National Wilding Conifer Control Programme
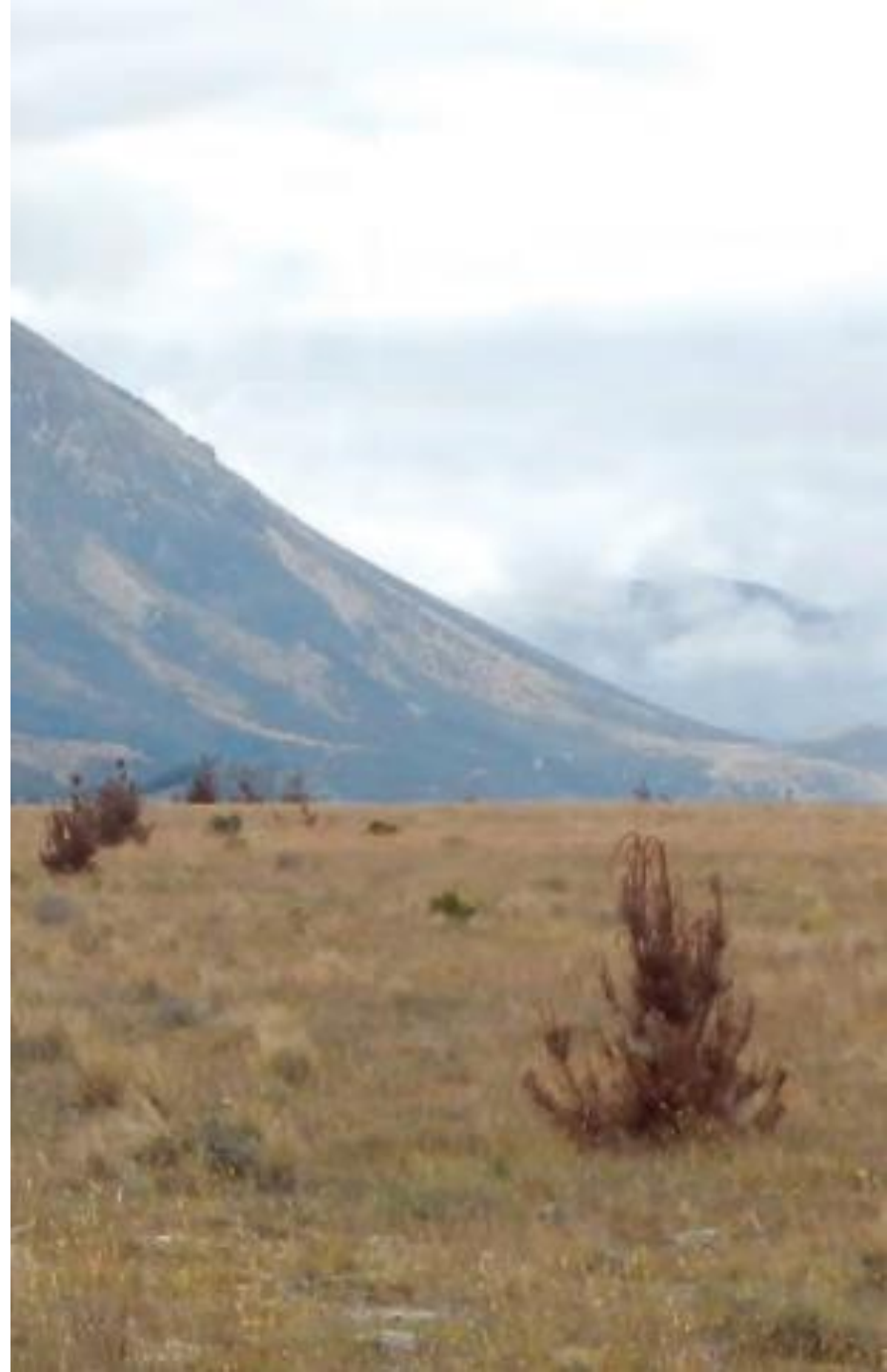
Phase one evaluation

12 August 2020

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Contents

Figure 1. Wilding conifer spread.
Source: NWCCP 2016/17 annual report

This report presents the evaluation findings for phase one of the National Wilding Conifer Control Programme (July 2016-June 2019)

This evaluation assessed the achievement of performance indicators related to seven key outcome areas identified by the Programme (Figure 2). This report also offers suggestions to enable continuous Programme improvement and to strengthen future evaluations.

We used a mixed quantitative and qualitative approach. Assessments were made against each performance indicator using a rating system (Figure 3). Raw data, specific methods and data limitations are included in an Excel spreadsheet to assist the phase two evaluation.

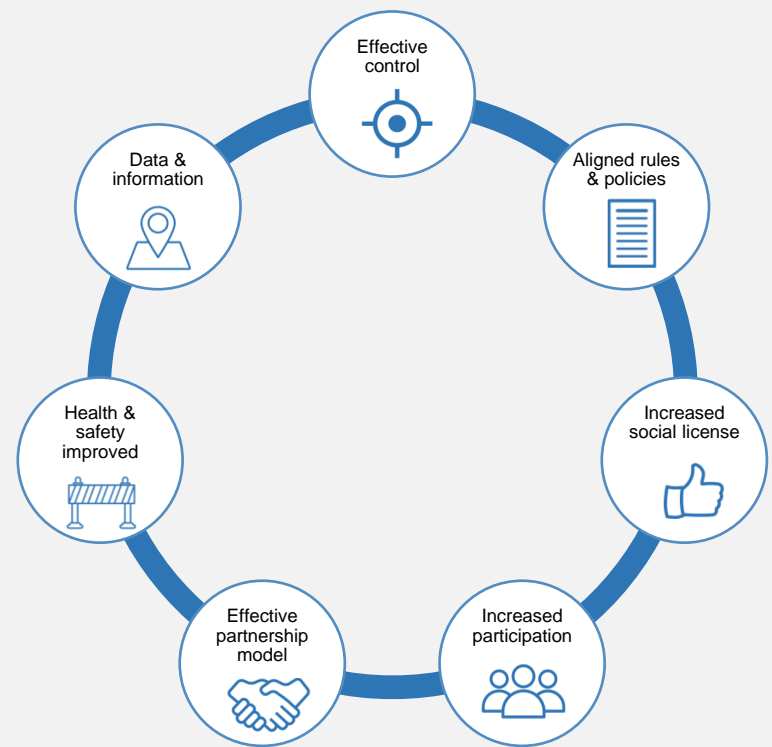We are confident the results presented in this report reflect the available data.

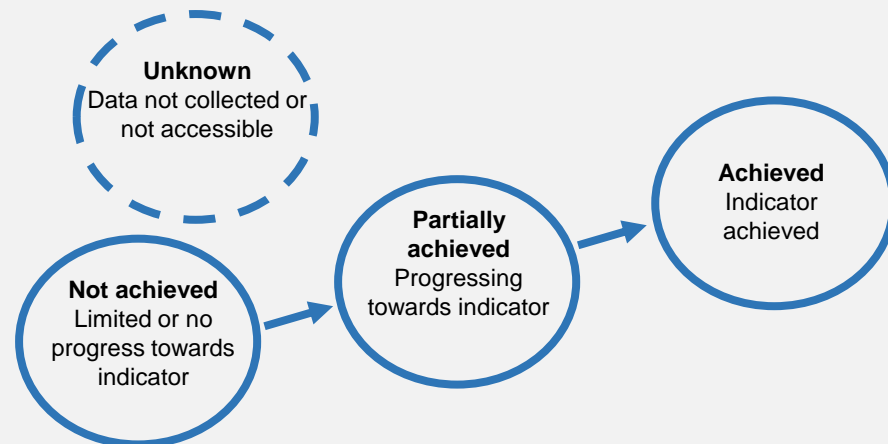**Figure 2. Performance Measurement Framework outcome areas**

Figure 3. Performance rating sysem

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The Programme achieved its phase one aim of reducing wilding conifer infestations

Overall, the Programme achieved most of its performance indicators. The performance summary statements on the right are ordered from the outcome areas with the most performance indicators achieved to those with the fewest or those that are unknown.

Some data limitations exist. Data for the effective control and increase participation outcome areas was not accessible in the time frame.

Since phase one, the Programme has continued to refine its implementation approach. These refinements have been considered when suggesting actions for Programme improvement.

Health & safety

The Programme has proactively taken action to improve health and safety

Effective control

The Programme exceeded phase one infestation control targets. Further work is needed to measure reductions in areas at risk of WC spread

Effective partnership model

Most partners consider the partnership to be effective; co-funding partners covered 33% of phase one operational costs

Data & information

Programme partners agree on data standards and the logging of WCIS data is increasing; more work is needed to map all known infestations

Increased social license

Awareness of wilding conifers is growing; more work is needed to increase awareness of their negative impacts

Aligned rules & policies

Councils are incorporating recommended rules in Pest Management Plans; most do not enable the removal of problematic seed sources

Increased participation

Data to measure landowner and industry participation in control work was not accessible in the time frame.

Priority actions for Programme improvement

- Include hapū and iwi in the Programme partnership framework ([Fig.13](#)) and create a consistent approach to engage effectively with Treaty partners.
- Review and adapt Governance and Advisory structures to shift the Programme partnership from cooperation to collaboration.
- Identify how to efficiently extract National Environmental Standards for Plantation Forestry data (NES-PF). Complete a national infestation and spread risk map using this data.
- Develop a process for consistently recording infestation size and spread risk. Incorporate this data into operational planning.
- Encourage councils to explicitly enable the removal of problematic seed sources for all four conifer species with limited commercial value.
- Continue work to increase awareness of the harmful effects of wilding conifers with rural and urban populations.

Figure 4. Wilding conifer spread in the Kawarau MU. Source: Kawarau Operational Plan 2016.

Wilding conifers are pests in Aotearoa

In 2016, the Ministry for Primary Industries (MPI) estimated about 1.8 million hectares of land were infested with wilding conifers. 'Wilding conifers' refers to the natural regeneration of introduced conifers seedlings spread by wind, sometimes several kilometres away from the source trees. Ten wilding conifer species have been identified including eight pine species, Douglas fir and European larch.

The spread of wilding conifers has negative environmental, social, cultural and economic impacts. Invasive conifers reduce water availability for irrigation, land productivity and biodiversity. The unchecked spread of wilding conifers can devastate iconic landscapes with consequences for the tourism industry.

