

Biosecurity 2025 Implementation Plan

Strengthening the
biosecurity system together



Ko Tātou This is Us

BIOSECURITY 2025

This plan reflects the collective effort of five working groups and a steering group made up of biosecurity system participants. It is not a statement of position of the Government, the Ministry for Primary Industries or any other participant.

It is a living document to support a national conversation about the way we do biosecurity

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Mā tāu rourou, mā taku rourou, ka ora te iwi kia tiakina pai ō tātou tongarewa – tēnā anō koutou katoa

With your contribution and my contribution the people will flourish – we must care for those things that are precious to us

Foreword by the Minister for Biosecurity

Biosecurity underpins the New Zealand environment, lifestyle, economy and identity.

But the system is under huge pressure. As a country, we need to respond.

We have the *Biosecurity 2025 Direction Statement* that laid out the goals and outcomes we need to achieve as a nation. A Biosecurity 2025 Steering Group co-ordinated actions, activities and relationships to develop the *Implementation Plan*.

I urge all New Zealanders to think about the role you can play. Ask yourself: how can I connect with others to make a positive difference to the biosecurity of New Zealand?

Hon Damien O'Connor
Minister for Biosecurity

Foreword by the Biosecurity 2025 Steering Group

The *Biosecurity 2025 Implementation Plan* is for New Zealand and all New Zealanders.

It reflects the thinking and passion of many knowledgeable, skilled and experienced people. Thanks to everyone – particularly our working groups – in helping us get this far.

Readers of this overview document will see the diagram on page 5 features five work programmes. Together, these work programmes seek to deliver against the goals and outcomes in the *Direction Statement*.

We intend to support these work programmes in every way we can to ensure these important goals and outcomes are met. We ask you to join us in our endeavour.

Keep in mind the *Implementation Plan* is a living document. It will continue to evolve as new ideas and priorities come to hand.

We look forward to working together and having all New Zealanders with us on the journey.

Roger Smith (Chair) – Head of Biosecurity New Zealand; James Buwalda (Co-Chair) – Better Border Biosecurity (B3); Kimberly Crewther - Dairy Companies Association of New Zealand; Rosemarie Dawson – Customs Brokers & Freight Forwarders Federation of New Zealand Inc; Steve Rich – Government Industry Agreement for Biosecurity Readiness and Response; Glenice Paine – Te Tira Whakāmatki; Cath Wallace – Environment & Conservation Organisations of NZ; Rob Phillips – Environment Southland; Amber Bill – Department of Conservation; Sally Giles – Ministry of Health; Graeme Marshall – Biosecurity Ministerial Advisory Committee; Grant Bryden – Ministry for Primary Industries

Introduction

Purpose of this Plan

Biosecurity 2025 set the direction for creating a more resilient and agile biosecurity system. The purpose of this Implementation Plan (the Plan) is to articulate how we have collectively agreed to deliver the goals and outcomes of the [Biosecurity 2025 Direction Statement for New Zealand's biosecurity system](#).

Five expert working groups produced [five work plans](#) with actions to deliver the goals and outcomes from the Direction Statement. All of the work plans' actions have been integrated into this Plan.

The Plan not only explains what we intend to do now; it also establishes the framework for an ongoing process. It is a living document which will continue to be shaped through collaboration and engagement. It has been designed to support alignment and participation in delivery and be dynamic enough to respond to changing context.

How this Implementation Plan is structured

This Plan sets out five programmes of work to deliver against the goals and outcomes in the Direction Statement. These programmes of work will transform the way we do biosecurity, achieve some critical foundational work over the next two-to-three years, to achieve important outcomes over the longer term.

Ideas central to transforming the way we do biosecurity:

Culture change – make it personal – changing attitudes about biosecurity; making sure everyone understands why it is central to our way of life.

Enable a network of networks – changing the way we work together; collaborating to make our system resilient.

These ideas are central to the work programmes and provide focus for the first two-to-three years of the Plan to build strong foundations and start the transformation.

Each programme of work outlines projects that will be undertaken early, and longer term projects that will build on the early work. There are opportunities for organisations and individuals to contribute to all of these projects. The Plan sets out:

Catalyst projects to kick-start a programmes of work: a set of 'catalyst projects' will kick start the programmes of work to support collaboration across the biosecurity system, and enable everyone to contribute to making Biosecurity 2025 goals and outcomes happen. Some projects will involve a large investment in biosecurity.

