impact and benefit of the CRIs to New Zealand. Central to the reforms is the intention to increase the CRIs' focus on collaboration with, and efficient technology transfer to, the sectors and key stakeholders they serve.

Each CRI has adopted a Cabinet-approved Statement of Core Purpose (SCP) which reflects this focus and clearly articulates the purpose, expected outcomes and strategic role for the organisation. To ensure CRIs continue to increase their contribution to New Zealand's economic, social and environmental well-being, the CRI Taskforce also recommended, and Cabinet agreed [CAB Min(10)43/5C refers], that the government evaluates the performance of each CRI against its SCP through a process of independent rolling reviews.

It has been agreed with the Minister of Science and Innovation that two reviews will be undertaken each year. Given the cycle of reviewing the seven CRIs will be completed every four years, these reviews will be known as the four-year rolling reviews. These reviews are described as rolling for two reasons: firstly, because they are designed to review each CRI successively, and secondly, because they will draw on an aggregation of performance-related information that is already routinely generated to inform the matrix of monitoring and assessment processes established around the CRIs.

### Purpose of the review and this report

The purpose of these reviews is to provide shareholding Ministers with insights on where each CRI's performance can be improved and assurance on where the CRI is operating effectively in delivering outcomes that contribute to New Zealand's economic, social and environmental well-being. The reviews will include an assessment of governance effectiveness, financial viability and sustainability as well as an identification of opportunities and barriers to success. Findings from the reviews will also support CRI Boards in their governance role. This report is the outcome of the third such review, that of Landcare Research New Zealand Limited (Landcare Research Manaaki Whenua). The review was undertaken between April and June 2014.

### Scope of the review

As outlined in the Terms of Reference for the review, each CRI's SCP provides the scope of enquiry for the four year rolling review. The review is expected to evaluate the CRI's performance and progress in delivering to the purpose, outcomes, scope of operation and operating principles in its SCP. There will also be some consideration of the likely durability of outcomes in the current economic and environmental context. The reviews are expected to evaluate factors that influence the CRI's overall success in contributing to its SCP outcomes now and into the future.

Every year each CRI, in collaboration with key stakeholders, measures and evaluates its impact on its respective sectors. The independent panel undertaking the four-year rolling reviews is not expected to duplicate this work. However, based on the measures and assessment generated by the CRI, the panel should evaluate how well the CRI is contributing to the outcomes in its SCP and assess the quality of the measures used to inform that assessment.

The Terms of Reference have the following as out of scope:

- how science reviews are undertaken by the Science, Skills and Innovation Group; rather the science reviews themselves may be sourced as an informational input into this project;
- measuring the performance of the CRI in delivering against individual contracts; rather the panel will evaluate how the CRI manages its contracts overall; and

- measuring the CRI's science quality; rather the panel will evaluate how well the CRI is monitoring, measuring and improving science quality.

### The review panel and processes

Panel members were appointed to ensure an appropriate mix of experience in governance, corporate finance and economics, senior management of science organisations and organisational review. The panel membership was Richard Westlake (Chair) and Jim McLean, Anake Goodall and Tricia Harris. Brief biographies for the panel members are attached as Annex 1. The panel reviewed any potential conflicts of interest that members may have in relation to this process. There were no direct conflicts identified. Relevant indirect issues were managed by the Chair throughout the review process.

The panel was appointed by the Ministry of Business, Innovation and Employment (MBIE) in late February 2014 and it convened on 18<sup>th</sup> March 2014. Panel members were then provided with a range of background material from both MBIE and Landcare Research. The information from Landcare Research was based on an information request and further information was provided throughout the period of the review. The full list of information provided to the panel through the review is detailed in Annex 2.

In undertaking the review the panel sought to be:

- future focused: while taking account of the performance over the last 4 years spending the majority of effort on understanding the position of Landcare Research for the future.
- independent: working closely with Landcare Research and MBIE but remaining independent of both to ensure the panel's report reflects a genuinely independent assessment;
- objective: the review sought to be objective and as far as possible evidence-based. The panel sought to be open minded and 'let the facts and the numbers do the talking';
- interactive: the panel consulted with members of the Landcare Research Board and senior management team during the review and Landcare Research had the opportunity to see and comment on matters of factual accuracy in the draft report before it was finalised;
- discreet: the panel, respecting the candour and openness of all who participated in the review - including external stakeholders - undertook to preserve confidentiality and ensure no statements in this report are directly attributable to individuals or specific organisations; and
- efficient: the panel aimed to be efficient in their engagements with Landcare Research and keep compliance costs to a minimum.

The panel met with the Chief Executive (together with the Chair by teleconference) and the Senior Leadership team together with some of the third-and fourth-tier science staff and younger scientists over three days at the Lincoln campus. The panel met separately with the Chair of Landcare Research and held meetings or teleconferences with a number of external stakeholders. Individual Board members were canvassed by email for any views they wished to provide. The full list of those the panel met with, or spoke to, is provided as Annex 3.

The panel discussed its preliminary findings with the Landcare Research Board at its meeting on 26<sup>th</sup> May 2014. A draft report was provided to both MBIE and Landcare Research for comments on matters of accuracy on 3<sup>rd</sup> June 2014, and the final report was provided to MBIE and Landcare Research on 24<sup>th</sup> June 2014.



## 4. HOW WELL IS LANDCARE RESEARCH MANAAKI WHENUA DELIVERING NOW AGAINST ITS SCP?

---

### Context for assessment

Within the boundaries of its SCP a CRI's performance is measured against two key deliverables:

1. the impact of its research in relation to economic, social or environmental benefits for Aotearoa New Zealand; and
2. the financial performance of the CRI.

The panel provides in Table 1 below its assessment of the current performance of Landcare Research within the context of the current operating environment for CRIs. However, in reflecting on its performance the panel was conscious of the particular history and place in the New Zealand science system of Landcare Research. In particular it:

- is primarily a provider of public good research supporting public sector decision making underpinning the needs of central and regional government, and the research of other CRIs;
- is a custodian of a third of the nationally significant databases and collections;
- has a very broad range of expectations from users of its research as to fields of research activity and capability which must be maintained;
- holds capability and resources that, if lost, would seriously disadvantage the national interest;
- serves a public-good role that generates few opportunities to develop valuable intellectual property or spin-off business opportunities;
- has some opportunities to extend its customer base into research supporting the private sector, but due to the nature of its research portfolio is largely one step removed from the end users;
- has seen a relative decline in the overall environmental output expense compared to the economic output expense in Vote Science over the 20 years of its existence;
- has had a very significant decline in investment from other Votes (Conservation, Environment, Primary Industries) and regional councils over the last 2-3 years with only recent signs of improvement in the case of regional councils;
- has an opportunity but also some risks associated with the National Science Challenges; and
- is among the smaller CRIs.

These parameters have meant that Landcare Research has probably always been more exposed to government budgets in terms of financial sustainability and has perhaps struggled to identify and clearly articulate the unique value proposition that it provides to its shareholder the Crown. That notwithstanding, the panel is of the view that oversight of Landcare Research should remain in the shared CRI framework.

**Table 1: Performance of Landcare Research Manaaki Whenua against the Statement of Core Purpose**

THE LANDCARE RESEARCH MANAAKI WHENUA SCP	PANEL PERSPECTIVE OF CURRENT PERFORMANCE
<p><b>Purpose</b> Landcare Research's purpose is to drive innovation in New Zealand's management of terrestrial biodiversity and land resources in order to both protect and enhance the terrestrial environment and grow New Zealand's prosperity.</p>	<p>All CRIs are required to undertake research to contribute to New Zealand's economic growth and environmental and social prosperity.</p> <p>The purpose statement was discussed in detail by the panel, in part because of its all-encompassing nature. The panel feels that key phrases within the statement such as 'drive innovation' and 'grow New Zealand's prosperity' are overly aspirational and outside the ambit or control of Landcare Research. While somewhat passive, the words used by Landcare Research to describe itself in its draft Strategy 2017 sat more comfortably with the panel, for example:</p> <ul style="list-style-type: none"> <li>• Landcare Research's service is providing '<i>tangible environmental benefits</i>'; and</li> <li>• Landcare Research's strategic position is as '<i>core provider of independent science to central government and regional councils supplying knowledge and tools for the land environment and land-water interface</i>'.</li> </ul> <p>Overall the panel:</p> <ol style="list-style-type: none"> <li>1. considers that, as in the expectations for all CRIs, Landcare Research does 'undertake research to contribute to New Zealand's economic growth and environmental and social prosperity'; but</li> <li>2. does not consider that Landcare Research can reasonably be accountable for delivering against the breadth of purpose in the SCP as currently drafted. Nevertheless, it should be held accountable for how it works with the users of its research to ensure its uptake.</li> </ol>

THE LANDCARE RESEARCH MANAAKI WHENUA SCP	PANEL PERSPECTIVE OF CURRENT PERFORMANCE
<p data-bbox="222 329 369 358"><b>Outcomes</b></p> <p data-bbox="222 427 999 557">Landcare Research will fulfil its purpose through the provision of research and transfer of technology and knowledge in partnership with key stakeholders, including industry, government and Māori, to:</p> <ol data-bbox="268 592 1020 1011" style="list-style-type: none"> <li data-bbox="268 592 1020 690">1. <i>improve measurement, management and protection of New Zealand's terrestrial ecosystems and biodiversity, including in the conservation estate</i></li> <li data-bbox="268 722 1020 787">2. <i>achieve the sustainable use of land resources and their ecosystem services across catchments and sectors</i></li> <li data-bbox="268 820 1020 885">3. <i>improve measurement and mitigation of greenhouse gases from the terrestrial biosphere</i></li> <li data-bbox="268 917 1020 1011">4. <i>increase the ability of New Zealand industries and organisations to develop within environmental limits and meet market and community requirements.</i></li> </ol>	<p data-bbox="1041 414 1961 581">The panel is aware that when the outcome statements were agreed several years ago with the Minister, Landcare Research was deliberately positioned to be a contributor towards those outcomes but with an expectation that other parties would deliver the actual outcomes. Landcare Research's outcomes therefore are not those delivered and measured by the organization itself.</p> <p data-bbox="1041 613 1961 849">This review provides an opportunity for Landcare Research to revisit parts of the SCP to more accurately describe the extent of its mandate. In the meantime, as with the Purpose statement, the breadth and aspiration of the stated outcomes are such that it is unlikely that Landcare Research could realistically demonstrate delivery of them on its own. In fact even attributing delivery of aspects of the stated outcomes by third parties would be difficult to achieve (see also Section 6.5).</p> <p data-bbox="1041 881 1961 1049">While the process to formally agree changes with MBIE and the Minister may take some time, addressing this issue and opening a discussion is likely to materially assist the Landcare Research Board and Senior Leadership Team (SLT) to firstly focus, communicate and then discharge the organisation's mandate.</p>

## Scope of operation

To achieve these outcomes, Landcare Research is the lead CRI in the following areas:

- catchment-level ecosystems (including wetlands) and related ecosystem services
- terrestrial vertebrate pest control
- terrestrial carbon processes and inventory, and other greenhouse gases from soil and land
- land cover, land-use capability and effects, and spatial land information that integrates across sectors and scales
- soil characterisation, processes and services
- integrated social and biophysical research to support sustainable land resource management, including natural and urban environments.