Figure 5. Wilding conifer spread in Alma Tarndale, Molesworth MU. Source: Molesworth Operational Plan 2016.

A collaborative partnership is acting to protect Aotearoa from wilding conifers

In 2014, MPI led a multi-stakeholder working group to develop the national Wilding Conifer Management Strategy (2015-2030) ('the Strategy') (Wilding Conifer Working Group 2014). The Strategy highlighted the need for immediate, decisive and collaborative action to prevent the spread of wilding conifers.

In 2016, the National Wilding Conifer Control Programme (NWCCP or 'the Programme') was created to deliver the Strategy. The Programme aims to prevent the spread of wilding conifers and contain or eradicate established areas of wilding conifers by 2030.

The Programme is a collaborative partnership led by Biosecurity New Zealand, working with the Department of Conservation (DOC) and Land Information New Zealand (LINZ). Other partners include the Defence Force, regional and local councils, local communities, researchers, industry and private landowners.


Figure 6. Wilding conifer control out of a helicopter. Source: NWCCP 2016/17 annual report

The 2016 Budget allocated $16 million to deliver phase one

Phase one of the National Wilding Conifer Control Programme was delivered from July 2016 to June 2019. Phase one objectives included to:

- increase prevention and control to slow the spread of wilding conifers and reduce the area that is currently infested

- implement coordinated control and prevention that is more cost-effective and focused on national priority areas

- gain new information for implementing national wilding conifer management

- seek early control action and support for wilding conifer control activities.
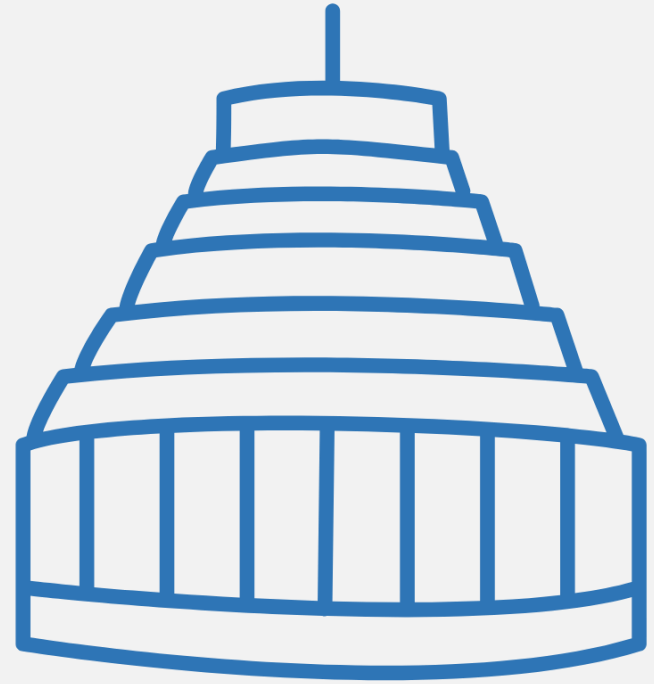
This evaluation assessed Programme performance in phase one

Biosecurity New Zealand commissioned Litmus, an independent evaluation firm, to evaluate phase one of the Programme (July 2016 to June 2019).

The evaluation assessed the performance of the Programme against measures identified in the Programme's Performance Measurement Framework (appended).

The phase one findings set the baseline for monitoring and highlight areas for improvement in phase two.

Since the end of phase one, the Programme has continued to develop. We have taken these developments into consideration when suggesting improvement areas for phase two.

We used a mixed quantitative and qualitative approach

We collated and analysed data from a range of sources in Microsoft Excel. For a complete list of data sources see the appended Performance Measurement Framework.

We are confident the results presented in this report reflect the available data.

Data quality and data limitations exist. We have detailed the specific analysis approach and data limitations of each data set in the Master Excel spreadsheet for phase one.

Biosecurity New Zealand have a copy of this spreadsheet to assist the phase two evaluation.

We assessed phase one performance against seven outcome areas identified by the Programme

We have structured the report against each of the outcome areas beginning with those with the highest achievement against performance indicators.

For each outcome area, we first present overall evaluative assessments and suggested areas for improvement.

We then present any relevant background context and evidence to support the evaluative assessments.

We also suggest improvements to the performance measurement framework and data collection methods.
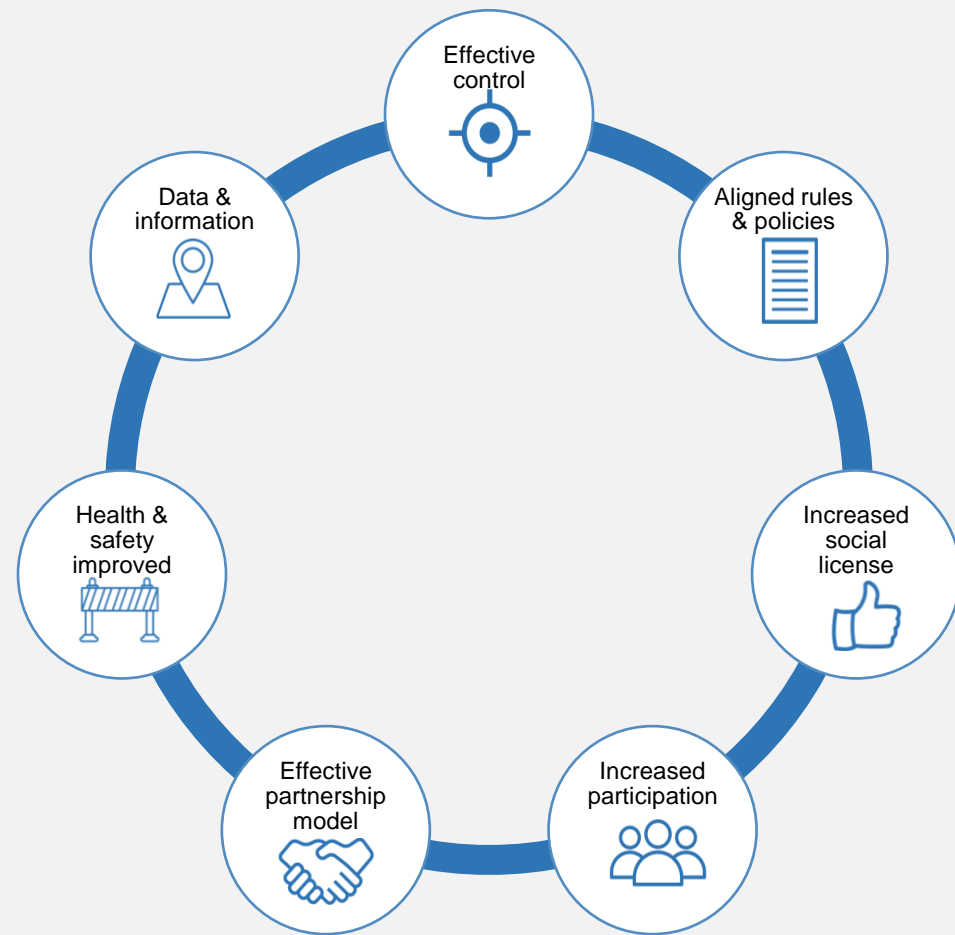

Figure 7. Performance Measurement Framework outcome areas. See appended Framework for key performance indicators, measures and data sources associated with each outcome area.

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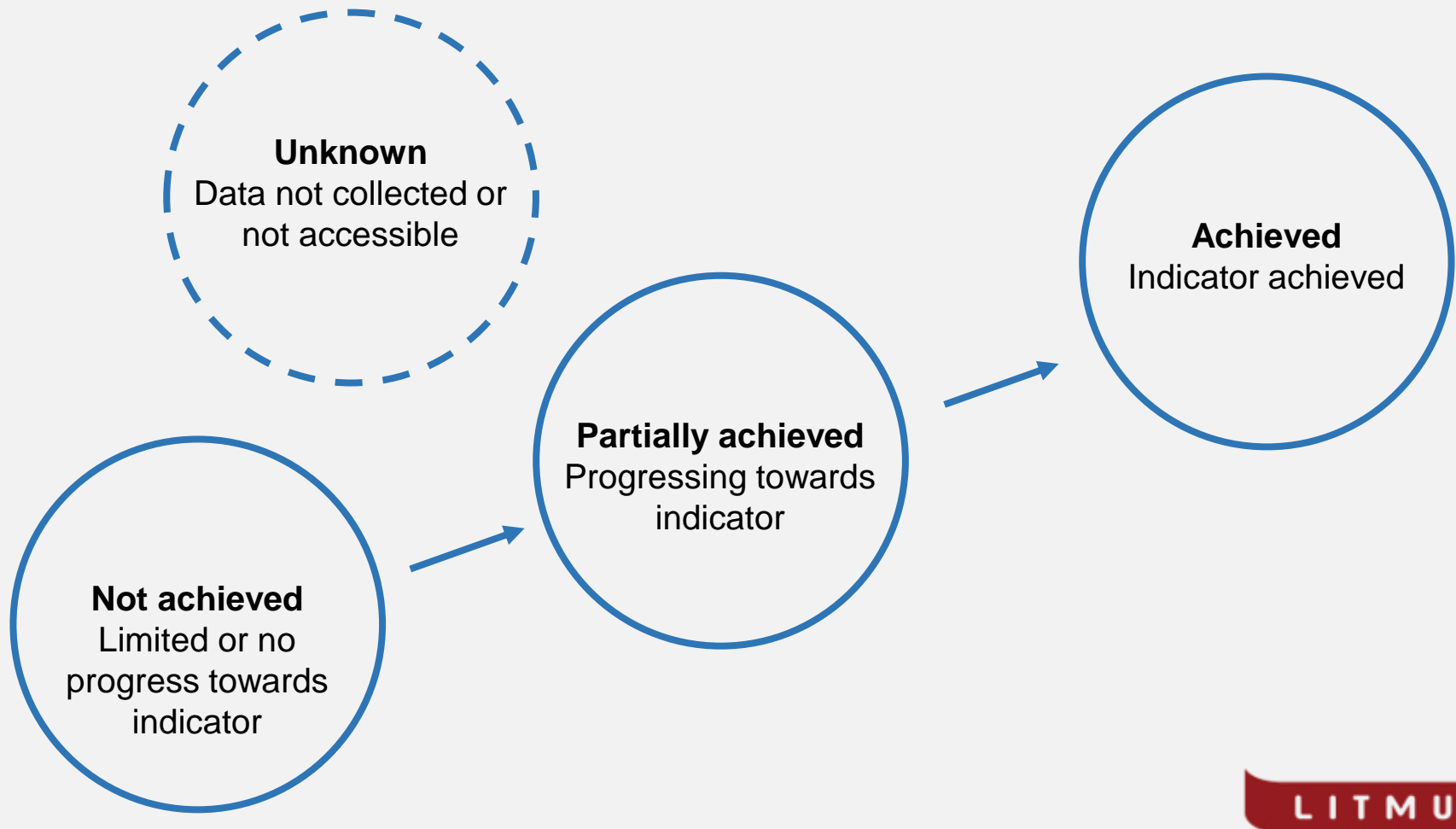# We used a rating system to assess the achievement of key performance indicators