How you can contribute to the programmes of work: if you or your organisation would like to contribute to these programmes, then there are activities you can undertake to support them.

The Plan includes activities identified as priorities and what needs to be done over the medium-to-long term so the biosecurity system remains robust. Many of these activities will need teams to 'own' them, continue to shape and scope them, and plan how they will be undertaken. Ongoing engagement on the programmes of work will inform this planning.

The Plan includes diagrams to illustrate system-level drivers and outcomes when viewed from [four critical areas of focus for New Zealand](#). The diagrams provide a 'roadmap' of how they are addressed in the Plan. They are: elevation of Te Ao Māori, strengthening global biosecurity, responding to climate change, and protecting New Zealand's marine environment.

Transforming the way we do biosecurity

We need to transform the way we do biosecurity to help our system remain resilient in the face of increasing pressures. We cannot continue to do things the same way.

The five programmes of work will be the drivers of this transformation. Through this Plan, the way we do biosecurity will change in the following material ways:

Culture change – make it personal

Attitudes about biosecurity will be transformed so that everyone understands why it is vital to our way of life. People will understand why it is necessary for every New Zealander to pitch in because they are motivated to act.

Biosecurity will become personally relevant – a fundamental change, a transformational change of culture and attitudes. Biosecurity will become so integral to our behaviour that we won't even think about it. It will come as naturally as putting on a seat belt.

Biosecurity will be a 'team New Zealand' effort where everyone takes action to mitigate biosecurity risks at home, at work, when they travel and within their communities, including all businesses, agencies and organisations. For people to feel motivated to contribute, they will be able to see their place in the system, understand why their participation is important, and how their efforts will make a difference.

Enable a network of networks

New Zealand's biosecurity system is made up of a network of networks – where leadership is exercised at multiple levels, across multiple network nodes, and public and private sector participants. A wide range of networks – of scientists, regional councils, growers, importers and other businesses, Māori, community groups, and central government agencies – will be energised with a sense of purpose aligned with common goals. Each of these networks will have sufficient capability, knowledge and tools to work collaboratively and exercise the leadership required to respond with agility. They will feel empowered to do so, and will take shared responsibility for delivery of actions.

System-wide strategic oversight will be undertaken, to make sure the system is comprehensive, best practice is followed, and technology is used to the best advantage to support system-wide transformation.

System performance monitoring will be put in place; continually looking for emerging gaps or weaknesses. This information will be available to all participants to inform good decision-making around allocation of resources and effort. There will be a culture of openness, transparency, and trust.

Five work programmes to deliver system transformation

This Plan sets out five programmes of work to deliver against the goals and outcomes in the Direction Statement, and to drive the transformation necessary to ensure the system functions effectively.

Each programme of work presents a number of foundational activities to be started over the next two-to-three years. It also presents activities that will be taken over the longer term to build on the foundational work completed in years two-three.

The nature and scope of the work is described in detail for the foundational work, while the longer term work is still to be developed. This Plan will continue to evolve as planning for the longer term activities is undertaken and projects are completed.

The five programmes of work are listed below, and presented in detail in the following section.

Exercise kaitiakitanga

Maintain a strategic view of the system, monitor and report on system health, and drive delivery of Biosecurity 2025.

Create a movement

Encourage proactive biosecurity behaviours and support collaboration across the system.

Collaborate in knowledge

Biosecurity organisations share knowledge, and work together in science, research and technology.

Build resilience

A system approach to investment in biosecurity skills and strategic assets, including regulatory frameworks and networks.

Enable smart data

Establish ways to share data, to unleash its value for analytics, science, research and intelligence.

Exercise kaitiakitanga

Maintain a strategic system view, monitor and report on system health to drive delivery

A biosecurity team of 4.7 million

A toolbox for tomorrow

Smart, free-flowing information

Effective leadership and governance

Tomorrow's skills and assets

Exercising kaitiakitanga (guardianship) will depend on establishing system stewardship arrangements, providing leadership to drive delivery of Biosecurity 2025, and monitoring and reporting on system health.