Landcare Research will work with other research providers and end-users to contribute to the development of the following areas:

- biosecurity, land, soil and freshwater management
- climate change adaptation and mitigation
- industry and business environmental performance, including verification
- indigenous forestry
- urban environments
- Antarctica.

Because of the very broad scope as defined, Landcare Research is able to claim a position of CRI leadership across a breadth of activity well beyond that possible for an organisation of its scale. It has less than \$55M p.a. of revenue available to apply in areas where it is lead CRI, each of which could justify a high proportion of the total so as to deliver significant impact. The panel recognises the organisation's dilemma of having to choose between spreading itself too thinly so as to maintain broad research capability and investing more deeply in some areas and letting some capabilities go, perhaps irrevocably.

The panel is of the view that several of these areas are not core to the future of Landcare Research and it should only be contributing to them if they are fully supported through direct funding. In particular, Landcare Research should evaluate the importance to its future of meeting government priorities for work in Antarctica and the Pacific, which may act as a distraction

## Operating principles

Landcare Research will:

- operate in accordance with a Statement of Corporate Intent and business plan that describes how Landcare Research will deliver against this statement of core purpose, and describes what the shareholders will receive for their investment
- meet its obligations as a Crown Company and remain financially viable, delivering an appropriate rate of return on equity
- develop strong, long-term partnerships with key stakeholders, including industry, government and Māori, and work with them to set research priorities that are well linked to the needs and potential of its end-users
- maintain a balance of research that both provides for the near-term requirements of its sectors and demonstrates vision for their longer-term benefit

The Statements of Corporate Intent (SCI) delivered over the last three years are appropriate as reporting documents to MBIE. Landcare Research informed the panel that following the CRI taskforce it changed the relative emphasis of the SCI to become a more substantial document replacing the Business Plan and that this is supported by an Annual Plan with tasks and Key Performance Indicators (KPIs) allocated to the SLT members. This approach provided the panel with all necessary information and appears to be a practical approach to maintain for the future.

As far as the panel could see from the information provided to it Landcare Research meets its obligations as a Crown Company. There are questions as to its long run financial sustainability under the current settings and these are addressed in Section 6.1.

Landcare Research has a strong record of partnering across central government and regional councils, with some new partnerships developing in the private sector. This is elaborated on further in Sections 6.1 and 6.5.

Landcare Research has a particularly strong focus on its need to maintain capability for long-term national needs. The panel has questions as to whether it is doing that sufficiently strategically recognising, however, that it also needs to respond to regular changes in the funding model on which it depends. While effectively managing short-term responses to immediate client needs has helped it meet its own income budgets, these short-term contracts have been a considerable distraction for staff and have precluded the development of longer-term strategic responses.

- transfer technology and knowledge from domestic and international sources to key New Zealand stakeholders, including industry, government and Māori
- develop collaborative relationships with other CRIs, universities and other research institutions (within New Zealand and internationally) to form the best teams to deliver its core purpose
- provide advice on matters of its expertise to the Crown
- represent New Zealand's interests on behalf of the Crown through contribution to international scientific issues and/or bodies as required
- seek advice from scientific and user advisory panels to help ensure the quality and relevance of its research

Landcare Research has an admirable focus on maintaining its science at world standard while at the same time transferring international knowledge alongside its own research to stakeholders. It is very effective in knowledge transfer to central and regional government agencies with a good foundation for adding value directly to the private sector through its work with other CRIs. It plays an important role in making data available to the public in a useable form through from its databases and collections. There appear to be pockets of successful knowledge transfer to Māori, but little evidence of a strategic research agenda that is relevant to the contemporary Māori space (see Section 6.3).

Collaborative research is a key competence for Landcare Research both internally and with other research organisations. It has a very positive reputation for partnering and brokering difficult relationships into research collaborations, and for its open and constructive approach.

A very significant part of Landcare Research's business is provision of advice to several central government agencies, each of whom were very supportive of Landcare Research as a key provider of the evidence base they need to deliver an informed policy agenda. The panel got a sense that because of the deep long-standing relationships with the agencies Landcare Research is not charging at commercial rates and/or is tending to over deliver on contracts, a view confirmed by some external stakeholders. In particular the panel is concerned that key government agencies should not benefit disproportionately from research supported by Core funds.

Landcare Research appropriately supports Government programmes in the Pacific Islands, China and Indonesia as well as supporting key science staff who have been elected to a number of international panels and technical working groups.

Landcare Research manages and seeks advice from both its Science Advisory Panel and its Outcome Advisory Panel, with the Board taking an active interest in both relationships so as to realise organisational value from them.

- establish policies, practices and culture that optimise talent recruitment and retention
- enable the innovation potential of Māori knowledge, resources and people
- maintain its databases, collections and infrastructure and manage the scientific and research data it generates in a sustainable manner, providing appropriate access and maximising the reusability of data sets
- seek shareholder consent for significant activity beyond its core areas.

Landcare Research has undertaken considerable work over the last two years with the other CRIs - with whom these challenges are shared - to better understand and manage talent recruitment and retention. The panel is of the view that Landcare Research is unsure how best to position itself for the future and this will serve to make the recruiting, training and retention challenges more difficult (see Section 6.4).

Landcare Research Manaaki Whenua has a strong tradition of working well with iwi / Māori but the panel considers that this capability is weakening with the lack of a strategic framework to capture or frame emerging opportunities in the burgeoning iwi / Māori development space (refer Section 6.3).

Landcare Research is an effective and responsible manager of its nationally significant databases and collections together with its broader infrastructure. The panel considers, however, that the organisation needs to intensify its work to improve the way in which databases and collections can be used to add value both for the organisation and the country (see Section 6.1)

The panel has not identified any significant activity by Landcare Research outside its scope of operation and is not aware of Landcare Research needing to seek shareholder consents for any new activities outside its existing scope of operations.

## 5. LEADERSHIP AND DIRECTION IN LANDCARE RESEARCH MANAAKI WHENUA

---

### Sector Overview

Management theory and practical experience both confirm that effecting enduring change within complex organisations needs sustained effort, consistency and finesse over an extended period. This is especially true in institutions with deep organisational cultures, such as scientific research entities, universities and iwi authorities. The levers of such change include: strong leadership, with a clearly articulated direction and purpose; governance and organisational design; strategic and operational planning documents; control and reporting systems; resourcing decisions; and employment policies and remuneration.

CRIs are complex organisations. They are now more than twenty years into the transition from grant-funded institutions to entities that independently set and execute strategic plans through their Boards and leadership arrangements.

As Crown-owned entities the CRIs have additional unique characteristics to reconcile. They are effectively hybrid organisations; part public-good science foundations and part corporates with profit motives. They hold both long- and short-term research and operational objectives, provide benefits to the public and private sectors, and are charged with being simultaneously collaborative with their peers and competitive in the “market”.

As legacy organisations, the CRIs have incumbent workforces that were employed into significantly different circumstances from those of today, with different expectations of operational flexibility and career mobility (see Section 6.4 on demographics). CRIs are also subject to ever-changing government priorities - and therefore resource flows - and continual calls to reduce costs and/or establish independent sources of income. A consequent challenge is the balancing of the expectation that CRIs will maintain national science capability even when funding support for those research areas is at cyclical lows.

The professionalisation of the science sector continues to be a work in progress, with all the CRIs continuing to be challenged by the transition. Early efforts focused on the employment of more “business-like” managers, often recruited from commercial roles in other sectors, and often with little understanding of science or its management. Many of these early efforts failed as a result of this lack of understanding, and the associated lack of respect and support from the science communities they were employed to lead. Over the last two decades, however, much progress has been made to bring CRIs closer to their customers.

### Landcare Research’s Transition to Date

Like its peers, Manaaki Whenua has evolved considerably. That said, the panel heard that many stakeholders consider it to be the least changed of all the CRIs and the best remaining example of genuinely independent research undertaken for the national good. This appears to be due to a combination of: its unique portfolio of responsibilities, such as the maintenance of various national databases; its position in the research ecosystem as the CRI most closely aligned with the public sector and with a history of working indirectly through other CRIs, therefore being somewhat removed from private sector end user communities; and its relatively small size. Stakeholder perception may also be influenced by the fact that environmental challenges evolve relatively slowly compared to product and production shifts in the primary sector. These attributes, plus the relative paucity of internally generated technologies suitable for sale, see Landcare Research having relatively less commercialisation experience or capability.

It is against this background that the current Board and senior management team have been operating.



The panel saw evidence that Landcare Research has significantly improved its systems of “organisational hygiene”, and particularly over the 18 months. The panel found that the core business processes expected of a good organisation are present: consideration of long-term strategy; translation into business plans and individuals’ targets; expansion of leadership development initiatives; and monitoring and reporting for example. The panel also considers that proper attention is being paid to cashflow and budgetary issues. Landcare Research has introduced a modest ‘at risk’ component to its Tier 2 salaries, some of which is tied to its financial performance.

Its tactical capability also appears to have improved. For example, in response to a projected revenue shortfall in the current year the SLT has identified and secured short-term contracts which will see Landcare Research now exceeding its budgeted revenues.

At an operational level, the panel considers that the science and research components are managed well with customers endorsing the work and quality of Landcare Research and delivery, and its constructive “can do” culture. Some stakeholders nominated it as their preferred CRI to work with as a result.

The panel heard from both the Board and the SLT about their views of the success of these incremental improvements and their respective comfort with the organisation’s direction and its progress to date.

The panel agrees that important progress has been made against these measures, that the direction of travel is broadly correct, and that this progress is important to Landcare Research’s future sustainability. Against this, the panel was concerned at the relative lack of urgency, the lack of awareness of the organisation’s limitations, and an apparent assumption that progress adopting improved practices equated with good long-term strategy.

### Draft Strategy 2017

At the strategic level the Board has been working with the Senior Leadership Team to develop a strategy for its intended direction and positioning in the light of current circumstances, including the uncertainties created by the National Science Challenges. However, the status of the draft Strategy 2017 remained unclear to the panel throughout the review period. There was relatively little explicit reference to the status of the document itself, or the associated business analyses or implementation plans, either in the documentation made available to the panel or in any of the interviews. As a result the panel remains unclear as to how ready Manaaki Whenua is to implement the broad direction outlined in Strategy 2017.