Unknown
Data not collected or not accessible

Not achieved
Limited or no progress towards indicator

Partially achieved
Progressing towards indicator

Achieved
Indicator achieved

Figure 8. Performance rating sysem

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The Programme has proactively taken action to improve health and safety

Key Performance Indicator	Evaluative assessment	Evidence summary
100% of operations have a documented HSMPs in place prior to work commencing	Achieved	Documented HSMPs is a prerequisite to receiving Programme funding. In 2017, an auditor sighted health and safety policies for all participating councils.
Risk register is documented and shared with Programme Partners	Achieved	Risk register was sighted.
The Programme receives, reviews and, where appropriate, responds to near miss and incident reports	Achieved	Incident reports sighted. The Programme reviews and responds to near miss and incident reports by updating the risk register with new hazards. These reports are discussed at Governance and Operational Advisory group meetings.
The Programme shares H&S investigation findings and 'lessons learned' across the Programme	Achieved	An H&S reporting framework of operational assurance activities and operational and governance reporting cycles ensures 'lessons learned' are shared across the Programme.

Suggested areas for improvement

- Consider creating electronic copies of any H&S hard copies.
- Once 2020 health and safety audits are complete, compare with 2017 audits to assess how council health and safety performance has improved.

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Health and safety improved

In phase one, only one incident and one near miss was reported. To address concerns of under-reporting, MPI developed a Health, Safety and Good Practice Charter in December 2019.

The Charter formalised a health and safety reporting framework and protocols in line with MPIs internal processes. All operational partners follow these protocols.
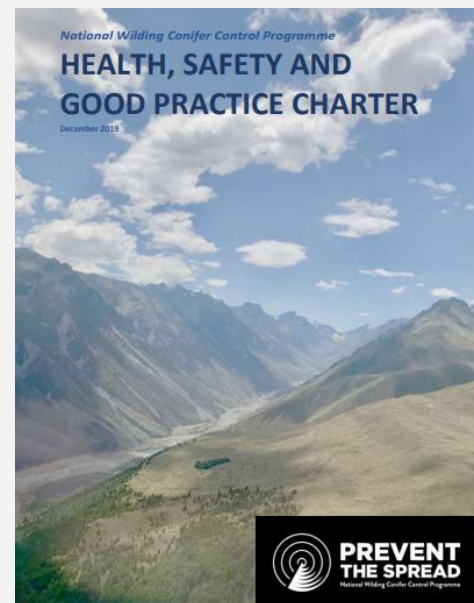

Figure 9. The Health, Safety and Good Practice Charter was released in December 2019.

'We started to talk with Fund Managers more about our health and safety obligations. The expectation now is Fund Managers will report a near miss or incident within five business days and a Notifiable Event within 24 hours. Since these discussions we now get regular updates and reports of incidents and near misses.' (Programme staff member)

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The Charter requires a Health and Safety Management Plan (HSMP) between MPI and all Fund Managers, and between Management Unit Managers and Site Managers.

Health and safety is now a fixed agenda item at Governance and Operational Advisory Group meetings to reviews near miss and incident reports and share lessons learned. The Programme's Risk Register is updated as new risks are identified.
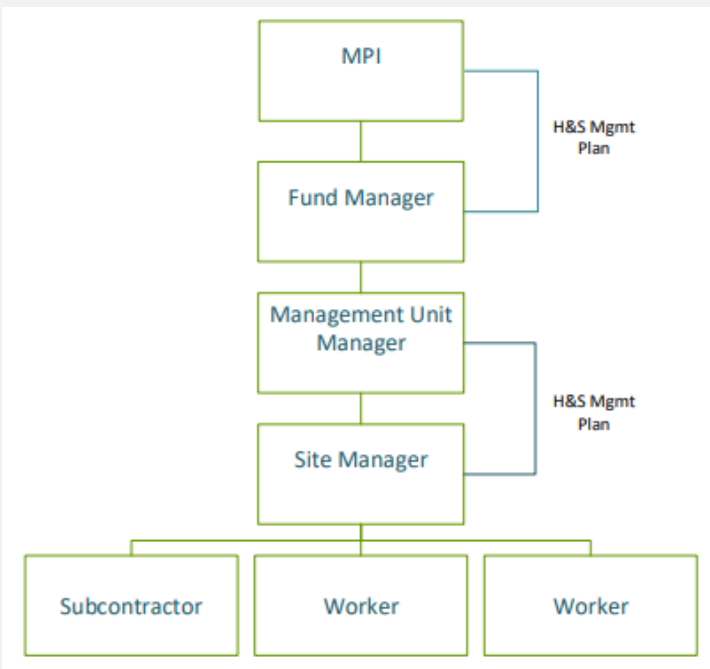

Figure 10.The National Wilding Conifer Control Programme contracting chain. Data source: Health, safety and good practice charter, Dec 2019
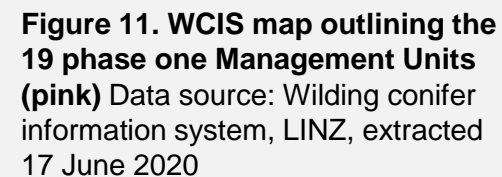
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The Programme exceeded phase one infestation control targets. Further work is needed to measure reductions in areas at risk of WC spread

Key Performance Indicator	Evaluative assessment	Evidence summary
<1% of new plantings represent a high spread risk	Unknown	MfE's National Monitoring System does not include the data required to assess this indicator in an accessible form; resource consent logs lack spatial data and National Environmental Standards for Plantation Forestry data does not include plantation species.
The total area of wilding conifer infestations targeted for control have received the first round of approved control under the Programme	Achieved	1.7 times the original 860,000 hectares target area received some form of control in phase one, about 1.5 million hectares in total.
The area of land at spread risk from these infestations is reduced by 25%	Unknown	MfE's National Monitoring System data is insufficient for our purposes in its current form and target infestation data was not uploaded to WCIS in 2016. Using WCIS data we have instead included the total area of land vulnerable to conifer spread protected by phase one control activities.

Suggested areas for improvement

- Identify how to efficiently extract plantation species and resource consent spatial data from MfE's National Management System to calculate changes in areas at risk of WC spread. Complete a national infestation and spread risk map using this data.
- Develop a process for consistently recording infestation size and spread risk. Incorporate this data into operational planning.

Phase one targeted **860,000 hectares** of scattered wildings for control or removal across 19 priority Management Units

About 1.5 million hectares received some form of control during phase one – **1.7 times the original target area**

Figure 11. WCIS map outlining the 19 phase one Management Units (pink) Data source: Wilding conifer information system, LINZ, extracted 17 June 2020

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The Programme protected **an additional 1.5 million hectares of land** vulnerable to conifer spread

Land vulnerability: Moderate - Very High
5km Buffer On Phase 1 Control Activites
Protected Areas = 1,475,575.32 ha

Figure 12. WCIS map showing 5km buffer zone around phase one control activities (blue) overlaid on land moderately-very highly vulnerable to conifer spread
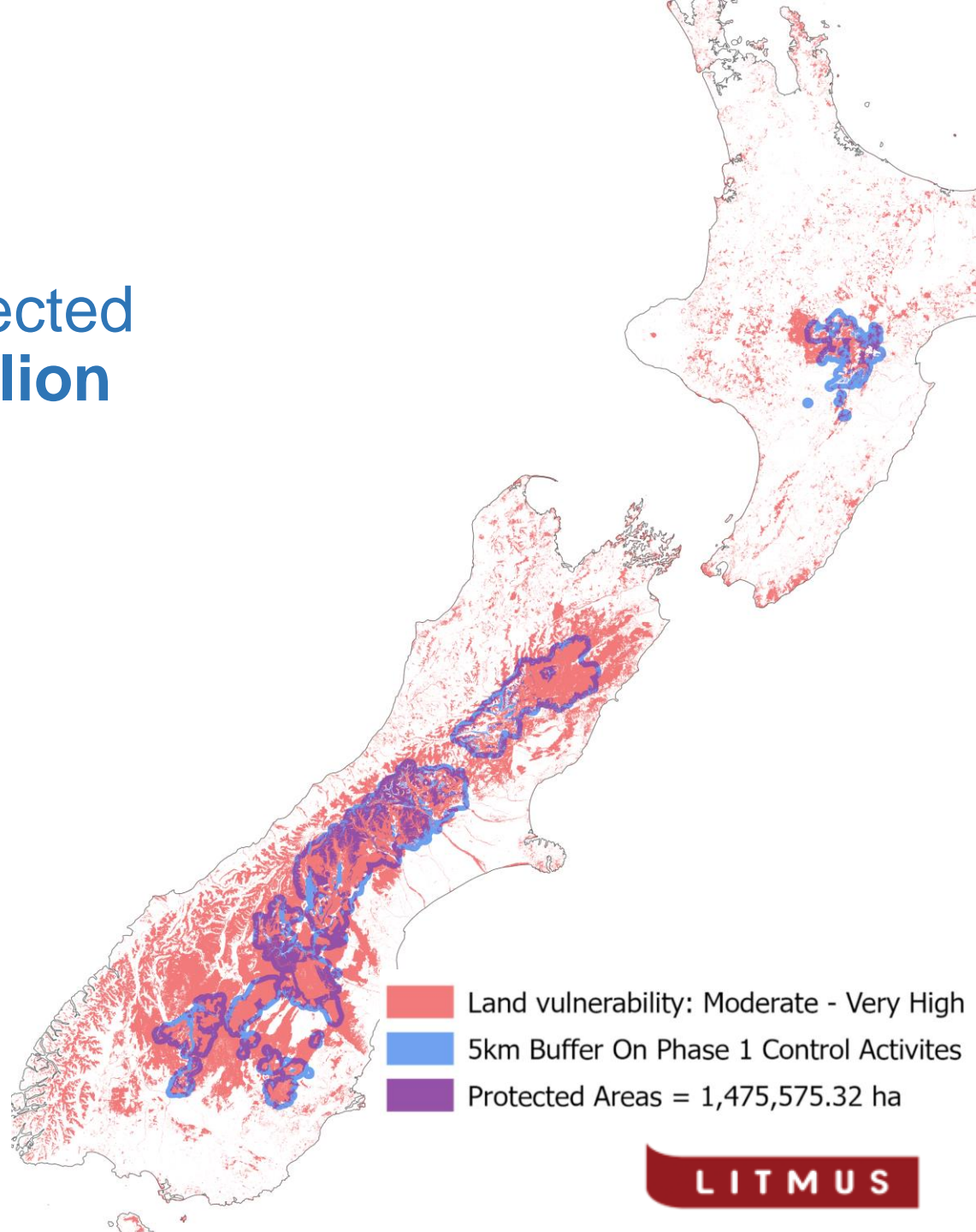
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Most partners consider the partnership to be effective. Co-funding partners covered 33% of phase one operational costs