Establish
system
stewardship
arrangements

Transform how we work together.

- Establish a biosecurity system stewardship council
- Support delivery of the six core system functions
- Incorporate the role of kaitiaki across the system
- Provide system leadership
- Clarify roles and responsibilities.

Drive delivery
of Biosecurity
2025

Convene participants at national, regional and local levels.

- Drive delivery of catalyst projects and the programmes of work
- Review and collectively confirm priority activities
- Connect, align and accelerate activities across multiple stakeholders
- Provide feedback on progress implementing Biosecurity 2025 and effectiveness of contributions.

Monitor and
report

Monitor biosecurity system health.

- Develop whole-of-system KPIs and measures
- Establish a monitoring and reporting programme
- Provide assurance on system performance
- Build a culture of transparency and accountability.

Establish system stewardship arrangements

There are a number of gaps and opportunities in the system. They include fragmentation, duplication, a lack of transparency of decision-making and information, a need for better monitoring and reporting, and a need for greater engagement and understanding across all system participants. Addressing these gaps and opportunities is central to securing trust and confidence from participants and the public. It is also critical to creating a well-functioning system that is agile and responsive to emerging risks and threats.

System stewardship arrangements are needed to, maintain a strategic view of the system, drive delivery of Biosecurity 2025, and support delivery of the [six core system functions](#). The arrangements need to be long-term, be supported by system participant, reflect the network of networks construct and ensure the kaitiaki role fulfilled across the system.

It is proposed that a biosecurity stewardship council be established which incorporates kaitiaki, and reflects the breadth of system participants, with the core characteristics/ responsibilities set out in Appendix 2. The stewardship council will be the 'custodian' of Biosecurity 2025 on behalf of participants, and will have responsibility for ensuring its currency and relevance over time.

Drive delivery of Biosecurity 2025

The success of Biosecurity 2025 will depend on shared responsibility (ownership) for implementation. The process for developing the Plan has engaged Māori, industry, community, central and local government, NGO, philanthropic, research and education stakeholders. These (and other) stakeholders will need to contribute to the delivery of actions in this Plan. Responsibility for implementation must extend beyond central government.

The proposed stewardship council arrangements would drive the 'shared responsibility' model, and would encourage and facilitate on-going and enhanced collaboration with participants to deliver Biosecurity 2025. Key elements of this approach to convene participants at national, regional and local levels are set out in Appendix 3.

This approach must have active leadership and facilitation. In particular, the stewardship council will need to be resourced to (i) convene relevant stakeholders, (ii) facilitate prioritisation, (iii) connect and accelerate activities across multiple stakeholders, and (iv) provide timely and objective feedback.

An important early action for the stewardship council will be to assemble biosecurity system participants to agree priorities and to identify/commit resources to these priorities. This will be essential to get the foundational activities underway during the next two-to-three years, and for the activities over the longer term.

A core programme team will support implementation by:

- Supporting the establishment of pilot projects
- Supporting the implementation-focused oversight groups (Information Advisory Group; Science and Technology Oversight Group; Building a Team of 4.7 Million Oversight Group; Assets and Skills Oversight Group), until they are self-sustaining
- Holding the pen on the Plan on behalf of the biosecurity system
- Providing strategic support
- Monitoring the progress on projects and programmes under this Plan.

Monitor and report

There are two types of monitoring that will need to take place to give effect to the Biosecurity 2025 programme implementation:

- Monitoring biosecurity system health, and
- Monitoring implementation– including key actions, programmes and targets.

This [diagram](#) illustrates how together they will contribute to assessment and strategic analysis, and how they will support transparent and accountable system stewardship.

A project to develop KPIs to measure biosecurity system health based on the whole-of-system outcomes has already started. (see Appendix 4). These outcomes reflect the involvement of participants across the system in developing them and incorporating the mission, values, principles, goals, outcomes and targets from the Biosecurity 2025 Direction Statement.

A 'State of Biosecurity Report' will combine the above information with strategic analysis of implications, emerging risks and opportunities. Reporting on system health will include holding a periodic (perhaps annual) biosecurity summit to report on system performance, enable wider engagement on system stewardship issues, and explore emerging risks and opportunities.