Strategy 2017 appears to fill a vacuum and is accordingly viewed positively by many staff although, unsurprisingly, as a draft document more junior staff are less familiar with its contents.

Strategy 2017 describes Landcare Research’s positioning as being the core provider of independent terrestrial science for central and regional government decision-making, and leveraging this expertise into the private sector, including the Māori economy. This is consistent with the organisation’s previous positioning, its core capabilities, and its position in the market as perceived by others. It does, however, include the assumption that it will be able to materially increase earnings from end user sector groups. This has not been the case historically, with Manaaki Whenua supplying enabling research to other entities that have then worked directly with end user groups. It is therefore unclear to the panel whether this aspiration to increase direct income is realistic given the relative lack of experience, organisational infrastructure, and understanding of clients’ commercial drivers on which to base this new business.

As a result of its investigations the panel concludes that the Board and senior management have identified the major strategic challenges in the external environment and are aware of the various trade-offs associated with resource allocation decisions. Further, there is explicit recognition of the need to increase marketing effort and improve internal and external communications; decisions with which the

panel strongly agrees. The recognition of the need for accelerated culture change is reflected in recent externally-sourced management appointments. External stakeholders have noted that this more proactive stance already compares favourably with its CRI peers.

There was also ample evidence of open and mutually respectful dialogue between the Board and the SLT about the issues confronting Manaaki Whenua. The panel did not detect any fundamental differences of opinion as to either the nature of the operating environment or the required organisational responses, or concern at the ability to raise and discuss issues openly and constructively.

The current Board and senior management have done much to establish the base infrastructure with which to manage and monitor Manaaki Whenua, and have identified - correctly in the panel's view - the challenges before them and the capabilities needed to meet those challenges. However, the panel considers that Landcare Research's view of its own capabilities is optimistic, and that its awareness of the immediacy of its challenges and opportunities is relatively low.

### Definition and Execution of Strategy Remains a Work In Progress

Whilst acknowledging the progress made by Manaaki Whenua's leadership in recent years, the review panel is of the opinion that it has not yet reached the level of organisational effectiveness which would be expected - and is required - for the challenging circumstances it faces, now and into the future.

In the draft version made available to the panel, Strategy 2017 proposes to develop the internal capabilities of the organisation to enable it to meet its strategic objectives. But the mapping of its goals against its internal capacity was poorly articulated in the draft, as were the internal linkages required to execute the strategy effectively. Neither were the linkages between Strategy 2017 and the SCI readily apparent.

The panel's impression is that Landcare Research remains overly internally focused and weighted towards utilising its existing resources in existing niches, rather than building the capacity required to secure and maintain a strategic position in a dynamic external environment. The panel had expected to see greater attention paid to converting Landcare Research to a market-facing organisation. In other words Landcare Research should build a much stronger customer focus and the appropriate customer management tools to support this.

Strategy 2017 is considered light on testing the viability of its strategic direction. The panel was looking for awareness and judgment around a range of issues, but the following types of question were heard only rarely and only discussed superficially:

- What are the strategies and tactics required to increase government revenues that have declined over recent years?
- How can Landcare Research secure substantial benefits from the National Science Challenges?
- What are the quantitative benefits that justify the efforts in the Lincoln Hub?
- How big is the Māori economy, what are the emerging trends from both a public policy and Māori sectorial perspective, and what are Manaaki Whenua's iwi / Māori revenue targets?
- What is the scale of Landcare Research's realistic opportunities for its services in the private sector, and how different are these from the government agencies it serves?
- Where might Manaaki Whenua add the most value to others' businesses, and what is the organisational capability required to secure and defend that work, and deliver that value?

The panel also expected to see a higher level of awareness of Landcare Research's limitations and a greater level of specificity and urgency around its strategic responses. In the absence of detailed business

assessments of the opportunities, action plans, accountabilities and timeframes the panel reached the view that Landcare Research's understanding of its own relative position towards being a more strategically focused and sustainable organisation is not sufficient.

Landcare Research holds a leadership role in Aotearoa New Zealand in relation to the sustainable use of land resources as set out in its Statement of Core Purpose. While the organisation now has an emerging vision and direction for the future, the panel did not see evidence of how Strategy 2017 would translate into a developmental strategy or plan to handle existing and future opportunity and emerging strategic risks. The panel considers that there are currently significant disconnects in relation to the strategies required to deliver that vision and the ability of the Board to guide and steer management.

The leadership role provided by the Board follows a governance process and procedures that are reasonably consistent amongst CRIs and NGOs, offering oversight to the management team on performance and direction. The panel is aware that the Board has put considerable energy over the last 18 months into focusing management attention on strategic issues, and considers that it has been relatively successful in this regard. The Board also acknowledged that given its comfort with Landcare Research's direction it has been less concerned about the urgency with which progress is being achieved. The panel is left, however, with an impression that the Board feels relatively powerless to determine the organisation's future, given the dominance of the government's decisions on its revenues, and has therefore focused principally on managing operational improvements. Even at this level, the panel did not get the sense that the Board was agreeing rigorous performance objectives with its SLT and then actively monitoring the delivery of the revenues and outcomes required to achieve its purpose, with the notable exception of short-term budgetary matters. The panel noted this lack of accountability tension and lack of urgency at SLT, as well as a less than cohesive view on organisational strategy at that level.

There are clear challenges to the future direction of Landcare Research and the panel is not convinced that it is currently structured to handle these challenges. Leadership does not appear to flow effectively from the Board through the CEO to the SLT and beyond. The panel also encountered evidence of varied levels of understanding of, and support for, the company's draft strategy among Tier 3 and 4 managers, and even among some members of the Tier 2 leadership team (direct reports to the CEO).

More specifically, the panel notes the following:

- There is little evidence of a clear future revenue pipeline. This is particularly important given feedback from stakeholders that Landcare Research has a tendency to over deliver (contributing, it is assumed, to the high level of satisfaction among some customers).
- Draft Strategy 2017 contains a variety of scenarios with ratings applied to each opportunity and risk. The scenarios themselves do not clearly articulate future direction or focus and are ambiguous for a reasonably mature business. The draft Strategy appears to lack clarity of targets or implementation plans to handle existing and future opportunity and increasing risk. Whilst some initiatives may be very valuable from a scientific perspective (e.g. Antarctica), the panel questions whether Landcare Research is the appropriate vehicle for this research and heard little or no commercial business case for pursuing them.
- Client engagement and understanding is mixed, albeit demonstrably improving. Whilst there is good engagement at the operational level from competent scientists, the level of understanding of Landcare Research clients' businesses and resulting opportunities appears to be lacking in some cases.
- The culture of the leadership group appears largely to lack the cohesion, accountability, urgency, stretch and energy the panel would normally expect in high performing leadership teams. The Board has a role in setting culture through the vision and values of an organisation. In this case,

there appears to be a gap in succession planning and developing and building more leaders, although the panel acknowledges this is recognised in Strategy 2017.

- At the level of the organisation performance measures are considered to be weak and focus on process achievements rather than outcomes. Many measures are unspecified and not time delimited. This is of concern given the lack of tangible demand-led strategy.

Some interviewees considered that there is a need for stronger and more sustained leadership to drive change within the organisation. The depth of the entrenched culture at all management levels means that transformational change may be difficult to promote. Whilst an incremental leadership development strategy is currently in progress, including the addition of some new personnel, the panel believes this may be insufficient to achieve the change in organisational culture required in a dynamic environment.

The Board's approach to compliance and risks appears to be process driven. The panel saw little evidence of the Board taking control of Landcare Research's destiny, relying instead on management addressing operational risks. Apart from interactions with its Science and Outcome Advisory Panels there is little evidence that environmental, economic and external strategic risks are considered to any significant extent.

Section 6 of this report sets out issues associated with: the matrix management structure and mixed accountabilities; key customer relationship management; constraints on Core funding; building new partnerships with private enterprise; and working with Māori. In each case the panel saw little or no evidence of a clear plan to deal with either the risks or opportunities associated with each issue.

Whilst efforts to date from all involved have been significant, in order to recognise opportunity and successfully manage strategic risk, the panel considers that a step change is required to develop a robust growth-oriented organisation with clarity of vision, and a defined and well-articulated strategy and implementation plan.

Landcare Research has been through significant change under the current governance and management structures. However, there is a suggestion that it may have difficulty in developing and executing the innovative and ambitious strategy and strategic business plan that will be needed for it to deal successfully with the challenges it faces.

## Conclusions

On balance, the panel considers that the Board and Senior Leadership Team are aware of their operating environment, circumstances and associated challenges and that their collective approach to these issues is both nuanced and correct. The existence of the requisite planning frameworks, control instruments, and constructive and open working environment are all significant strengths as well.

Against this, however, the absence of a robust external focus, lack of clear strategic linkages externally and internally, lack of urgency and rigour, lack of sense of control and the "acceptance of our lot", and the lack of sense of value added for clients and how to capitalise on that value proposition are considered to all be major weaknesses. Perhaps of most concern in the context of this review is the significant gap between the relative comfort of the Board and Senior Leadership Team with the organisation's current positioning, capability and momentum and the panel's opposite views on these same matters.

## 6. ANALYSIS OF MATTERS INFLUENCING THE ABILITY OF LANDCARE RESEARCH MANAAKI WHENUA TO DELIVER TO THE SCP IN FUTURE

---

### 6.1. Financial viability and sustainability

The financial systems of Landcare Research are subject to the considerable oversight expected of government-owned organisations. Recent reports from the Auditor General and from the CRI balance-sheet review are positive in their assessment of the financial control environment, and of prudent financial management. The historical financial and planning materials made available to the panel only confirmed the confidence gained from regular oversight.

Management accounting and revenue planning were evidently well managed although the panel undertook no investigation of its own. Audit New Zealand in its most recent report describes the management and control environment as very good, notes that Landcare Research complies with all significant legislation, describes the financial information systems and controls as very good, and identified no outstanding matters.

Other than maintaining the current careful attention to managing costs to match actual revenues as they are revealed, the panel views the financial systems to be in good shape. Everything seen by the panel indicated that this is an area of Landcare Research's business that is well managed.

In recent years revenue has been static or declining. The most material decline has been from non-MBIE revenues. These are mostly other Crown agencies including Department of Conservation (DOC), Ministry for the Environment (MfE) and Ministry for Primary Industries (MPI). All of these departments have been subject to cost pressures and this is reflected in less contracted work with Landcare Research. In spite of this Landcare Research has managed to achieve positive EBIT by controlling costs. Costs are largely linked to people in one way or another and consequently there has been a consistent reduction in headcount from 421FTE in 2008/9 to 340FTE as in the 2013/14 SCI, with a resulting reduction in organisational capacity. Much of this decline appeared to be in 2011/12 with further reductions in 2012/13.