Key Performance Indicator	Evaluative assessment	Evidence summary
All key programme partners and stakeholders consider the partnership to be effective	Partially achieved	90% of surveyed partners rated partnership effectiveness as good/very good. 76% agreed their partnership level was right for their role in the Programme. Roles and responsibilities are well documented in Terms of Reference documents. To engage with impacted community groups, the Programme has a Community Trust representative on their Governance Group. Programme staff visit community groups when concerns arise.
All co-funding partners commit to the Cost Share model, and cover at least 20% of Management Unit control cost over the 3 years of Phase 1	Achieved	In phase one, co-funding partners covered 33% of the operational costs across all Active Management Units.

Suggested areas for improvement

- Include hapū and iwi in the Programme partnership framework (Fig.13) and create a consistent approach to engage effectively with Treaty partners.
- Review and adapt Governance and Advisory to move the Programme partnership from a mode of cooperation to collaboration.

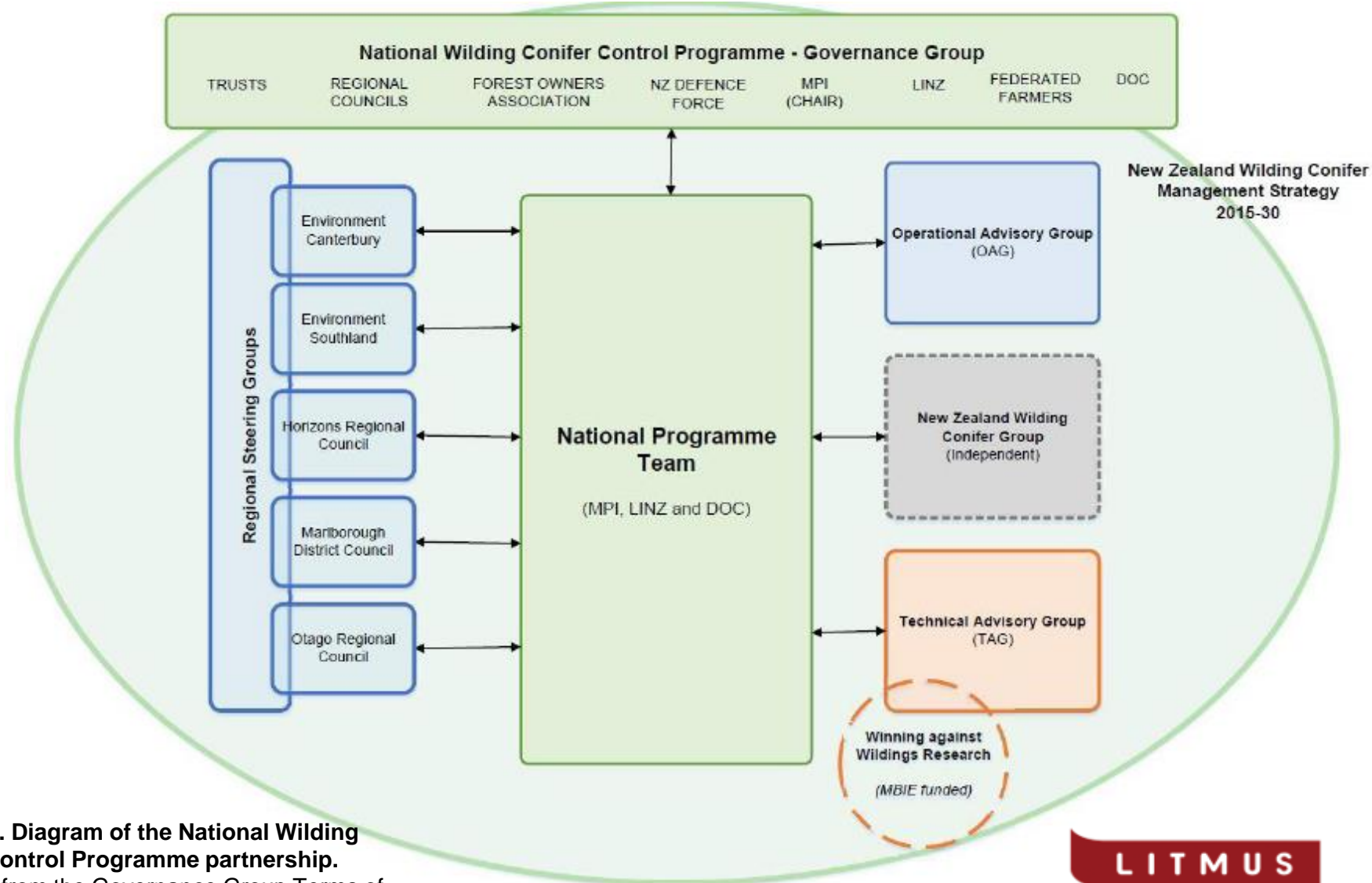# The Programme is a collaboration of a range of partners and stakeholders

Figure 13. Diagram of the National Wilding Conifer Control Programme partnership.
Retrieved from the Governance Group Terms of Reference document

We developed a survey to understand how Programme partners view the partnership[1]

We delivered the survey to 35 partners and received 21 responses (60% response rate)

Partner category	No. invites sent	Responses
Central government	13	7
Councils	10	7
Industry	5	3
Researchers	4	2
Community/landowners	3	1
Other		1
Total	**35**	**21**

Table 1. Partnership survey sample. The one respondent in the 'other' category was from a WC interest group.

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1. See appendices for survey templates.

90% of surveyed partners rated partnership effectiveness as 'good' or 'very good'

The remaining 10% ranked effectiveness as 'neither good nor poor'

'Overall the partnership seems to be working well. Some regions and particularly Iwi weren't strongly involved in this phase of the programme but could/should be next.' (Technical adviser)

'The structure of National Programme (through the OAG, TAG, and Regional Steering Groups) allows for local/regional expertise as well as nationwide coordination. The partnership model has proven effective at gaining central government funding as well.' (Community group member)

'While this same collaboration was effective in the lead up to 2016 (Strategy development etc.), continuing in effect as status quo with such broad coverage tended to reduce the effectiveness of key operational decision making. For example, the Operations Advisory Group.' (Fund manager)

'Inability to leverage the required funding, not sticking to the prioritisation of management units. Became political.' (Technical advisor)

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86% classified the partnership between their organisation and the Programme as cooperating or collaborating[1]

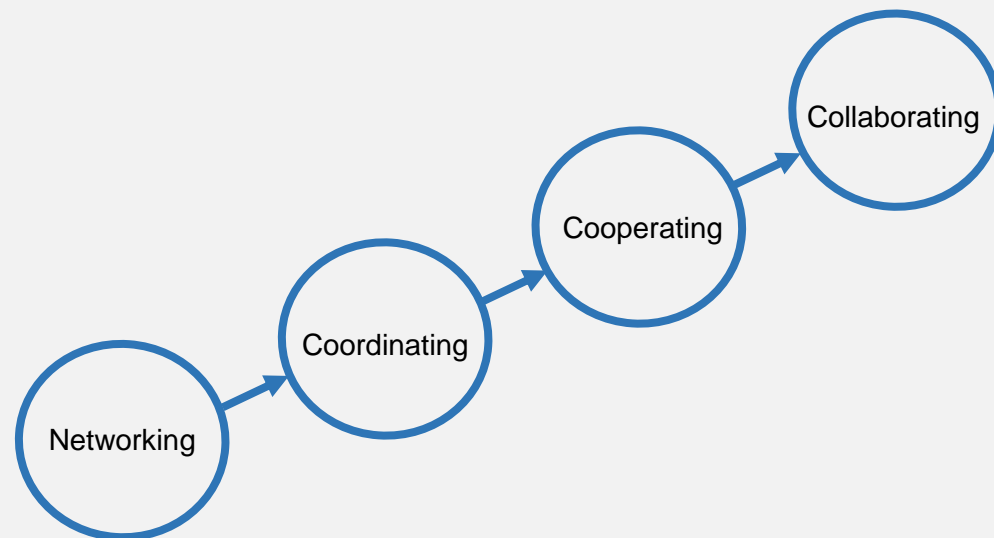# No respondents classified the partnership as networking

Figure 14. Partnership continuum

'Work really spans collaborating or cooperation depending on the topic or work involved. A strength of the programme is regular, structured advice and planning amongst organisations and with operations compared to what happened previously.' (Technical adviser)

1. See survey template in appendices for definitions of the partnership continuum levels.

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Effective partnership model

76% agreed their partnership level was right for their role and responsibility in the Programme.

The two respondents who disagreed classified the relationship as 'cooperating' but wanted it to be a collaboration.