Catalyst Projects

We've identified some high priority projects to support the programmes of work, and which will deliver value to the biosecurity system.

Project description	Value to system participants
<p>Establish biosecurity system stewardship arrangements</p> <ul style="list-style-type: none"> • Establish a biosecurity system stewardship council • Incorporate the role of kaitiaki across the system • Clarify roles and responsibilities • Support delivery of the six core system functions • Organise participants at a national, regional and local level through a 'shared responsibility' model to deliver Biosecurity 2025. 	<p>This will ensure we maintain a long term strategic view of the system, monitor and report on system health, and drive delivery of Biosecurity 2025.</p>
<p>Biosecurity system map and state of biosecurity</p> <p>Agile decision-making means leaders across the biosecurity system will need to know how the system is configured, how it works and fits together, and have clarity on their roles and responsibilities.</p> <p>For system effectiveness, people need to know what impact their efforts make, what is working and what isn't, and where to draw on resources. Decision-makers need to know where the weak points are in the system, and impediments that need to be overcome to prioritise actions for a resilient system.</p> <p>This requires:</p> <ul style="list-style-type: none"> • A map of people and resources so efforts can be aligned, learnings and best practice can be drawn on, and people know who to call on for support or collaboration. • Establishing measures for monitoring and reporting on the health and effectiveness of the biosecurity system. • Resources for detecting weaknesses and addressing them before a significant event occurs. • Understanding critical biosecurity system needs – undertake baseline assessments and gap analyses re biological databases and collections, science, research, mātauranga and technology, capability, infrastructure and network development needs, sustainable funding arrangements. 	<p>Everyone will have access to information on how the system is configured, key roles and responsibilities, significant activities, the state of the biosecurity system, its strengths and weaknesses.</p> <p>All system participants will know where they can go for support and information, and the tools they need to participate.</p>

How can you exercise kaitiakitanga?

Responsibility for the performance of our biosecurity system is ours. Collectively we benefit from a strong, resilient and continuously adaptive system, and therefore we share collective responsibility.

Laying the groundwork

Understand what activities you can do as an individual or as part of the community.

Our own activities and behaviour help protect the values we treasure. There are many activities set out in this Plan to help us do this. We can influence our organisations or agency to moderate their activities and behaviours to protect our resources, our taonga and our way of life.

Community groups, supported with information and skills, can support biosecurity-related community programmes. They can contribute knowledge and expertise through citizen science activities: contributing to public debate on issues related to appropriate tools and practices for managing biosecurity risk, levels of acceptability, and the trade-offs.

Contractors, industries, businesses, agencies and other organisations can make themselves familiar with the elements of this Plan, and take steps to support them. Their organisational or corporate plans can include biosecurity, and are aligned with the Plan.

Building networks, aligning and collaborating with others

Networks of biosecurity organisations, businesses, community organisations, iwi and hapū.

When commissioning biosecurity-related scientific research or tool development, participants can use the Plan's priorities to inform their investment. They can collaborate between groups to align research activities so their results are useful to those who need them.

Māori bring a unique knowledge and perspective to biosecurity in their role as kaitiaki (guardians) of New Zealand's taonga, and as partners with the Crown through Te Tiriti o Waitangi. In these roles, Māori can support, drive, and benefit from the implementation of this Plan.

Central and local government agencies can use this Plan to align their plans and policies. Biosecurity, and the values being protected by this Plan, are relevant to agencies responsible for: public health, conservation and the environment, freshwater and marine activities, statistics and information, research and innovation, trade, primary industries, imports and new organisms, immigration, transport, and community networks.

Connected programmes and initiatives

Connection and alignment with other relevant external programmes and initiatives.

There are a number of external programmes and initiatives that support the successful implementation of Biosecurity 2025 and the *Exercise kaitiakitanga* programme of work including:

- New Zealand's environmental reporting series (land, freshwater, marine, atmosphere, climate)
- Environmental Protection Agency reporting (especially under HSNO and RMA)
- Monitoring and reporting on the New Zealand Biodiversity Strategy,
- National Reporting on the Convention on Biological Diversity and Aichi Targets
- World Organisation for Animal Health reporting
- Sector environmental performance reports/reporting

Create a movement

Drive and support participation and collaboration

Biosecurity 2025 Goals

Collaboration; Māori participation; Awareness & knowledge; Taking action; Tools, rules & processes
Current tools; New tools
Accessibility
Leadership; Trust & confidence; Governance
Skills

This work programme sets out activities to drive the changes in attitudes, behaviour and culture needed to drive and support participation and collaboration. It helps build the foundation for people to take action to mitigate biosecurity risks at home, at work, when travelling and in their communities.