As a consequence of declining Core funding in real terms, the maintenance and development of databases and collections are managed according to available funds and a question arises whether this is sufficient in the medium or longer terms. It was clear from interviews with nearly all stakeholders that they place great value on the availability of information in these databases and collections. When pressed about whether they valued them sufficiently to pay for access and maintenance they all demurred. They all expressed grave concern when asked how they might get by if they were no longer readily available.

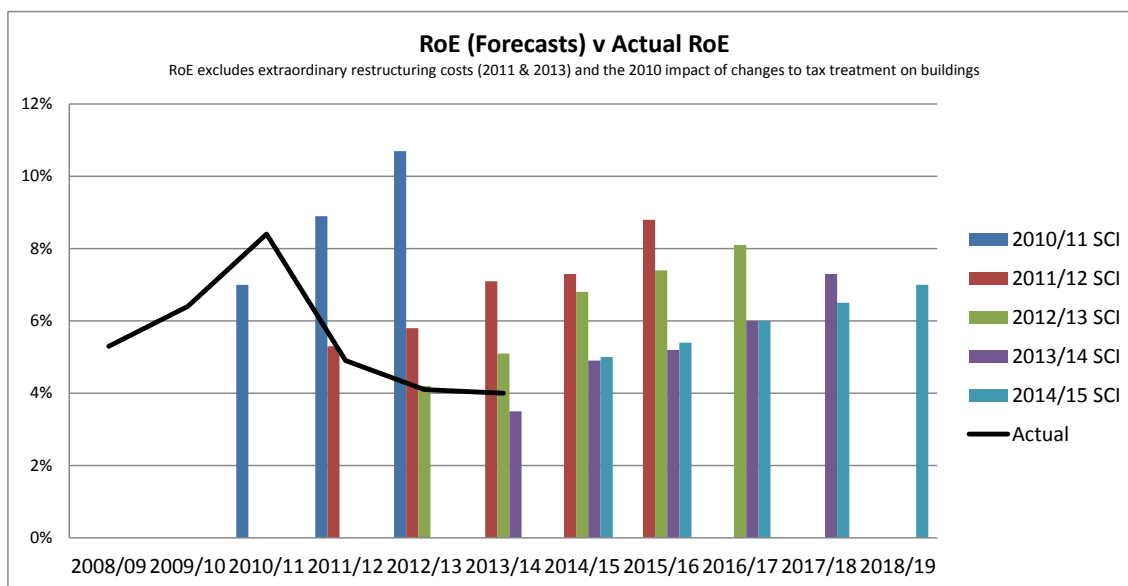
The business model for Landcare Research is a fee-for-service one, selling time and capability, and bidding for most jobs. In addition Core funding is managed according to a project portfolio. However, in some cases Landcare Research provides resources in projects from its own Core funding to leverage external co-funding as an incentive to obtain contracts. This model on its own relies on greater demand for Landcare Research's services and it is difficult to see that this will be sustainable from amongst its government agency clients in the future. Attention is also being paid to increasing internal awareness of valuable intellectual property to enable the development of commercial revenues. Spin-out companies and technology licensing have not been successful on the whole and the panel doubts if they will be significant in the future and are not convinced further investment of resources will provide benefit (see also Section 6.2).

Databases and collections are an area where challenges to the existing business model seem worthwhile. The great store placed on these by users, particularly of soil databases in the present environment, seems to provide the opportunity to challenge the way things are done. In line with the new strategy for the Collections and Databases, some re-thinking is in train about how to monetise these assets. While there are barriers to how these data might generate income, (including open access requirements of the base data and the public good expectations of users), the clear importance of some of these databases justifies serious re-evaluation of the income generating opportunities. The panel understands that early work is in train about how to monetise data so as to generate an ongoing revenue stream under licence for value-added products in use. While this work is at an early stage, it has the potential to set a new approach for revenue generation by products sourced off public-good data, and the panel would encourage ongoing movement in this direction.

s9(2)(b)(ii)

One basis for finding the ROE to be lower than the rates that have previously been expected of CRIs was that “New Zealand Inc.” derived significant benefit from the science undertaken by Landcare Research, although quantifying this at the macro level was difficult. It was clear to the review panel that Landcare Research is predominantly a public-good CRI by comparison with other CRIs, and that the government agencies spoken to by the panel almost universally described Landcare Research as such. This may mean that to move outside of this position may be difficult to achieve.

**Chart 1: Actual and Forecast ROE trends**

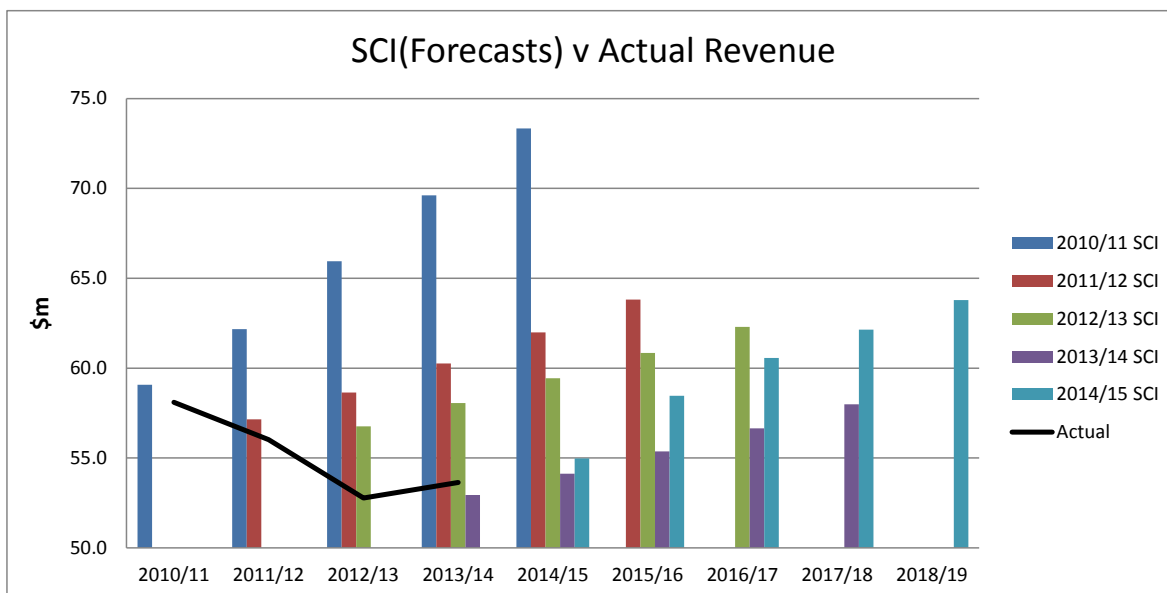


s9(2)(b)(ii)

Revenue forecasts for Strategy 2017 anticipate growth of greater than 20 per cent by 2017. This is significantly higher than historical growth. A comparison of recent forecasts for out years from recent

SCIs indicate growth has been forecast in each case but has not materialised (refer Chart 2). Accordingly getting this right for the current SCI will be very important for Landcare Research.

**Chart 2: Actual and Forecast Revenue Trends for Parent Company**



Landcare Research has \$24.2M p.a. of Core funding from MBIE which is devolved to the Board for investment against its Outcome areas. Of that, about \$8M p.a. is dedicated to maintenance and development of the databases and collections, about \$8M p.a. is now under promise to the National Science Challenge process and, although Core funding aligned to NSCs will remain invested in Landcare Research and under the control of its Board to deliver against the Statement of Core Purpose, the Governance Groups of National Science Challenges will be able to recommend allocation priorities to the Board. The final \$8M p.a. remains under Landcare Research control. All other revenue is fee-for-service contract research with the majority obtained through contestable processes, either directly or indirectly from central government agencies.

As noted the 2014/15 SCI forecast increases of about 7% in “commercial”<sup>1</sup> revenue appear ambitious to the panel when viewed against Landcare Research’s recent record of zero or negative revenue growth. The forecast predicts that the increasing importance of water, land-use and their related flora and fauna will drive the increased revenues planned from the government agencies it serves. The majority of growth is expected to come from government or regional council funding of one sort or another. Small growth in Core funding is expected in the later years, and for contestable MBIE funding. Landcare Research is targeting development of greater revenue from industry but has included only modest expectations from this source. The targeted growth clients are expected to deliver some returns in the current year, off a very low base. Revenue from these parties is growing, but in some cases is channelled and contracted through traditional clients. Forecasting for further out years has not been done.

The panel believes that Landcare Research needs to develop as a matter of priority a strategic business plan that demonstrates how it will achieve its financial forecasts for the next five years. The panel notes that the (new) CFO is comfortable that the targets will be achieved through a mix of activities. These include increases in contestable revenue from MBIE and other central government agencies, some small

<sup>1</sup> Landcare Research defines ‘commercial’ revenue as not including Core and MBIE-contestable revenues but includes revenue from other government departments, local authorities, other research organisations and the private sector.

growth in international revenue, and a move towards direct contracting with the private sector. In addition, contestable MBIE funding, developments in the Natural Resources Sector including central and local government and National Science Challenges are expected to have a positive impact consistent with Landcare Research's role in the Our Land and Water Challenge and as host agency for the Bio-Heritage Challenge

A significant new focus for Landcare Research over the last year and in the 2014/15 SCI is to build research partnerships directly with the private sector (rather than as subcontracts through other research organisations). In particular, there is a focus on the land-based industries including fertiliser, dairy and beef and lamb as these sectors increasingly pay attention to the issues of 'growth within limits' and associated ecosystem services. While Landcare Research has begun to be more targeted in this space (see Table 2 below), it is highly contested space and Landcare Research understands that it has to provide a point of difference to be competitive. Both GMs Science appear to be actively engaged in attempting to grow revenue in this space but Landcare Research is apparently still formalising its key relationship engagement strategy.

s9(2)(b)(ii)



s9(2)(b)(ii)

The targeted growth clients are expected to deliver some returns in the current year, off a very low base. Forecasting for further out years has not been done. Similarly little revenue has been forecast from the National Science Challenges although these have the potential to provide significant returns. The National Science Challenges may provide some new MBIE investment but there are associated risks with the high governance costs of these new structures and with renewal of current MBIE contracts as they terminate and are released into the Challenge pools.

There is an expectation that there will be some growth in international work, although other comparable organisations have recognised that such activity requires sophisticated skills in negotiating across different political systems and jurisdictions. High-margin revenue from this source may require different resourcing for greater growth, but it is likely to remain patchy and relatively high risk. Some low-margin opportunities, such as NZAID, are introducing opportunities for Landcare Research but these will need to be considered with care to ensure they align with Landcare Research's areas of strength and that there is sufficient margin to justify reallocation of already scarce resources.