'In general, cooperation has been the right level for research activities but there are clearly more opportunities for collaboration as much of the research moves into implementation phases.' (Researcher)

'For the most part there seems to be a balanced approach of management/input/guidance vs freedom to plan and manage your area.' (Management Unit manager)

'I'd like to see more stakeholder engagement to push the National Programme to the 'Collaboration' level.' (Community group member)

'Does need to be at that collaborative level - but felt that the MPI Programme team were not in a position to fulfil that level of involvement nor were Fund Managers.' (Fund manager)

1. See the appendices for definitions from the partnership continuum.

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Terms of Reference documents clearly outline roles and responsibilities

'The Operational Advisory Group provides advice on the how and where operational activities are best delivered to achieve the outcomes of the strategy.'

'Technical Advisory Group provides independent advice on the science and technical aspects of control methods used in the programme.'

Exerpts from the Governance Group Terms of Reference document.

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Effective partnership model

To engage with heavily impacted community groups, the Programme has a community trust representative on their Governance Group

Programme staff visit community groups when concerns arise

'Some communities see it as beautiful pine trees being killed. They just see it as the forest being destroyed. Once [Programme staff member] went along to educate them he made them feel a bit better.'(Programme staff member).

In phase one, co-funding partners covered 33% of the operational costs in Active Management Units

% Operational costs funded by partners
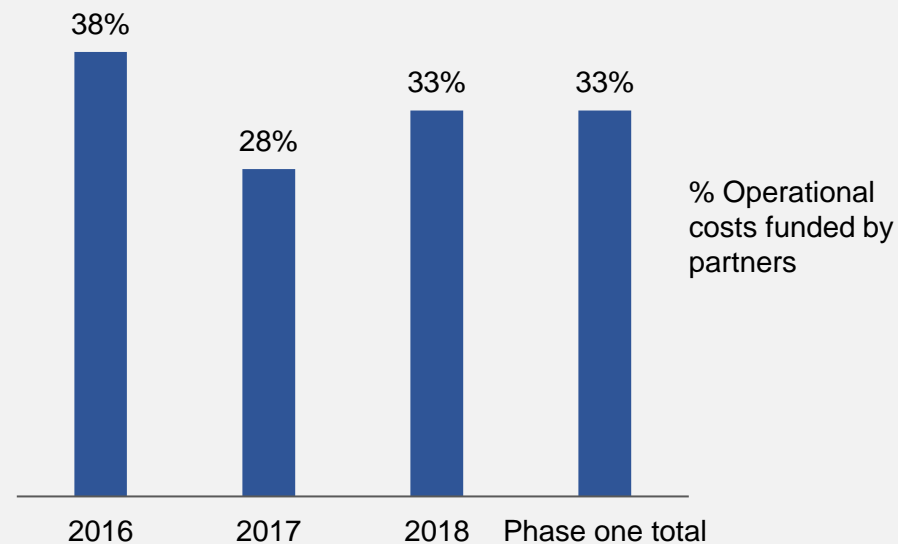
Figure 15. Percentage of operational funding contributed by co-funding partners in phase one.

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Programme partners agree on data standards and logging of WCIS data is increasing; more work is needed to map all known infestations.

Key Performance Indicator	Evaluative assessment	Evidence summary
Agree data standards for mapping infestations and control activities	Achieved	The Operational Advisory Group reached a consensus on the data standards for mapping infestations and control activities for the WCIS app. These standards are documented in the WCIS user guide and YouTube tutorial. One-on-one trainings appear to be an effective tool for supporting user engagement with WCIS.
100% of infestations we know of are mapped in WCIS as at 30/06/2019	Not achieved	By 30 June 2019, about 40% of known infestations were mapped in WCIS.
100% of infestations originally targeted for control with the budget from 2016 – 2019 have been loaded into WCIS	Achieved	1.5 million ha loaded into WCIS received conifer control during phase. This greatly exceeded the original target infestation area (500,00 ha). We assume the mapped areas of control in WCIS include all original target infestations.

Suggested areas for improvement

- Programme staff meet regularly with each Fund Manager to discuss challenges and training needs and check logged WCIS data is up-to-date.
- Continue the delivery of one-on-one WCIS trainings with fund managers to increase WCIS engagement.

At the beginning of phase one, the Operational Advisory Group agreed on the data standards for mapping infestations and control activities for the WCIS app.

'The proof is in the mapping. We can tell from the increasing accuracy of the data that people logging the information understand the agreed standards.'
(Programme staff member)

In April 2018, the Wilding Conifer Information System (WCIS) app was launched. Initial user support included a user guide, YouTube video and orientation trainings. Initial engagement was low with few WCIS data logging events.
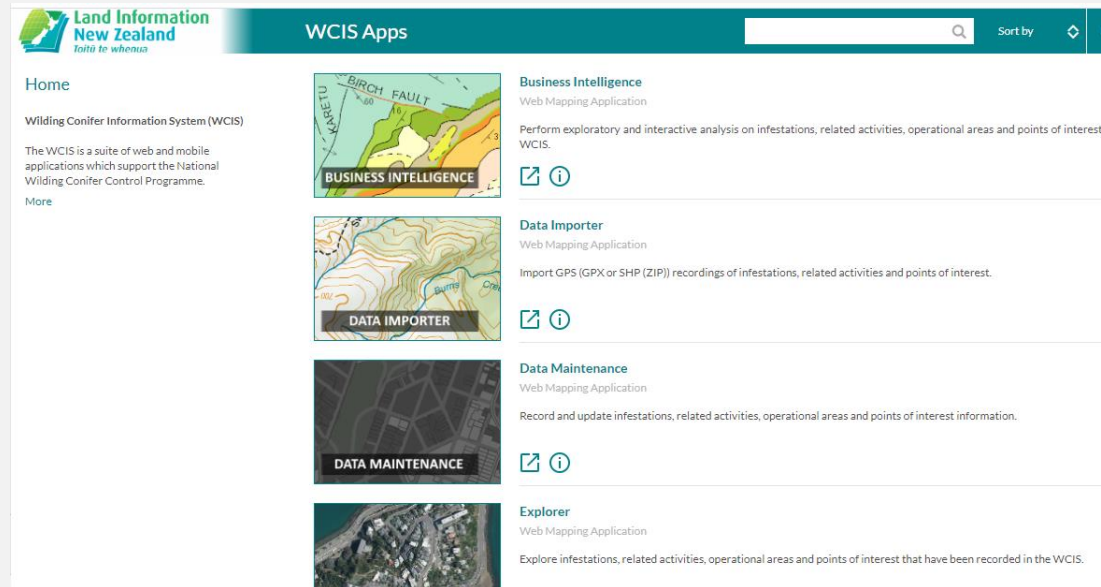

Figure 16. The WCIS app developed by the IT company Eagle.

Improvement in the WCIS data was noted following the WCIS training in April 2019.

Data logging events increased and the data manager noticed increased engagement with the app.
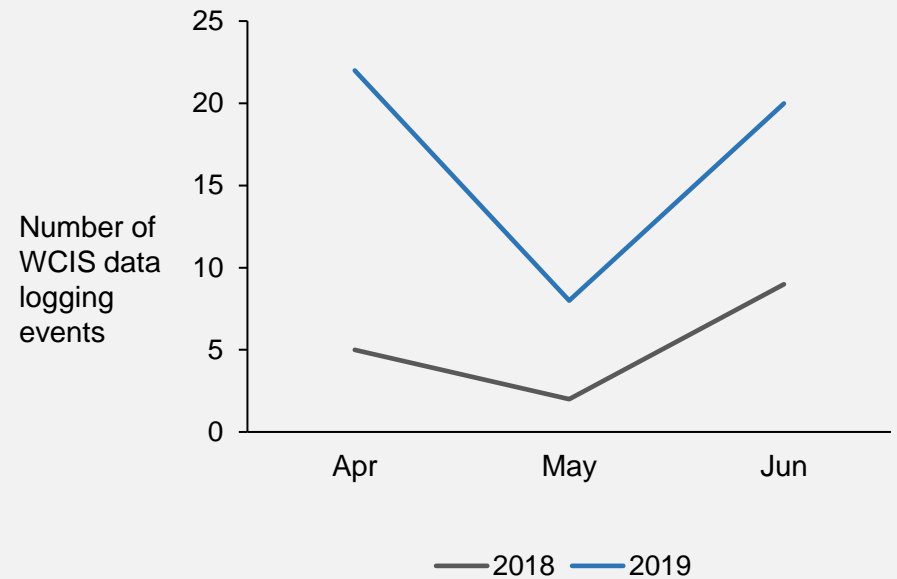

Figure 17. Total number of WCIS data logging events from April-June 2018 and 2019 by Horizons Regional Council, Marlborough District Council, Environment Canterbury, Otago Regional Council and Environment Southland.

'It was great to see enthusiasm lift during, and after the [April 2019] training sessions as users realised their own achievements, and the potential of the system. Very rewarding. And to actually watch the use of WCIS increase made it all worthwhile.' (Programme staff member)