It also supports, enables and fosters Māori participation. It means Māori actively participate as kaitiaki. Mātauranga Māori and kaitiakitanga are incorporated into the way biosecurity outcomes are achieved. And Māori collaborate with others on biosecurity planning and delivery activities.

Key components of *Create a movement* are:

<p>Increase awareness</p>	<p>All New Zealanders know they are essential to strengthen our biosecurity system.</p> <ul style="list-style-type: none"> • A catalyst project to develop an independent biosecurity brand and advertising campaign • A call for everyone to use and promote the biosecurity brand.
<p>Proactive biosecurity behaviours</p>	<p>All New Zealanders practice proactive biosecurity behaviours.</p> <ul style="list-style-type: none"> • A set of programmes for raising awareness and knowledge of proactive biosecurity behaviours with targeted audiences • Better biosecurity behaviours – a programme to identify and articulate key biosecurity behaviours, with actions initially focussing on: moving people and goods; vigilance and readiness; and pest and disease control • Establish a programme to build awareness and understanding of critical target audiences of their wider roles and responsibilities in biosecurity, starting with supply chain participants (especially internationally) and the visitor industry.
<p>Unification & participation</p>	<p>Communities, iwi, and businesses work together to promote a strong biosecurity system.</p> <ul style="list-style-type: none"> • A set of programmes for supporting iwi, communities, businesses and others to collaborate and support biosecurity • A call for everyone to support and contribute to biosecurity activities in their community.

Catalyst Project

This catalyst project will increase biosecurity awareness and knowledge of New Zealanders:

Project description	Value to system participants
<p>This project aims to transform the biosecurity system and help everyone contribute to the work programme.</p> <p>An independent biosecurity brand and advertising campaign launched in 2018 will run for seven years. The brand aims to unify and connect programmes and activities occurring across the system. It will also speak to all New Zealanders by highlighting the personal relevance of biosecurity.</p>	<p>Organisations in the biosecurity system have access to an easily recognised brand for their biosecurity activity.</p> <p>They understand how they are part of the system and what they can do to be part of the movement.</p>

How you can help create a movement

This catalyst project is starting to grow the *movement* and build a team of 4.7 million. You can help be part of this within your organisation or industry, and by combining, increase the momentum of the *movement*, to create a collective effort across the country and a successful programme of work.

Laying the groundwork

Use and promote the independent biosecurity brand in your own biosecurity programmes or activities.

This will help align and connect all the programmes, and make them visible. A brand toolkit is available on the [Thisisus.nz website](https://thisisus.nz).

Building networks

A critical part of this Plan is building networks. Getting different people and organisations in a room together talking about the issues.

Upload your event or news item to the Biosecurity 2025 website.

Be part of Biosecurity 2025 by sharing your biosecurity-related case studies, news items and events. These can then be promoted to a wider community, ensuring more people know how you are pitching in.

Enter your biosecurity-related programmes, activities or projects into the New Zealand Biosecurity Awards.

Sharing your stories will provide a source of inspiration and the opportunity for others to learn from and connect with like-minded initiatives.

Consider joining the Biosecurity Communication Network (BCN) – A network of communication and engagement professionals who work for organisations in the biosecurity system.

It will be easier to create a movement if communicators from across the biosecurity system are singing from the same song sheet.

The BCN is made up of communicators from businesses, central and local government, Māori, supply chain, Primary Industries, Tourism, research organisations and NGOs, etc with the aim of integrating and amplifying communication on biosecurity. Check out the [Thisisus.nz](https://thisisus.nz) website for more information.

Aligning and collaborating with others

Support and contribute to biosecurity activities in your community.

Think about developing your own programme to meet the particular needs of your community. This may be as simple as displaying posters in the workplace, identifying things you do that are related to biosecurity, or incorporating biosecurity into workplace conversations at all levels of the organisation.