### Conclusion

Landcare Research has shown that it can undertake the difficult task of managing costs to balance declining revenues at least in the short-term. However, it faces challenges to its financial sustainability if revenue does not grow as planned or alternative sources of revenue are not found.

## 6.2. Commercialisation of intellectual property

The majority of Landcare Research's science is undertaken for the public good, informing policy-makers in government agencies (MfE, DOC, MPI) and regional councils. Opportunities for valuable intellectual property to arise are few and significantly less than for the more economically focused CRIs. Understandably, and as a direct consequence, the level of IP commercialisation acumen throughout the organisation is low. Landcare Research has engaged a consultant (two days per week) to raise the commercialisation culture in the company. The panel judges that this is unlikely to have a material impact given the scale of the task in an area that even specialised IP businesses struggle with.

Opportunities for new businesses such as Enviro-Mark Solutions (EMS) and Varigate are also infrequent. These are handled mainly outside the normal organisational structure, with, in the case of EMS, Landcare Research directors are actively involved alongside senior managers. This approach is understandable given the dearth of commercial resources but does risk confusing the Board's governance responsibilities with the management accountabilities of the CEO.

s9(2)(b)(ii) is an independent company based on licensed Landcare Research technology and led by the consultant, s9(2)(b)(ii) who is engaged under a separate contract to mentor scientists and teams as they

identify projects with commercial potential and work with other commercial partners to realise their value

Strategy 2017 signals a clear focus on supporting public sector decision making for government and local authorities that will give rise to little exploitable intellectual property. Growth is predicted in these areas as a result of increased importance being placed on water and soil science as it affects agriculture in particular.

There are also increased efforts directed at Outcome 4, increasing the ability of New Zealand industries and organisations to develop within environmental limits. The Board has directed management to look more broadly at private sector industries outside the primary sector.

The dominant approach to information produced through Landcare Research's science in these areas is towards open-access of data with a view to supporting the public good. It seems likely the greater emphasis on working directly with industries is also likely to provide pan-industry solutions to environmental problems rather than proprietary solutions for individual businesses.

These goals for Landcare Research indicate that it will continue to develop only a little intellectual property available for commercialisation. The public good role that Landcare Research occupies is only occasionally expected to generate valuable returns from such intellectual property. These few opportunities are likely to be on a small scale unless there were to be a change in strategic direction to make Landcare Research a much more intellectual property oriented organisation.

The deep commitment to the public good and the low level of commerciality among the scientists and management who spoke to the panel make it clear that changing the emphasis of Landcare Research to emphasising the pursuit commercial products or spin-outs is not appropriate. The barriers to cultural change and to developing intellectual property skills are high. Developing a reasonable degree of capability throughout the organisation would be a substantial task, and risks being underestimated by management attuned to the main public good role. There seems merit in Landcare Research continuing to acknowledge the relative unimportance of these types of opportunities and then adopting policies and approaches for dealing with IP on a case-by-case basis as it is developed.

Such policies might include appointment of one or two advisers whose only role would be to systematically inventory opportunities and to advise how to exploit any intellectual property identified. Policies would typically prohibit these advisers from participating in licensing or developing IP in their own interests. Then they could also provide independent assistance with any commercial transaction. The commercialisation could be provided under an arrangement with one or other of the organisations Landcare Research currently deals with, such as KiwiNet, Auckland Uniservices, or the Biocommerce Centre at Massey.

As noted in Section 6.1 the panel is not aware of any initiatives to find ways of generating significant new revenues from collections and databases. This is one area where, in the panel's view, a profitable model would justify the development of Landcare Research's own commercial resources and expertise.

### 6.3. Working with Māori

Landcare Research has a long proud tradition as an early and bold participant in the Māori relationship space. As noted earlier in this report, “Manaaki Whenua, Manaaki Tangata / Care for the land, Care for the people” is a strong statement of organisational identity with very real relevance for iwi / Māori. This shared conceptual ground is a robust base on which to establish meaningful and mutually rewarding relationships.

Landcare Research is understood to be the first CRI to appoint a Māori relationship manager as a full member of its SLT, an approach that appears to have been subsequently adopted by most other CRIs. The organisational settings originally adopted by Landcare Research predate fundamental shifts in iwi / Māori communities over the ensuing twenty years. These shifts include, especially, the advent of the Treaty settlements process and its consequent and significant implications.

Against this solid backdrop the panel saw evidence that Landcare Research struggles with challenges familiar to all entities operating in this sector, including the ability to: recruit and retain Māori staff at all levels; establish enduring relationships and work programmes with iwi authorities, incorporations and industry bodies; access the funding required to build and maintain these relationships over the long run; genuinely integrate iwi / Māori interests into existing research programmes; derive material levels of revenue from the sector; or establish a clear strategic position or value proposition in a very diverse and dynamic space.

#### Organisational Design

Landcare Research has reinstated the position of Kaihautū Māori at SLT level (a clear acknowledgement of the importance of a senior Māori perspective in its work) although this position is part-time only. Manaaki Whenua has yet to achieve a coherent and effective structure between this role and the roles of Māori Business Manager and Māori Research Leader. It has also struggled to establish continuity in the Māori Research Manager position; possibly reflecting the extraordinary demands that fall on the few individuals taking these senior roles in an organisation as multi-faceted as Landcare Research.

As noted below, there do not appear to be clear organisational arrangements in place to ensure the effective communication and coordination of Māori strategy with organisational activity at the community and research levels, and vice versa.

The panel considers that this lack of structure, stability and continuity at the Tier 2 and Tier 3 levels is contributing to a lack of clarity around Landcare Research’s strategic positioning in relation to iwi / Māori and less effective internal coordination and deployment of its resources as a result.

#### Existing Research Activity

Landcare Research has relationships with a number of diverse iwi as measured by size, capability and discretionary resources. Each of the resulting research programmes reflects Landcare Research’s skills and expertise, and ranges from species protection to iwi governance of areas of conservation value. While a number of employees expressed a view that Landcare Research is “missing the boat” in relation to Māori-related opportunities, all were enthusiastic about both the work and the opportunities to add value.

The panel heard equally positive comments from iwi partners as to the relevance of the research and the quality of the Landcare Research relationship, which they consider to be genuinely respectful. They also appreciate Landcare Research’s organisation-wide capacity and understanding of Māori issues (as opposed to a reliance on individual relationships). Interaction at the most senior levels was considered an important component of the relationship, although some noted that this had lessened in recent years. Some iwi / Māori also referred to Landcare Research “missing the boat” in relation to emerging areas of research need, and hoped that it would increasingly invest in “thinking forwards” in future.

Importantly, there was evidence of these research interactions with Landcare Research, over an extended period, raising the capacity of those iwi to add value to the relationship and that this increased capability in turn enabled more productive relationships with other science providers. This contribution to the wider public good appears to be an unheralded, and unfunded, component of Landcare Research's work.

The panel saw little focus, however, on matters of economic importance to iwi / Māori or matters outside the more 'passive' conservation and protection domains, despite the growing levels of commercial and community development activity amongst post-settlement iwi and the larger Māori incorporations.

Furthermore, there seemed to be little crossover or coordination between scientists working on different Māori-focused projects where clear synergies existed. Neither did there appear to be in place mechanisms to allow the timely consolidation of learning from these engagements so as to inform the identification of new research and strategic opportunities.

### External Stakeholders

The panel heard almost unanimously from a range of stakeholders - from government Ministries and Departments to industry and local bodies - that Landcare Research was considered to have strong, if not the strongest, relationships with Māori and to have expertise and strength in this area. One commentator noted this as "Manaaki Whenua has the best rapport with Māori of any CRI".

When questioned further, external (i.e. non-Māori) stakeholders were mostly unable to follow up their initial response with concrete examples. The panel was accordingly left with a strong sense that these stakeholders' opinions of Manaaki Whenua's capability in the iwi / Māori space were based on reputation rather than first-hand experience or knowledge.

Stakeholders also confirmed that it had not occurred to them to seek to 'purchase' specific iwi / Māori-related advice or support from Landcare Research, and neither had they been offered it. Those questioned confirmed that they would be open to receiving such a capability statement.

### Strategic Positioning and Consistency

The text of Landcare Research's planning and strategic documents, and conversations with senior managers, reflect an 'in-house' view of the organisation's credentials in the iwi / Māori space, including references to it having "the history, the contacts, the relationships, and the capability".

The SCI goes further and refers to Landcare Research's unique capacity to service iwi / Māori given its alignment with the government's Māori-related objectives in its Business Growth Agenda, its integration of mātauranga Māori into its work, and its own integrated and multi-disciplinary way of working which it viewed as being "similar to Māori". This is then translated into a stated objective in Strategy 2017 to be the "preferred partner" for Māori, and is matched with a "major new" initiative in the SCI to service iwi coming through the Treaty settlement process.

Against this Landcare Research lacks the senior personnel and full appreciation of the challenges associated with establishing enduring relationships with iwi / Māori entities, and exhibits little evidence of having a clear view on Landcare Research's strategic position and value proposition. While the identification of the opportunity to support post-settlement iwi is both appropriate and useful, the settlement process has been going for approximately twenty years already and only represents some 10% of the Māori asset base.

It is surprising, given the strong Māori interest in the integrated and sustainable management of the natural environment so as to achieve a range of community benefits over the long run, that there did not appear to be any focus on integrating the iwi / Māori work stream with the ecosystem service work which is receiving greater emphasis across Manaaki Whenua.

Neither did the panel see evidence that Landcare Research was deploying its internal co-governance capabilities to win a clear market position with those iwi picking up significant co-governance responsibilities through the settlement process, such as Ngāi Tūhoe and the Urewera National Park for example. And despite the close working relationship with DoC there did not appear to be any collaboration between the two organisations in this area of shared responsibility and opportunity. While these new co-governance and co-management regimes are not separately funded, they do constitute an opportunity to approach a range of parties for additional resources.

The panel noted that the single metric in the SCI for performance in relation to iwi / Māori objectives is “the number of positive strategic partnerships” with Māori entities, with no reference to, for example, numbers of papers co-authored with Māori, or financial income earned, or science students co-sponsored. It was also noted that the Māori Strategy was adopted in December 2012 but does not appear to have been actively driven or monitored by the Board since that time.

While Landcare Research has a solid set of relationships and a relevant portfolio of current Māori-related research at a granular level, the panel could not identify clear linkages to the organisation’s overall strategy or identify the capacity or systems needed to deliver strategic outcomes.

## Conclusion

Landcare Research has a solid reputation for considered and genuine investment into the iwi / Māori dimension of its research activities. Its acknowledged experience at brokering and maintaining collaborative relationships is a comparative advantage and its focus on environmental science gives it strong connections to iwi / Māori communities.