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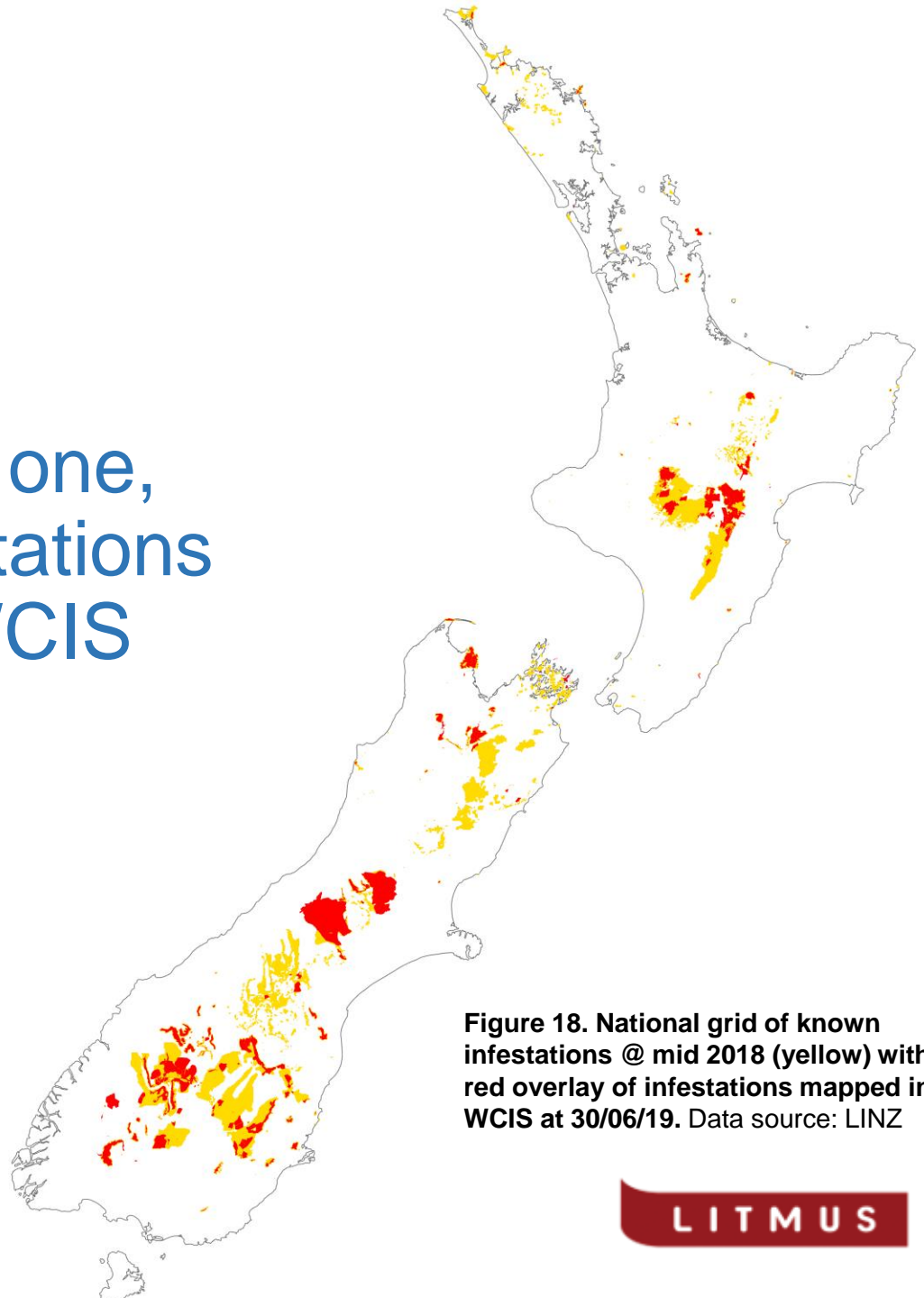# At the end of phase one, 39% of known infestations were uploaded to WCIS

Figure 18. National grid of known infestations @ mid 2018 (yellow) with red overlay of infestations mapped in WCIS at 30/06/19. Data source: LINZ

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Awareness of wilding conifers is growing; more work is needed to increase awareness of their negative impacts

Key Performance Indicator	Evaluative assessment	Evidence summary
40% of New Zealanders are aware of wilding problem and impacts to economy and environment	Partially achieved	In 2017, 35% of rural decision-makers were aware of wilding conifers establishing in their districts, an increase from 25% in 2015. In 2019, 31% of rural decision-makers were aware of wilding conifers affecting their land, adjoining properties or other land in their district. In 2019, of those aware, 14% did not believe the harmful effects of wilding conifers outweighed their benefits. This was a significant decrease from the 2015 and 2017 statistics. In 2019, 55% of city dwellers were aware of wilding conifers and 20% were aware of wilding conifer spread in their local region. Almost half the surveyed city-dwellers did not believe the harmful effects of wilding conifers outweighed their benefits

Suggested areas for improvement

- Continue work to increase awareness of the harmful effects of wilding conifers with rural and urban populations.
- We assume programme staff and partners have an important role in raising awareness of the problem through outreach activities. However, we do not know the extent of activities across New Zealand. The Programme could consider tracking outreach activities to understand reach and coverage, and identify outreach gaps.
- Encourage Manaaki Whenua Landcare Research to include wilding conifer questions in their 2021 Rural Decision Makers Survey to continue monitoring wilding conifer awareness in phase two.

Programme staff and partners engaged with the public in a range of ways to increase the social license of the Programme

Over the course of phase one:
- The Programme produced resources related to wilding conifer control (see quick guide on right)
- The NZ Wilding Conifer Group engaged with a range of community groups and facilitated information sharing
- Programme staff shared information and resources at A & P show stalls
- Programme spokespeople engaged with a range of people at Community Trust meetings and other events

Figure 19. ID guide developed by the Programme. Retrieved from the NWCCP website 22 June 2020.

In 2017, 35% of rural decision-makers were aware of wilding conifers establishing in their district, a significant increase in awareness from 2015

In 2019, 31% of rural decision-makers were aware of wilding conifers affecting their land, adjoining properties or other land in their district
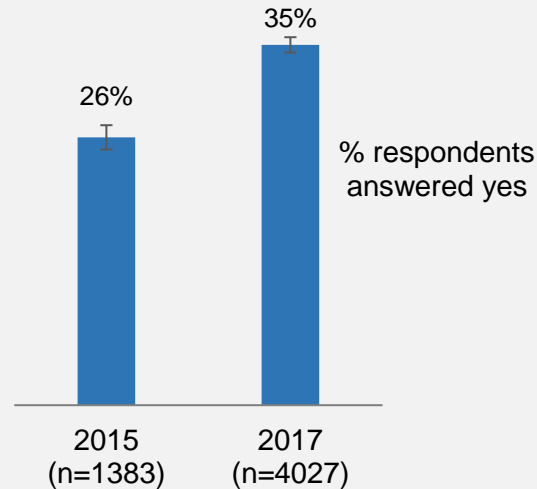

26%   35%

% respondents answered yes

2015   2017
(n=1383) (n=4027)

Figure 20. Percentage of rural decision-maker survey respondents aware of wilding conifers establishing in their district. Standard error bars included. Question: To the best of your knowledge, have pine or fir trees that are not on forestry plantations become established in your district? Data source: Manaaki Whenua Landcare Research (2018). Results to this question were not included in the summary of the 2019 survey.

Figure 21. Percentage of rural decision-maker survey respondents aware of wilding conifers affecting their land, adjoining properties or other land in their district. Question: As far as you are aware, have wilding conifers affected your land, adjoining properties, or other land in your district? (Q108). Data source: Manaaki Whenua Landcare Research (2020).

31%

% respondents answered yes

2019
(n=3572)

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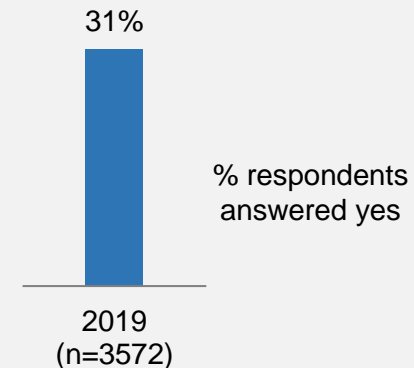
In 2019, of those rural decision-makers aware of wilding conifers affecting their district, 14% did not believe the harmful effects of wilding conifers outweighed their benefits

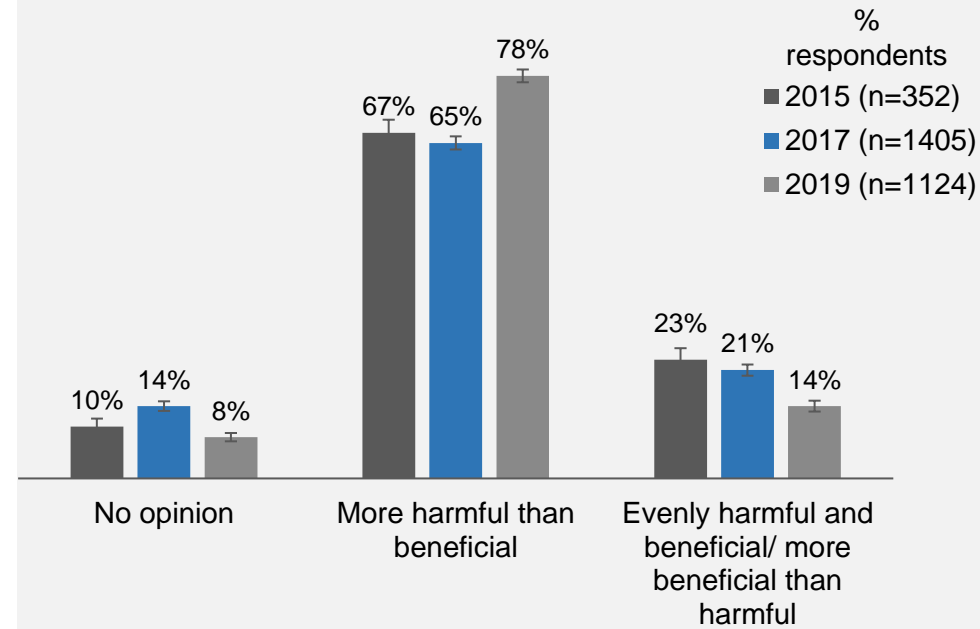This was a significant change in attitude from the 2015 and 2017 surveys

Figure 22. Proportion of surveyed rural decision-makers aware of wilding conifers with different personal attitudes towards wilding conifers. Standard error bars included. Question: Which of the following best describes your personal attitude toward wilding conifers? Question asked only of those who answered yes to being aware of WC establishing (2015/2017) or affecting (2019) their district. (Manaaki Whenua Landcare Research 2018 & 2020).