You may be able to form a partnership or collaborate with agencies, industry groups, local organisations including Māori and community groups.

The aim is to create a collective effort where every business manages its own biosecurity risk and where organisations collaborate and pool resources to further common objectives and goals.

Collaborate in knowledge

Unlock the potential of knowledge for better biosecurity outcomes

Biosecurity 2025 Goals

Science; Current tools;
New tools

Collaboration;
Māori participation

Accessibility; Effective use;
Preparing for the future

Leadership; Trust &
confidence; Governance

Skills; Assets

Participants in the biosecurity system will be the most effective when they have the knowledge they need to do their job. Knowledge is very broad and varied and is not just the outputs of research and science, but includes the information, skills and capability held by individuals, organisations, communities and different cultural knowledge systems.

Improving how we collaborate to build, share and use knowledge is essential to having a resilient system that can manage existing and emerging issues. We will be more successful when we pool our knowledge and skills. By unlocking the benefits of knowledge we will create connections, invest in building and maintaining trust and confidence, and make knowledge available to all. This requires action now to:

Realise the value of Te Ao Māori

Māori world view informs biosecurity knowledge, underpins decision-making.

- A catalyst project to build Māori participation and the role of kaitiaki (see Build resilience) to:
 - Establish a hapū based biosecurity programme to identify and develop biosecurity best practise
 - Develop a framework and guidance for iwi/hapū engagement with national and international collections.

Collaborate in delivering science & technology priorities

Priorities in science, research and technology are funded with system participants working together to address them.

- Develop a 'Statement of Current Biosecurity Research, Science and Technology Priorities'
- Establish science, research and technology collaboration mechanisms including:
 - Bionet as a platform for making connections and sharing information
 - Establish multi- and trans-disciplinary groups to tackle issues.
- CEBRA research project to establish tools to support collaborative management of biosecurity risks to Australasian region.

Build & maintain confidence

Biosecurity solutions are supported by local communities and iwi because they have been involved in their development.

- Commission The Royal Society of New Zealand to report on sustaining trust in science, technology and tool development for biosecurity
- Develop social, cultural and technical protocols for data collection and reuse.

Improve access to knowledge

There is strong alignment between regional biosecurity needs and the tools and support offered by biosecurity experts.

- A catalyst project to identify how to deliver and/or facilitate training, outreach and advice to community, iwi, and regional organisations
- Digitally catalogue, register and data-base current collections
- Implement with Australian colleagues a programme for aircraft disinsection and establishing a DNA reference library for exotic mosquitoes.

Catalyst Projects

A number of projects have been identified that will make it easier for all of us to *Collaborate in knowledge* to deliver the value of that knowledge.

Project description	Value to system participants
<p>Develop a Statement of Current Biosecurity Research, Science and Technology Priorities to tap into a range of stakeholders across the system including Māori, animal, plant and human health sectors, primary production, marine and fresh water, and tourism to provide input into the science plan.</p> <p>Ensuring science priorities are based on need not want.</p>	<p>The Statement will give investors and researchers clarity and understanding of the needs and priorities of a wide range of biosecurity system participants.</p> <p>The creation of an enduring mechanism to review and update the priorities so they remain relevant.</p> <p>Over time it will capture whole of system needs.</p>
<p>Assess and establish the best mechanism for delivering and/or facilitating biosecurity training, outreach and advice to community, iwi, and regional organisations.</p> <p>Scoping then implementing a project to help people and organisations involved in biosecurity initiatives to identify and access/link to the resources they need.</p> <p>Facilitate the delivery of training and other support to community, iwi and regional organisations to draw on and build the National Biosecurity Capability Network (NBCN) and enable the NBCN to tap into a wider circle of capability.</p> <p>A critical function will be feedback on science and tool requirements of community, iwi and regional organisations.</p> <p>A key outcome a direct link between critical users of biosecurity science and tools and the science providers.</p>	<p>The Biosecurity Community Capacity Development Project will let people and organisations on the ground doing the work have the knowledge, training and tools they need to be effective.</p> <p>It will be the human face of – Bionet; building and extending the knowledge, resources and services Bionet provides.</p> <p>The focus on facilitating and building knowledge connections and relationships will ensure longevity and resilience in capacity building. This goes beyond the traditional route of individual grant applications for specific interventions, resources, and/or training delivery.</p>

How can you collaborate in knowledge?