The panel heard from both internal and external sources that, its reputation notwithstanding, Landcare Research is considered to have a relatively weak strategic position in the iwi / Māori space and does not have a clearly articulated or understood value proposition for that sector. Consistent with its observations elsewhere, the panel considers there to be a significant gap between Manaaki Whenua’s own view of its capabilities in this area and those observed by the panel through the review process.

To realise its potential - and give effect to its own interpretation of the “Manaaki Whenua, Manaaki Tangata” mandate - Landcare Research will need to invest meaningfully in its capacity and systems, and will need to better integrate these activities with its overall strategic positioning.

## 6.4. People and culture

### Organisational Culture

As already detailed in Section 5 leadership, people and culture are all issues about which the panel has significant concerns.

The panel heard overwhelming commitment by staff at all levels to Landcare Research in its role of protecting and enhancing the terrestrial ecosystem of New Zealand. As evidenced by the very recent staff survey there is less commitment for the leadership and strategic direction of the organisation with:

- Tiers 2 and 3 being convinced that Strategy 2017 and the use of an independent commercialisation advisor will address these concerns;
- some of the small number of Tier 4 staff interviewed expressing considerable concern about management understanding of “their” science. To what extent this is a reflection of change resistance and endemic cynicism specific to the long-standing staff who were interviewed is hard to judge. Some members of that group suggested that the level of concern raised was ‘patchy’ which the panel understood to be partly a reflection of the degree of change some teams were

experiencing. Nevertheless, there was evidence of a lack of understanding of various aspects of the organisation and its current activities and direction of travel. This lack of a clearly articulated and understood organisational strategy was a recurring theme, both internally and with external stakeholders; and

- younger staff, while positive about the environment and the support they receive with their research activities, were less clear about the organisation's strategic direction which may not be surprising as it has only been outlined to them in one roadshow so far.

Overall the panel perceived a general lack of urgency and some resistance - especially at lower levels in the organisation - to change but at the same time support by staff at all tiers for their immediate managers and peers.

All staff interviewed below Tier 3 wanted more time to focus on individual publications as well as interdisciplinary idea stimulation, such as 'skunkworks' opportunities. There was little understanding that at average 80% of hours there is already time to do these things, and if not staff may be over-delivering to their contracts. The Chief Scientist discussed some small new initiatives in this space but the budget is small. This reinforces the panel's impression, as noted independently by various internal parties, that opportunities to explore new areas of research are increasingly being sacrificed to meet the ever-present budgetary pressures.

Many aspects of the culture of Landcare Research appear to the panel, as was reflected in the views of some stakeholders, to still reflect the culture of its predecessor organisation. Perhaps because of its very strong focus on delivery of research to central government agencies and the associated shelter and distance from the private sector it has different drivers and dynamics from many other CRIs. This is positive in relation to the universal staff dedication to delivery of independent research to the public good and benefit to New Zealand, itself a description used by nearly all external stakeholders to describe Landcare Research's role. However, this view can become a significant barrier to progress, bringing with it: some sense of entitlement; resistance to change; a lack of urgency; and a commercial and business development naivety as outlined in other sections.

### Demographics

All the science teams show reasonable bell curves in their age structure with (like most other CRIs) a skew towards the older end with few research staff under 30 years old and small numbers in the 30-40 age group. In part this will be ameliorated by the significant numbers of co-supervised PhD students but there is increasing risk around an aging capability and, because of the paucity of recent post-doctoral appointments, there may also be increasing risk around recruitment of specialist expertise in a highly competitive international market.

Compared to other CRIs Landcare Research has a good gender balance - perhaps in part because of science focus of the organisation - and there is a good focus on assuring this balance as indicated by the analysis paper of 2011.

Māori staff numbers sit at approximately 4% and have been stable at these levels over time.

Overall, however, there is a concerning trend for overall staff numbers to be in decline from a peak of 421 FTEs in 2008/09 with this decline affecting both support and science staff as shown Table 3 below. While this turnover has apparently not involved a significant loss of 'key' science staff it is still high by general CRI standards and may reflect some churn in the younger science staff. Given that some CRIs are concerned that they have too little turnover and refresh of staff, a turnover of around 10% a year (outside 2013 where there were deliberate processes of staff change) may be healthy but the overall downward trend alongside the lack of post-doctoral appointments suggests that the vitality of the research capacity is at risk.

**Table 3: Staff Turnover**

Staff Turnover Year ending 30 June:	2008	2009	2010	2011	2012	2013
Science	s9(2)(b)(ii)					
Science Support						
Support						
<hr/> Total	10.00%	12.60%	9.2%	14.7%	11.5%	16.10%

### Performance Management and Succession Planning

The panel was impressed by the performance management processes for staff, which enables Landcare Research to objectively and evenly reward high performers and identify and manage low performance. Importantly, the panel saw evidence that isolated cases of poor performance were being actively addressed. Staff at all levels understood and could readily articulate their own and their direct report KPIs.

The panel notes and supports Landcare Research’s involvement in the pan-CRI workforce initiative over the past two years. Landcare Research has implemented several projects in workforce performance assessment and succession planning. However, as with all CRIs there are still potential risks associated with:

- securing and retaining quality external candidates, and highly effective leaders;
- succession planning generally;
- recruiting, developing and retaining younger, Māori and women scientists;
- relatively low staff turnover rates; and
- remuneration.

Further effort in these areas is warranted.

Given the difficult environment for science recruitment and the relatively low salaries on offer compared with many other CRIs, Landcare Research can be commended for its commitment to refreshing its science capability. In particular it has done this through maintenance of significant numbers of co-supervised PhD candidates. However, as noted above, although the panel understands the fiscal restraints which have constrained recruitment of post-doctoral staff, it is concerned that without a return to actively recruiting post-doctoral staff there is risk that there will be a dearth of younger staff entering Landcare Research over the next few years.

### Staff Development

Training appears *ad hoc* and focused on health and safety, in part because individual training needs are derived from the annual personal assessment process where younger staff in particular may not be aware of their own needs. For example, the panel understands that there is no systematic training in project management with young scientists who succeed in getting contestable contracts claiming to be “thrown in the deep end” to find their own approaches or mentors. That said, commentary from stakeholders as to the quality and timeliness of delivery suggests that this is not causing significant problems. Such areas of training may be some of those cut back over the previous two years while Landcare Research has managed budget constraints. The relatively newly initiated ART (Autonomy, Resilience and Trust) programme may address some deficiencies in training as well as the change resistance commented on above, especially as it has been established out of a staff-led initiative.

### Use of the Matrix to manage portfolios and science teams

It is now more than two years since Landcare Research moved from line management to matrix management of its science capacity with teams of science staff reporting up to the Chief Scientist but

delivering to contracts sourced and directed by portfolio leaders. Not surprisingly, given that the current matrix system has only been in place for two years, there is still some bedding down to be achieved. Tiers 2 and 3 both commented that the matrix has demanded some over-communication to make it work and some aspects of project management have become more time-consuming. However, all staff expressed the view that it has reduced the previous silos which were universally perceived as being a significant weakness of the previous organisational structure. There was some concern from the Tier 4's that it promotes mixed messages, however given the level of change resistance in some of this group that may in part be an excuse to ignore or criticise all messages.

While the panel sees that the matrix is working well in terms of managing internal communication and science delivery better than in the past it has concerns about the mixed accountabilities and difficulties for clear customer focus which it creates. In particular, the relatively arbitrary separation of the portfolio managers under two Science GMs, one of whom is focused on 'industry' while the other is focused on 'policy'. Multiple portfolio leaders have an interest in the same key customers which may or may not be able to be easily separated into industry/policy or existing/new relationships. This is further complicated by the Business Development activity and associated resources residing with another GM. Without a customer management strategy and clear key customer accountabilities there is risk of missing revenue opportunities, and confusing customers and staff alike. Further, it appears that the complexity and layered nature of the current arrangement is limiting the opportunities to establish clear, coordinated strategic positions in the markets in which Landcare Research operates.

The reorganisation proposed to the Board's People and Culture Sub-Committee in February 2014 sought to ameliorate some of these issues. Assigning all customer relationship management to a single Partnership GM supported by some business development resource is useful. However, the new structure still separates the portfolio leaders into two reporting streams and the new role and accountabilities of GM Science risks overlapping with that of the Chief Science Advisor.

While matrix management is becoming common practice in New Zealand research organisations the panel is of the view that the one operated by Landcare Research is complicated by a portfolio management matrix within the overall matrix with a split of the research portfolios between two Tier 2 managers. This split appears to introduce complexity and thwarts efforts to establish a clear customer-focused culture or accountability in the science teams. The recently proposed reorganisation within SLT will not solve that problem. There are consequential impacts on leadership effectiveness, and progress that has been made has been dependent on the good will and personal relationships of key SLT members.

On balance the shift to a matrix structure appears to be delivering the desired outcomes but the panel is of the view that the leadership of the matrix should be revisited so as to establish a single, unambiguous SLT-level responsibility for the research portfolios.

## 6.5. Policies, processes and practices

The panel reviewed at a high level a range of policies and reviews of management processes. The panel considers that the policies, processes and practices supporting the day-to-day running of Landcare Research are current and effective. This view is supported by reports from the Office of the Auditor General and external auditor documentation. The new CFO also commented favourably on the financial systems and the ease with which he could access information. Other SLT members appear conversant with all business planning tools.

There is no current communication strategy or, until recently, a single point of responsibility at SLT level for leading organisation-wide communications. This function has just been allocated to the GM People and Communications who has only recently begun repositioning her team. The panel encountered considerable evidence that Landcare Research is not "telling its story well" - either internally or externally



- and considers that strengthening the communications function must be a priority. The lack of a customer relationship management strategy is commented on further in Section 6.1.

The panel considers that Landcare Research has an appropriate range of cultural awareness and skills training mechanisms in place at a level of investment that would be expected of an organisation of this scale and complexity, and consistent with its resource constraints.

It was noted that these and related issues, which are shared across the research sector, are receiving attention at the joint CRI forum. The panel considers that this is an appropriate response to what are in effect longstanding systemic challenges.

Portfolio achievement reporting uses a best practice process while recent team capability planning seemed to the panel to have been well managed without too many complaints from science staff around the 'compliance burden'.

### Open data

Open data access is a New Zealand government expectation covered by NZ GOAL which states that unless a restriction applies State Services agencies should "make their copyright works which are or may be of interest or use to people available for re-use on the most open of licensing terms available". In addition, "to the greatest extent practicable, such works should be made available online." Internationally, such expectations are becoming common practice.

Landcare Research has been very proactive in meeting the open data expectations and is ahead of many other New Zealand research organisations, with a clear policy and very proactive moves towards digitising its collections. A number of stakeholders described it as "a leader" in this area. Manaaki Whenua's approach seems to the panel to be very well embedded across all staff spoken to with open data just part of business as usual in their conversation. The risk for Landcare Research is that at the same time these staff appeared to have little recognition of the implications of open data access for intellectual property management. This may not be problematic as there is likely to be very little patentable material involved. However, the panel understood that while there is early work in train as to what could be done to monetise data sources such as S-Map or its collection databases, more work could be done in this area. This "non-commercial" approach is consistent with the organisation's own view of its 'guardian' role in relation to these public good data, and again reflects the fundamental tension - and, indeed, contradiction - in Manaaki Whenua's role in the science ecosystem.