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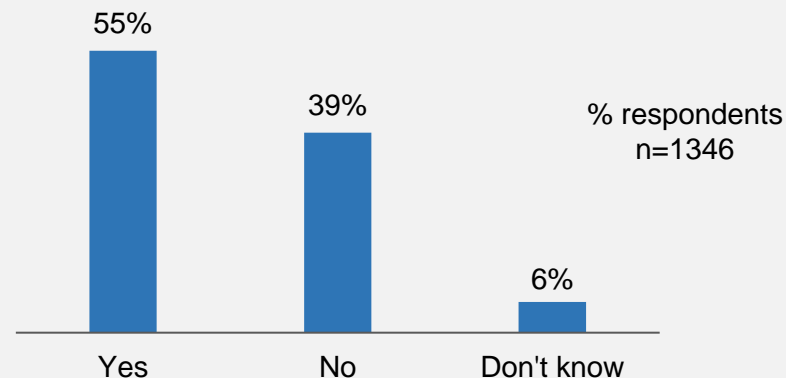# In 2019, 55% of city-dwellers were aware of wilding conifers

Figure 23. Percentage of surveyed city-dwellers aware of wilding conifers as a general concept. Question: Have you heard or read that pine, fir or conifer trees can self-seed and create new, unintended trees or forests in New Zealand. Note: Source data did not add to 100%.
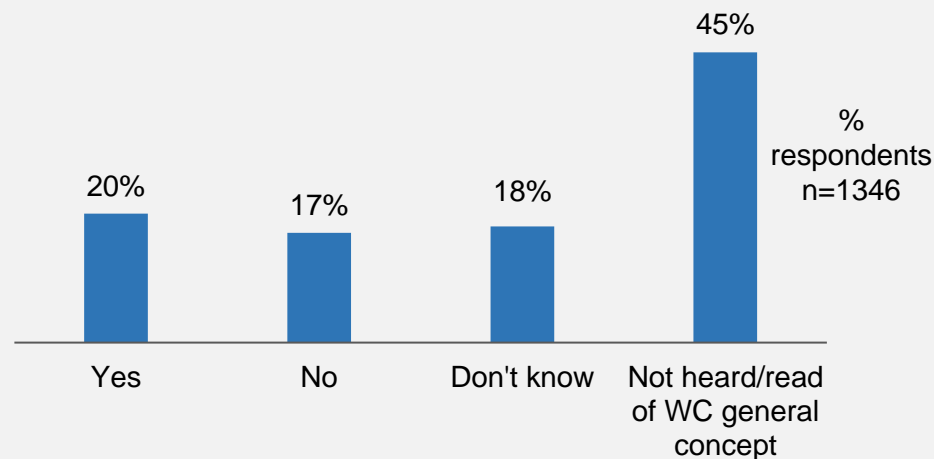
20% of those aware of wilding conifers were aware of spread in their local region

Figure 24. Percentage of surveyed city-dwellers aware of wilding conifer spread in their local region. Question: To the best of your knowledge, have pine, fir or conifer trees spread in your region – creating unintended trees or forests? (Question asked of those aware of WC general concept (n=777). Chart rebased to total population, Base: n=1,346 . Data source: Navigators & MPI (2019)

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Almost half the surveyed city-dwellers did not believe the harmful effects of wilding conifers outweighed their benefits
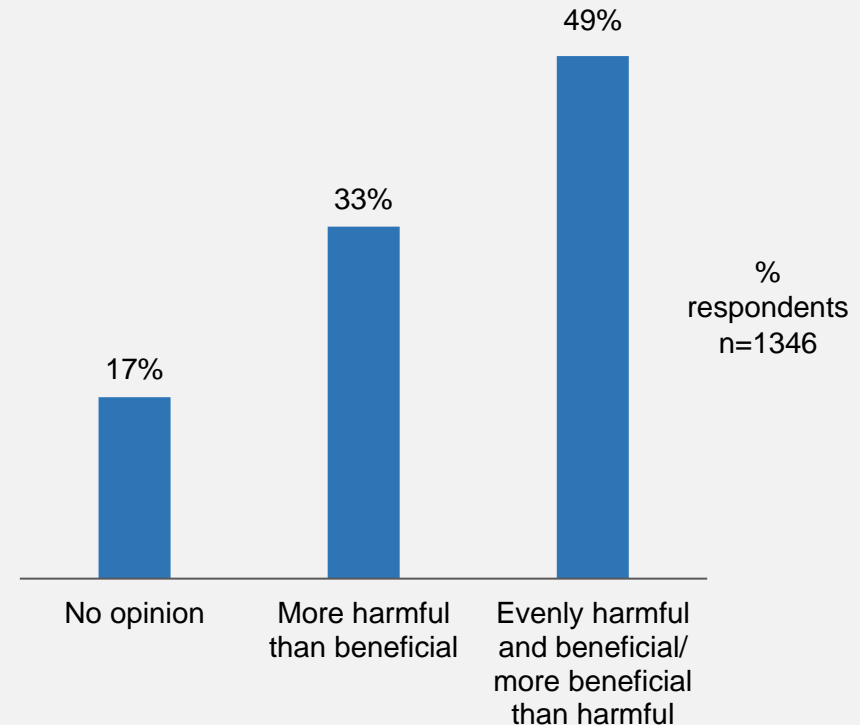

Figure 25: Percentage of surveyed city-dwellers with different personal attitudes towards wilding conifers. Question: Based on your current knowledge, and even if you have only just heard about them... which of the following best describes your personal attitude towards wilding conifers? I know or expect that 'wilding conifers' are: (The Navigators & MPI 2019)

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Councils are incorporating recommended rules in their Regional Pest Management Plans (RPMPs); most do not enable the removal of problematic seed sources

Key Performance Indicator	Evaluative assessment	Evidence summary
RPMPs for active Management Units state they: ▪ prohibit the planting of the high risk species as noted by the Wilding Tree Spread Risk Calculator	Partially achieved	3 of 5 RPMPs list all ten wilding conifer species as pests when wild. Pest status places them under the 1993 Biosecurity Act which prohibits their propagation.
▪ enable the removal of problematic seed sources	Not achieved	1 of 5 RPMPs enable problematic seed source removal of all four conifer species with limited commercial value, without exceptions.
▪ require land occupiers to maintain cleared areas	Partially achieved	3 of 5 RPMPs have incorporated the Programmes recommended rule requiring land occupiers to maintain cleared areas.

Suggested areas for improvement

▪ Work with Environment Southland to understand why they did not list all four recommended species with limited commercial value as pests in their RPMP. Encourage councils to enable problematic seed source removal for all four conifer species with limited commercial value, without exceptions.

▪ Due to different councils' RPMP review cycles, some have incorporated the Programme's recommendations and others have not yet. Follow-up action is required to ensure remaining councils enact changes.

In 2016, councils with active Management Units in their regions received recommendations to align their RPMPs with the Programme's aims

'Recommended Wilding Conifer Definition

Wilding conifers are any introduced conifer tree, including (but not limited to) any of the species listed in Table 2, established by natural means, unless it is located within a forest plantation, and does not create any greater risk of wilding conifer spread to adjacent or nearby land than the forest plantation that it is a part of.
For the purposes of this definition, a forest plantation is an area of 1 hectare or more of predominantly planted trees.'

Table 2 List of wilding conifer species

Common Name	Scientific Name
Douglas fir	*Pseudotsuga menziesii*
Lodgepole or contorta pine	*Pinus contorta*
Scots pine	*Pinus sylvestris*
Dwarf mountain pine and mountain pine	*Pinus mugo* (subspp. *mugo and uncinata)*
Bishops pine	*Pinus muricata*
Maritime pine	*Pinus pinaster*
Ponderosa pine	*Pinus ponderosa*
Corsican pine	*Pinus nigra*
European larch	*Larix decidua*
Radiata Pine	*Pinus radiata*

Excerpt from the Wilding Conifer RPMP Rule Development Project document (NWCCP 2016).

📄 Aligned rules and policies

Three of the five councils prohibit the planting of the ten wilding conifer species and require land occupiers to maintain cleared areas

Environment Canterbury, Otago Regional Council and Environment Southland list all ten wilding conifer species as pests in their RPMPs. This prohibits their propagation under the Biosecurity Act 1993. The same three RPMPs include a Plan Rule requiring land occupiers to maintain cleared areas.

Programme staff have indicated the other two councils (Horizons Regional Council and Marlborough District Council) are waiting for the next revision of their RPMP to incorporate recommended changes.

'Attention is also drawn to the statutory obligations of any person under sections 52 and 53 of the Act. Those sections prevent any person from selling, propagating or distributing any pest, or part of a pest, covered by the Plan.'
(Canterbury RPMP 2018-2038)

'**Plan Rule 6.3.4.1**
Within the Otago Region **occupiers shall destroy all wilding conifers**, contorta, Corsican, Scots, mountain and dwarf mountain pines and/or larch present on land that they occupy prior to cone bearing, if:
a) the wilding conifers, contorta, Corsican, Scots, mountain and dwarf mountain pines, and/or larch are **located within an area which has had control operations carried out to destroy wilding conifers** since January 2016; and
b) the control operations were publicly funded (either in full or in part)'
(Otago RPMP 2019-2029)

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Only one RPMP enables problematic seed source removal of all four conifer species with limited commercial value, without exceptions

The Programme recommends RPMPs list four conifer species (the Corsican, Scots and mountain pines and European larch) as pests, whether wilding or planted, to enable the removal of problematic seed sources regardless of location.

Environment Canterbury is the only council to list all four species as pests in their RPMP, without exceptions. Otago Regional Council lists all four species as pests but includes the exception that removal of existing plantings less than 1ha won't be required.

Environment Southland lists one of the four recommended species (mountain pine) in their RPMP and also lists Contorta as pests in wilding and planted form.

'The Plan does not include rules requiring the removal of existing shelter belts and other existing planted conifers less than 1ha.' (Otago RPMP 2019-2029)

Figure 26. Central Alma Tarndale showing the former windrows where original source planting have been removed. Areas of dense second and third generation re-growth have re-generated within and near-by. Data source: Molesworth Operational Plan

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# Data to measure landowner and industry participation in control work was not accessible in the time frame

Key Performance Indicator	Evaluative assessment	Evidence summary
10% of known risk-prone species plantings removed proactively by landowners	Unknown	Surveillance data from Emissions Trading Scheme was not accessible in the time frame.
25% increase in planting/replanting of non-spread prone species in areas vulnerable to wilding invasion	Unknown	Surveillance data from Emissions Trading Scheme was not accessible in the time frame.

Suggested areas for improvement

- Determine the relevance and value of this outcome domain in assessing the effectiveness of the Programme in Phase 2. If relevant, further work is needed to access and analyse the surveillance data from Emissions Trading Scheme.

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Actions to improve the Performance Measurement Framework and data collection

- Review Programme strategy and logic model to align with current programme.

- Review Performance Measurement Framework indicators and wording to ensure alignment with Programme priorities and available data.

- Consider adding employment rates to monitor the number of new jobs generated with the expansion of the Programme.