Sharing and collaborating in the development and use of knowledge starts with you, your whanau, community and employer.

Laying the groundwork

Identify what you can contribute to; making your knowledge available.

We all produce huge quantities of reporting, intelligence, analysis, and other information about the system. Everyone who can use this information should be able to access it.

This knowledge will help everyone support biosecurity outcomes, but often it is kept in silos with no easy access. Not all knowledge can be shared but we need to share what we can. Review your knowledge sharing processes to make more of your information available to others.

Building networks

Networks of biosecurity organisations, businesses, community organisations, iwi and hapū.

One of our greatest assets is the relationships between participants in the biosecurity system. Engagement, cross-seeding of ideas, and intersecting perspectives will help build trust and generate collaboration. Building communities at a local, national and international level will increase knowledge transfer, collaboration, and situational awareness.

Start small – identify someone in your team, organisation, board, whanau, class, school, or community group to champion the development of relationships and sharing of knowledge.

Aligning and collaborating with others

Identify opportunities to work with others to deliver better biosecurity outcomes.

Sometimes the best solutions come from unexpected sources. Identify how to work and collaborate with other disciplines, local communities, and hapū to deliver better knowledge and system outcomes.

A project is underway to identifying common priorities for biosecurity science, research and technology with mātauranga Māori at its heart. Key to the success is the creation of a process to keep these up to date and relevant. You can help by identifying needs and priorities and looking for opportunities to align your knowledge and actions with others.

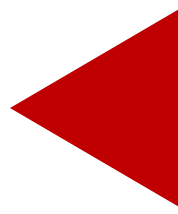
Connected programmes and initiatives

Connection and alignment with some other relevant external programmes and initiatives.

There are a number of external programmes and initiatives that will help the *Collaborate in knowledge* programme of work including:

- Centre of Excellence for Biosecurity Risk Analysis (CEBRA)
- Decadal Plan for Taxonomy and Biosystematics in Australia and New Zealand
- Government Industry Agreement for Preparedness and Response programme (GIA)
- Industry extension programmes
- National Science Challenges programmes
- Ministry for Business, Innovation and Employment review of Scientific Collections and Databases.

Build resilience



Skills; Assets
Science; Current tools; New tools
Collaboration; Māori participation
Accessibility; Effective use; Preparing for the future
Leadership; Trust & confidence; Governance

Work together to develop people, assets and networks underpinned by a fit-for-purpose regulatory

To have a resilient and agile biosecurity system, the right people, need to be in the right places, doing the right things, equipped with the right skills, tools, resources. We need the right policies, and legal and regulatory frameworks, to support what we need to do.

Our world has changed and there are new pressures. We now need to make our biosecurity system fit for purpose by working together to:

- Safeguard our natural and productive environmental systems to withstand these changing pressures
- Build our cultural relationships
- Restore and maintain our capability and capacity
- Enhance the interconnectedness between participants.

This requires immediate action to invest in:

A healthy marine environment

Everyone can manage their marine biosecurity risk.

- A catalyst project to invest in marine biosecurity.

Enhanced Māori participation

Kaitiaki support biosecurity resilience through their skills, expertise and capabilities.

- A catalyst project to build Māori participation and the role of kaitiaki.
- Projects to:
 - Enable Māori to support biosecurity
 - Build trust and social licence.

Addressing gaps in our biosecurity assets

Gaps in biosecurity system are identified and addressed early.

- A catalyst project to develop a biosecurity system map
- Projects to:
 - Improve our regulatory and non-regulatory frameworks
 - Develop critical infrastructure and tools
 - Build and protect our taxonomic collections and capability.

Future generations

We build now for tomorrow.

- Projects to:
 - Develop biosecurity champions.
 - Embed biosecurity in the boardroom.
 - Support biosecurity education and training.

Building our networks and relationships

Robust biosecurity networks exist at a local, national and international level.

- Identify opportunities to build networks, and drive conversations in new and existing networks, including projects to:
 - Build on Bionet and citizen science
 - Share access to people and assets
 - Grow networks of data users/providers
 - Build international collaboration.