### Allocation of Core investment

Given some of the external uncertainties (and especially those associated with the National Science Challenges and the Lincoln Hub) the approach to allocation of Core investment is well thought through as described in the 2013/14 SCI and the Board paper (14/03/13) of 19 March 2014. Advice has been taken from both the Science and Outcome Advisory Panels, together with the directions established in Strategy 2017. Changes from the original allocation have so far been relatively minor, but with clear strategic intent. The panel considers that Landcare Research is facing the implications of any reallocation appropriately and encourages it to review, and if need be accelerate, such Core funding adjustments when it has a clearer strategy around business development and some external uncertainties are resolved.

### Management of Science Quality and Delivery

Landcare Research has a strong focus on maintaining or improving the quality of science delivered across its research teams. International metrics such as citation indices from Incites™ across key research areas such as soil science, biodiversity conservation and environmental sciences show that Landcare Research scientific publications are better than those of other CRIs or New Zealand universities. Landcare Research has maintained a steady rate of publication over the last decade including a small number of articles published in top international journals. There is a rigorous focus on individual publication

performance across the science teams as part of the annual performance review process and in recent team capability plans.

The Science Advisory Panel has undertaken a review of key science areas in late 2013 and provided recommendations which the panel understands management are implementing. Some parts of the science capacity have recently undergone externally managed independent peer reviews involving international review panels, notably through the MBIE 'water' reviews in 2013. Those reviews suggested that for some contracts the output of publications was below that which could be expected and one contract only scored a 2 (out of 5) for science quality. That panel acknowledged that some of the low science quality may have been attributable to the focus on delivery of contractual reports to research users. The chair of the Science Advisory Panel made similar comment while also noting that all CRIs struggle with assuring the balance of high impact peer reviewed papers relative to the so-called 'grey' literature. Instead he suggested that Landcare Research should certainly pursue high impact publications but also seek publication in fit-for-purpose NZ-accessible journals and thereby minimise the grey literature that inevitably languishes and often vanishes in libraries.

Interviews with users of research were universally positive about the quality and timeliness of Landcare Research delivery to their contracts, with one going back eight years to find an example of poor delivery.

Overall the panel believes that Landcare Research is managing its science quality and delivery well, and this view is supported by independently conducted surveys. As long as it continues to respond effectively to external reviews, including those from its Science Advisory Panel, this should continue to be the case.

### External partnerships

Relationships with central and local government are very strong as evidenced by the CEOs and senior managers of MfE, DOC and three regional councils making time to meet with the panel. All provided commentary as to the depth and critical importance of Landcare Research in enabling their organisations to deliver on their mandates. As noted in Section 6.1 all were concerned for Landcare Research's future recognising that their own contracting of research had declined over the last 2-3 years. Only DOC believed that a focusing of research capability and activity was feasible for Landcare Research in making changes to meet a challenging future.

At the same time Landcare Research is generally recognised by other research organisations as an important resource for specialist areas of environmental sciences and is generally perceived to be open and inclusive in its relationship management. There is some sensitivity by other research organisations to Landcare Research acting as a lead in key areas of research with a suggestion that their role is to be deeply embedded across the sector based CRIs providing environmental perspective and expertise. To the extent this is true this approach results in AgResearch and Plant and Food Research subcontracts being two of Landcare Research's largest non-central government clients. With the advent of the National Science Challenges with Landcare Research acting as 'host' organization both the perceptions of its role and relative subcontracting may change. In addition, the hosting of one of the National Science Challenges provides an opportunity for Landcare Research to further leverage its Core funds alongside central government agencies.

As already discussed in Section 6.1 direct partnering with private sector organisations is nascent.

## Measurement of Impacts and Outcomes

Landcare Research uses a conventional suite of metrics to report its impacts through knowledge transfer. These include scientific publications, hits on websites and numbers of reports produced.

In addition, it uses case study narratives in its Annual Reports, Innovation Stories on its website and a number of newsletters. A unique and successful initiative is the monthly seminar series it delivers in Wellington for policy makers, which was commented on favourably by a number of stakeholders. While the Chair commented that there is a “need to further improve the measurement and promotion of the impacts” of Manaaki Whenua’s research the panel felt that its performance and profile in direct knowledge transfer is competent and generally effective at an operational level.

When it comes to measurement of progress against its strategic outcomes Landcare Research has two difficulties to contend with:

- as outlined in Section 4 the outcomes listed in the SCP are unreasonably broad; and
- as with all CRIs all of the outcomes are delivered through third or even fourth parties and so measurement and attribution are problematic.

All CRIs have issues of measurement and attribution although they are easier for some of the sector-focused CRIs where, for example, the international market value of a new plant variety can be assessed. The October 2012 ‘Balance Sheet Review’ noted that Landcare Research used mainly narrative to describe its progress against outcomes in its annual reports. It recommended that:

*‘Landcare Research annually quantify to the extent required at a macro level the value of its science to NZ Inc. We recognise that this exercise will inevitably be an approximation. Nevertheless, it will be required to substantiate the RoE discussion and acceptance by shareholders and their representatives.’*

The March 2013 report on Results from the 2011 and 2012 Audits from the Office of the Auditor General noted that:

*‘Only Landcare Research had reported against the outcome/impact measures set out in its 2011-16 SCI for core purpose outcomes. Using the framework set out in its 2011-16 SCI, Landcare Research reported progress against its SCP outcomes in its annual report for 2011/12, using KPIs for each impact. It then discussed the highlights achieved during the year that related to each specific outcome/impact. Outcomes, impacts, and the initiatives that related to them were clearly linked, so the reader could see how Landcare Research’s activities were intended to affect national outcomes and what progress had been made. Landcare Research could further improve its reporting by including measures of the outcome KPIs and providing, over time, some trend data.’*

The panel is of the view that Landcare Research is attempting to fulfil both these sets of recommendations and encourages it to put priority around that process. Refining and focusing the SCP outcomes against which it is expected to deliver would make the task more realistic.

## 7. OPPORTUNITIES FOR LANDCARE RESEARCH MANAAKI WHENUA

---

As detailed at the start of Section 4 Landcare Research has a distinctive history and role which provides a compelling case for being considered as unique amongst the CRIs in a number of respects. The panel spent considerable time discussing models positioning Landcare Research for the future including:

- considering whether the organisational structure is over-engineered for its role and simplifying the structure and strategy;
- accelerating the current strategy of building products and advice for the private sector around ecosystem services but doing so in a much more business like way while focusing the activities of the rest of the organisation;
- considering making a case that Landcare Research has a special role in supporting central and regional government evidence-based policy and regulatory developments and that it is materially different from the other CRIs and requires a significantly greater proportion of Core funds;
- reconsidering a merger into one or more other research organisations; or
- building scale by acquiring relevant capacity from other CRIs where that capacity is more marginal to their scope and purpose.

On balance the panel does not support structural change and supports the Board and management's direction for Landcare Research but strongly believes that it must lift its performance significantly. Looking ahead, Landcare Research has several opportunities to do this, and in the process enhancing delivery to a refocused Core Purpose. The panel has sought to focus on opportunities that are directly within the control of the organisation, albeit sometimes needing third party support to achieve in full. The most significant of these opportunities in the panel's view are:

- for Landcare Research to initiate a discussion internally about a refocusing and restating of its Purpose and Outcomes within the SCP. This would provide context for a deep strategic analysis of its role and the key areas in which it should focus its activities. It would also provide greater clarity of its role within the national research context, enabling key stakeholders to better understand and support a different style of business. Finally, such a refocusing of the purpose and outcome expectations would enable better articulation, and attribution, of the delivery of impacts from Landcare Research's activities. The panel recognises that formalising such a change to the SCP may take some time and negotiation with MBIE and the Minister;
- for the Board and SLT to create a high performance culture within themselves and throughout the organisation which encompasses the urgency and expectations of any successful business. Create an externally focused strategy which provides excitement, growth and national leadership in its core areas of activity;
- meeting, and preferably exceeding, the organisation's own financial forecasts for revenue growth over the next five years. Not doing so will continue a spiral of slow decline, while doing so would support the high performance culture attractive to external stakeholders;
- to acknowledge that commercialisation of intellectual property will not be significant to growth and so free up resources which are currently, and might in future be, applied to this area;
- building a strategic position in the iwi / Māori space and developing a clearly articulated and understood value proposition for that sector. Landcare Research could also actively position its iwi / Māori capability in 'emerging markets' with active promotion of its iwi / Māori-related services to other clients; and
- supporting performance with strong accountability; delivering clear strategic priorities that are understood, committed to and driven by the entire organisation. Adopt international benchmarks of business best practice to further enhance its business processes and deliver on its

top priorities including focusing its research portfolios as necessary. To succeed, integrate all of the opportunities listed above through the development of “SMART<sup>3</sup>” KPIs which drive the strategic direction of the overall organisation. Monitor and report on these at all levels so there are common conversations and aligned incentives throughout the integrated Board, SLT, support services and the science engine.

This report has drawn attention to strengths but also shortfalls and limitations across Landcare Research Manaaki Whenua. The panel considers that adoption of the opportunities listed above have the capacity to overcome the challenges the organisation faces and help in the realisation of Landcare Research Manaaki Whenua’s potential.

---

<sup>3</sup> Specific, Measurable, Attainable, Relevant, and Time-specific

## ANNEXES

---

### Annex 1: Brief biographies of the members of the review panel

#### *Richard Westlake (Chair)*

Richard Westlake runs Westlake Governance Limited (formerly Westlake Consulting), a New Zealand-based globally focused governance advisory business. He has over 20 years' experience as a Board chair and director and currently chairs Trans-Tasman software company Interger and Careerforce Industry Training Organisation. He is the first independent director of the Dairy Goat Co-Operative (NZ) Ltd, the world's leading exporter of goat's milk infant formula and was an independent director of Kiwibank Ltd for ten years from its establishment in 2001.

Richard has CRI experience, as Deputy Chair, Institute of Geological & Nuclear Sciences Ltd from 2000 to 2006 and he was Establishment Chair of research collaboration, Better Border Biosecurity (B3) from 2006-2010. He was also the Establishment Chair for two SOEs, Quotable Value Ltd and MetService and was Chair of Crown Entity Standards New Zealand from 2003-2010. He has worked on two previous sector reviews - reviewing the governance of Ovine Automation, a research collaboration among the main meat producers, and the Natural Hazards Research Platform, a collaboration between CRIs and universities. Previously he was General Manager of WestpacTrust (South Island) and Trust Bank Canterbury and Chief Operating Officer of Barclays Bank PLC, New Zealand.