- Consider changing the partnership survey Q5 to 'which of the following options best describes the relationship of the Programme to your organisation.'
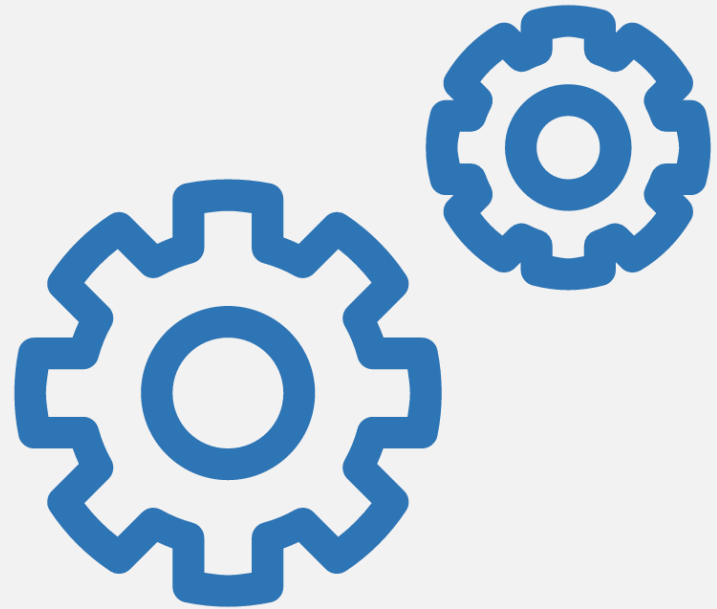
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Appendices

National Wilding Conifer Control Programme
Performance Measurement Framework
Measuring first 3 years of the programme (Phase 1) to 30 Jun 2019

Purpose

The purpose of this framework is to provide a method of measuring the ongoing performance of the National Wilding Conifer Control Programme. The Programme needs a means to measure the performance of the programme against agreed milestones, and the progress made in the control of wilding conifers. Outputs from this work should enable continuous improvement within the programme.

This document will underpin establishment of baseline measures, and collection, management and analysis of both quantitative and qualitative data to inform a continuous improvement approach, and to make the right decisions at the right time. Independent evaluation is planned for the end of FY 2019-2020 (for Phase 1), and every second year thereafter.

Performance Measures

	Outcome	Category	Key Performance Indicators	Measures	Data Source
1	**Effective Control**	Environmental/ Landscapes - Prevention	▪ <1% of new plantings represent a high spread risk.	▪ Total number of permitted and consented new plantings between 1/7/16 to 30/6/2019 ▪ % of these new plantings that are assessed a 'high spread risk' using the Wilding Tree Spread Risk Calculator	▪ Regional Council consents approved between 1/7/16 to 30/6/2019 in Active management areas. ▪ Wilding Tree Spread Risk Calculator assessments submitted to regional councils in line with NES-PF
		Environmental/ Landscapes - Control	▪ The total area of the Wilding conifer infestations targeted for control with the budget from 2016 – 2019 have received the first round of approved control under the Programme	▪ Total area of targeted infestations at 1/7/2016	▪ Phase 1 business case ▪ Regional Council infestation data
				▪ Total area of control at 30/6/2019	▪ WCIS
			▪ The area of land at 'spread risk' from these infestations is reduced by 25%	▪ Total area at risk from targeted infestations at 1/7/2016	▪ WCIS. ▪ WEEDs (DOC) ▪ Regional Council infestation data ▪ Predictive spread modelling.
				▪ Total area at risk from targeted infestations at 30/6/2016	
2	**Aligned Rules & Policies**	Regulatory - Prevention	Regional Pest Management Plans for active Management Units state that they: ▪ prohibit the planting of the high risk species as identified by the Wilding Tree Spread Risk Calculator ▪ enable the removal of problematic seed sources; and ▪ require land occupiers to maintain cleared areas.	▪ Regional Pest Management Plans for active Management Units	▪ Relevant plans and policy documents.

3	**Increase social licence**: ensuring there is wide understanding of wilding conifer impacts, inspire public action through education and support from community initiatives	Social - Prevention	▪ The % of New Zealanders aware of the wilding problem and it's impacts to the New Zealand economy and environment is increased to 40%	▪ Proportion of the public that are aware of wilding conifers as assessed by the social research completed by the Programme ▪ Proportion that view wilding conifers as negative	▪ Rural Decision Makers questionnaire. ▪ Navigators report
4	**Increased participation** Landowners & Industry	Social - Control	▪ 10% of known risk-prone species plantings removed proactively by landowners ▪ 25% increase in planting/replanting of non-spread prone species in areas vulnerable to wilding invasion.	▪ # risk prone species plantings between 01/07/2016 and 30/06/2017 ▪ # risk prone species plantings between 01/07/2017 and 30/06/2019 ▪ # of planting/replanting of non-spread prone species in areas vulnerable to wilding invasion between 01/07/2016 and 30/06/2017 ▪ # of planting/replanting of non-spread prone species in areas vulnerable to wilding invasion between 01/07/2017 and 30/06/2019	▪ Surveillance from Emissions Trading Scheme (ETS) who carries out a survey every 2 years.
5	**Effective Partnership Model** Programme Partners	Operational - Prevention	▪ All key programme Partners and Stakeholder consider the partnership to be effective ▪ All Co-funding/partners commit to the Cost Share model, and cover at least 20% of the total Programme costs over the 3 years of Phase 1	▪ Programme has documented clear roles and responsibilities ▪ Key programme Partners and Stakeholders understand and support the documented roles and responsibilities ▪ Co-funding/partners cover 20% of total Programme costs ▪ Heavily impacted Community groups are engaged in or supportive of Programme Operations	▪ National Strategy ▪ Terms of Reference for Programme Governance and Advisory Groups ▪ Interviews with a selection of key programme Partners and Stakeholders ▪ Programme financial reporting.
6	**Health & Safety Improved**	Operational - Prevention	▪ 100% of operations have a documented HSMPs in place prior to work commencing ▪ Risk register is documented and shared with Programme Partners ▪ The Programme receive, review and, where appropriate, respond to near miss and incident reports ▪ The Programmes shares H&S investigation findings and 'lessons learned' across the programme.	▪ All MU H&S Management Plans & corresponding audit reports ▪ H&S Risks and mitigation documented and shared ▪ Register of H&S Incidents and investigation outcomes is maintained ▪ H&S Incidents and investigations shared with GG and OAG	▪ Good Practice Charter ▪ H & S reporting. ▪ Audit reports and follow up. ▪
7	**Data and Information**	Consistent data standards and process	▪ Agree data standards for mapping infestations and control activities ▪ 100% of infestations originally targeted for control with the budget from 2016 – 2019 have been loaded into WCIS ▪ 100% of infestations that we know of are mapped WCIS as at 30/06/2020	▪ Data standards for mapping infestations and recording control activities are documented and shared with all Programme partners ▪ % targeted infestations loaded into WCIS ▪ Create shared national 'grid' of known infestations ▪ % known infestations loaded into WCIS ▪ Effective user support processes are in place to ensure required data is loaded into WCIS accurately	▪ WCIS Infestation maps and control polygons ▪ WCIS Business requirement and development documents ▪ WCIS user training and support guides & process

Partnership survey for the National Wilding Conifer Control Programme

This survey informed the evaluation of the first phase of the National Wilding Conifer Control Programme (July 2016- June 2019). The survey assessed how effective the Programme partnership was in phase one.

The survey was confidential. The Wilding Conifer Control Programme team sent out the survey link but only Litmus received responses. Litmus collated the feedback to include in the anonymised report.

Thanks for your participation. The survey will only take two minutes.

Q1. Please select the category that best applies to you

- Central government (MPI, DOC, LINZ, NZ Defense Force)

- Regional or local council

- Local community

- Researcher

- Industry (New Zealand Forest Owners Association, Federated Farmers of New Zealand)

- Private landowner

Q2. What is your role within the National Wilding Conifer Control Programme?

- Governance

- Fund manager

- Management Unit manager

- Technical advisor

Q3. The National Wilding Conifer Control Programme is a collaboration between Biosecurity New Zealand (MPI), the Department of Conservation (DOC), Land Information New Zealand (LINZ), and other key stakeholders including New Zealand Defence Force, regional and local councils, local communities, researchers, industry (incl New Zealand Forest Owners Association and Federated Farmers of New Zealand), and private landowners.

Overall, how would you rate the effectiveness of this partnership during phase one (July 2016-June 2019)?

- Very poor

- Poor

- Neither good nor poor

- Good

- Very good

Q4. Please provide a reason for your rating above

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Q5. Please indicate where the National Wilding Conifer Control Programme sat along this partnership continuum during phase one in relation to your organisation.

- Networking: Involves the exchange of information for mutual benefit. This requires little time and trust between partners/stakeholders. For example, the National programme team contacted you only when they required your help/guidance in order to obtain information or complete a Programme task.

- Coordinating: Involves exchanging information and supporting programme planning. For example, the National programme team would contact you or meet in person at an agreed frequency and schedule in order to seek your advice on the approach being taken to address Wilding Conifer control, and discuss any issues arising.

- Cooperating: Involves exchanging information, supporting programme planning and preparation of key documents, adopting a shared commitment and consistent approach to how we work. It also involves providing regular advice. It requires a fair amount of time and a high level of trust between partners/stakeholders. For example, the National programme team/programme partners/stakeholders would meet regularly to plan a coordinated approach to Wilding Conifer control, discuss any issues arising and agree on a resolution to those issues. Any advice you provide relates to operational activities and how these are best delivered to achieve the outcomes of the strategy, or expert scientific and technical advice, or advice on how the outcomes of the strategy can be achieved.

- Collaborating: Involves exchanging information, supporting programme planning and preparation of key documents, adopting a shared commitment and consistent approach to how we work. It also involves providing regular advice, and input and reporting to the National Programme. It requires a significant amount of time and a high level of trust between partners/stakeholders. For example, the National programme team/programme partners/stakeholders work alongside you to complete shared deliverables. This could include developing and delivering operation plans or taking action to minimise Programme risks. Any advice you provide relates to operational activities and how these are best delivered to achieve the outcomes of the strategy, or expert scientific and technical advice, or advice on how the outcomes of the strategy can be achieved.

Q6. Is this the right participation level for your role and responsibility in the National Wilding Conifer Control Programme?

- Yes

- No

- Not sure

Q7. Please explain your choice above

Q8. Which region are you operating in?

- Northland
- Auckland
- Waikato
- Bay of Plenty
- Gisborne/Tai Rāwhiti
- Taranaki
- Hawke's Bay
- Manawatu-Whanganui
- Wellington

- Tasman
- Nelson
- Marlborough
- West Coast
- Canterbury
- Otago
- Southland
- I operate across multiple regions

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