Richard holds a Master of Arts (Philosophy, Politics & Economics) from Oxford University and is an Accredited Fellow of the Institute of Directors in New Zealand. He is also a Master Trainer/Lead Trainer in Corporate Governance for the Training of Trainers Programmes for the Global Corporate Governance Forum (World Bank), for whom he wrote a book *Guidance for the Directors of Banks*, which was published in 2013.

#### *Anake Goodall*

Anake Goodall has diverse management and governance experience. Most recently, he served as Chief Executive Officer of Te Rūnanga o Ngāi Tahu, and was before that responsible for managing all aspects of Ngāi Tahu's Treaty settlement process.

Anake is currently a director of Meridian Energy, PledgeMe, and NXT Fuels Limited. He is a member of the Environmental Protection Authority, the Te Waihora Co-Governance Group and the Canterbury Earthquake Recovery Review Panel, and is an Adjunct Professor at the University of Canterbury. He is also a trustee of the Ākina (formerly Hikurangi) Foundation, on the establishment Board of Te Pā o Rākaihautū, and a founding trustee of the Hillary Institute of International Leadership.

Anake has a Master of Public Administration from Harvard's Kennedy School of Government, an MBA from Canterbury University, and is a New Zealand Harkness Fellow.

*Jim McLean*

Jim is Chair of a number of companies including Hill Laboratories Ltd, Mesynthes Ltd, Prevar Ltd, Pictor Limited and Information Tools Limited as well as Chair of the Governance Board for the Allan Wilson Centre. He was Chair of Plant & Food Research from 2009 to 2011 and Chair of HortResearch from 2006-2009. Jim was Executive Director of Genesis Research & Development Corporation Limited and a partner in Ernst and Young for 11 years.

Jim has a BSc (Hons) in Chemistry from University of Otago and a Post Graduate Diploma in Accounting from Victoria University of Wellington.

*Tricia Harris*

Tricia was the Chief Science Advisor at the Foundation for Research Science and Technology (2004 – 2008). Since then she has worked as a consultant in a range of consultancy roles, including work on the IRL stocktake, the CRI Balance Sheet Review, and as Chair of Partnership Proposal review panels for MBIE.

Tricia completed her PhD in Animal Nutrition at Cambridge University and returned to New Zealand at DSIR (later AgResearch) and for 20 years was a research scientist, then research group leader. In 1997 she was appointed Group Manager, Science at AgResearch where she had responsibility for strategic planning, together with implementation and review of company innovation policy. In 2005 Tricia was awarded the ONZM (Officer of the New Zealand Order of Merit) for Services to Science.

Tricia served on the panel for the first two 4 Year Rolling reviews

## Annex 2: List of information provided to the panel

DOCUMENT / INFORMATION	
<b>A. Understanding the business</b>	
1. Statement of Core Purpose	
2. Statement of Corporate Intent (last 2 years only)	
3. Copies of the detailed workings for the 5 year SCI Budget	
4. Annual Reports	
5. Quarterly and six-monthly reports (last year only)	
6. YE management accounts for the past 3 years and any reconciliation to the year-end financial statements	
7. Landcare Research Balance Sheet Review	
8. Landcare Research Stakeholder Survey 2012 and 2013	
9. Key Stakeholders list	
10. Landcare Research Organisation Charts	
<b>B. Business structure overview</b>	
1. A brief memo providing an overview of each of Landcare Research's business units, the activities undertaken, their capabilities (including technological platforms and R&D specialisations) and the market(s) that they serve	
2. A brief memo providing an overview of each of Landcare Research's subsidiaries, associates and JVs with a brief description of the activities undertaken, Landcare Research's equity stake (%), revenue (\$) and assets (\$) and governance	
3. For each business unit, subsidiary, associate and JV a brief memo on:	
a. what resources are engaged in core science	
b. what resources are engaged in applied research and	
c. an estimate of the % of the entity's resources devoted to each of the above two categories	
<b>C. Management accounting process</b>	
1. A copy of the last review of the company's financial systems	
2. A copy of the latest review of the company's computer systems	
<b>D. Historic management accounts</b>	
1. A breakdown of Landcare Research revenue for the last 5 years by business unit and location including the following revenue categories	
i. from non-MBIE Central Government	
ii. from other CRI / Universities / Local government	
iii. commercial (NZ) [breakdown by customer and location]	
iv. commercial (int'l) [please provide a breakdown by customer and location]	



DOCUMENT / INFORMATION	
v. IP income [with additional notes breaking this down as appropriate]	
vi. other [with additional notes breaking this down as appropriate]	
2. A contracted revenue maturity profile breakdown	
3. Expenditure trends for the last 5 years by major categories of expenditure	
4. Detail of capital injections from and distributions to the Crown have been made over Landcare Research life (dates and \$ amounts)	
5. Details on the realignment of Landcare Research core funding	
<b>E. Forecasts</b>	
1. Latest forecasts of revenue for the next 5 years broken down into the categories in D1 above and similar forecasts for each of the previous 5 years	
2. What are the key assumptions underlying the above forecasts?	
<b>F. Investments</b>	
1. A list of planned Capex and other investments (type and \$ amount) for each of the next five years	
2. IP Register & valuations	
3. Current value of assets	
<b>G. Key governance documents</b>	
1. A copy of any strategic reviews undertaken of Landcare Research in the last five years	
2. A copy of the risk register	
3. A copy of the legal register	
4. Details of the Board self-assessment process	
5. Details of strategic planning days	
<b>H. Personnel</b>	
1. A headcount breakdown by location and type (management, basic science, field staff, support staff)	
2. Detail of areas of science specialisations and excellence	
3. The annual turnover rate of professional staff for the last 5 years by group	
4. A bell curve of the years since graduation for all professional staff	
5. A breakdown of the term (years) to retirement of professional staff	
6. Information on current industrial disputes, if any	Not provided as there are none.
7. Information on redundancy agreements	
8. Succession planning documents	
9. Details of the processes in place within universities in regards to recruiting PhDs and how	

DOCUMENT / INFORMATION	
these are managed	
10. Staff satisfaction survey results	
11. Benchmarks of Landcare Research salaries against comparable institutions	
12. Staff management strategies around managing changing priorities and staff development	
13. Utilisation Rates of staff across the organisation	
<b>I. Outcomes</b>	
1. Paper stating the key desired outcomes of the government that Landcare Research is contributing to and the evidence available that Landcare Research outputs are having a significant effect on the desired outcomes	
2. Documents reporting on the assessment of outcomes; reviews or evaluations of outcomes	
3. Reviews evaluating how contracts are managed overall both internally and externally	
4. Senior management response to reviews undertaken – including details of what management has learnt from these reviews and taken forward	
5. Measurements of how well Landcare Research is monitoring, measuring and improving its science quality	
6. Case studies of Landcare Research projects (include recent ones and list other examples that are available if required)	
7. End of programme reviews (and mid-programme reviews)	
<b>J. KPIs</b>	
1. Internal KPIs that are not published but provided internally to the Board and senior management	
2. Studies around Landcare Research's contribution to economic growth	
3. Time series of KPI's (projected versus outcomes for last 4 years)	
<b>K. MBIE documents</b>	
1. Report of the CRI Taskforce	
2. CRI Taskforce core documents	
3. MBIE Vision Mātauranga	
4. Landcare Research bidding history	
5. 2014 Letter of expectations from Minister	
6. Landcare Research financial information including balance sheet review	
6a Updated Landcare Research financial information	
<b>L. Other documents</b>	
1. Sample of Board papers and minutes over the last year – seen on-site	
2. Thought papers by Senior Leadership Team	

DOCUMENT / INFORMATION	
<b>M. Additional documents</b>	
1. Introduction to Landcare Research	
2. Landcare Research Science Strategy	
3. Strategy 2017 – Revised Post Board 28 March 2014 – MBIE copy	
4. SCI 2014 draft	
5. % papers cited	
6. Biodiversity publications	
7. Biodiversity comparison	
8. Panel meeting with Board Chair 1 May 2014	
9. 2013 October Board – National Land Resource Centre Review	
10. Soil Horizons 22	
11. Board Members – email addresses	
12. Whakamarama 12 September 2011	
12a. Landcare Research Structure – September 2011	
13. Where do our employees come from	
14. Staff in Science and Support Teams	
15. February – People Culture – SLT role changes	
16. July – People culture – SLT Salary recommendations	
17. Table of Delegated Authorities	
18. Financial Delegations Policy	
19. Outcome Investment Strategies (2013/14)	
20. September – Monitoring – Revenue attachment - dashboard	
21. Finance - breakdown of revenue for out years	
22. Enviro-Mark – Expression of Interest	
22a. Enviro-Mark Solutions Information Memorandum updated 13 May 2014	
23. Annual Plan	
23a Explanation of annual plan	
24. Revenue report to Board February 2014	
25. Email answers to financial questions	

### Annex 3: Stakeholders whom the panel met with or spoke to

Meeting	Position
<b>A. 14-17 April 2014 at Landcare Research, Lincoln</b>	
s9(2)(a)	CEO
	Chair
	Kaihautū and Māori research leader
	General Manager Development
	General Manager Science & Policy
	Chief Financial Officer
	General Manager Science & Industry
	Chief Scientist
	GM People and Communications
	CEO Enviro-Mark Solutions Limited
	National Land Resource Centre
	Cross portfolios and teams (portfolio leaders and team leaders)
	Science advisory panel
	Small group younger staff
	3 <sup>rd</sup> and 4 <sup>th</sup> tier staff

Meeting	Position
<b>B. 29 April, 1 or 2 May 2014 at MBIE Wellington (meeting or phone) *denotes exception</b>	
s9(2)(a)	Executive Trustee, Tūhoe Tuawhenua Trust
	Director Resource Policy, MPI
	Landcare Research User Advisory Group
	CEO and Deputy Secretary, MfE
	CEO and Deputy Director General, DOC *At DOC, 18 - 32 Manners Street
	CEO, OSPRI
	TBFree Technical & Farm Services Manager
	CEO, Foundation for Arable Research
	GM for Research and Development, Dairy NZ
	Programme Leader Research & Development, Ngāi Tahu
	GM Science Investments and National Manager Environment & Society, MBIE
	Board Chair
	CEO and Director Investigations and Monitoring, ECan  Chief Executive of HBRC currently seconded full-time as Managing Director of Hawke's Bay Regional Investment Company Ltd and Hawkes Bay Land Services Manager, HBRC
	CEO Fertiliser Association of NZ  General Manager Overseer
	Sustainability & Environmental Manager, Meridian Energy
	Manager, Science Policy and Departmental Science Adviser, MPI