Catalyst Projects

Catalyst projects to make it easier for us to *develop people, infrastructure and networks*, and deliver value faster.

Project description	Value to system participants
<p>Marine biosecurity system</p> <p>Protecting New Zealand’s marine environment by keeping pests and diseases out of our waters, and stopping the spread around the country. Catalyst activities include:</p> <ul style="list-style-type: none"> • A marine biosecurity vision to set the direction and aspiration across the marine biosecurity system • A national approach to managing marine pathways • Improving capability and capacity by building: <ul style="list-style-type: none"> ▪ resources that can move to areas of need ▪ ways to access infrastructure and kit to manage risk. • Use the smart data framework to support responses, starting with aquaculture. 	<p>System participants have the capability, resources, infrastructure, equipment, facilities, knowledge and information they need to manage New Zealand’s marine biosecurity effectively.</p>
<p>Kaitiakitanga in biosecurity</p> <p>It is important we invest in building whanau, hapū and iwi capability and capacity for active contribution and participation. This will include:</p> <ul style="list-style-type: none"> • Establishing biosecurity system stewardship arrangements which incorporate kaitiaki • Enabling Māori to have their own regional pātaka • Addressing barriers to Māori participation in biosecurity, management and information networks • Developing closer iwi/hapū relationships with national biological collections. 	<p>Mana whenua will be exercising kaitiakitanga and enabling tikanga, mātauranga and kauapapa to enhance biosecurity system resilience.</p>

How can you contribute to developing people, assets and networks?

Taking a collaborative approach to investing in people, infrastructure and networks will create better system capability and capacity. Working collaboratively towards what the system needs (rather than the needs of a single organisation) will build a resilient system.

The catalyst projects will make it easier for participants to understand and contribute to biosecurity resilience. Investment in system resilience is a commitment to maximising the value of your people, assets, networks and strategies.

Laying the groundwork

Understand and raise awareness of capability gaps for long term biosecurity resilience in your area.

Understanding what the strategic gaps are so we can build a stronger system and feed into the gap analyses and monitoring undertaken by the biosecurity stewardship council.

What are your most important biosecurity capabilities and assets? Do you have all the skills and assets you need to successfully meet your biosecurity needs?

A regulatory framework that allows you to contribute to great biosecurity outcomes.

Identify how the regulatory framework can be improved to support biosecurity risk management in your area and engage in the reviews of the Biosecurity Act and Import Health Standards framework.

Building networks

Develop networks of biosecurity risk management organisations and providers of key capabilities.

Leveraging networks to collaborate and align activities for efficient investment in system capability and capacity.

Organisations managing biosecurity risk in central and local government, iwi, NGOs, community groups as well as internationally are key investors in system resilience. Many groups have strong and productive networks (e.g., the central/local government BioManagers Group). We must foster existing networks and develop new ones.

Can you or your organisation help build a biosecurity network – locally, nationally, and internationally?

Aligning and collaborating with others

Identify opportunities to work with others by sharing and coordinating skills and assets.

New Zealand has a culture of working together. We can increase the value of our biosecurity system investments through collaborative investment, joined up strategies, and sharing.

A system approach to investment means we consider all parts of the system. It maximises the value by finding smart ways to share and coordinate. The 'marine biosecurity system' catalyst project is an example of a strategic and networked approach to investment in critical assets.

What critical skills and assets could be shared with others? What would it take to make that happen?

Connected programmes

Connect and align with some other relevant external programmes and initiatives.

There are a number of external programmes and initiatives that will help the *Build resilience* programme of work including:

- Implementation of the Decadal Plan for Taxonomy and Biosystematics in Australia and New Zealand
- Establishment of the Climate Change Commission
- Implementation of sector environmental strategies and plans
- Various regional and central council environmental initiatives, and
- 2018/19 reviews of National Certificate in Educational Achievement and New Zealand Curriculum.

Enable smart data

Connect data to protect New Zealand

Biosecurity 2025 Goals

Accessibility; Effective use;
Preparing for the future

Collaboration;
Māori participation;
Awareness & knowledge

Science

Leadership; Trust & confidence;
Governance

Assets

Data sharing and analysis will improve how we predict, respond to and manage biosecurity risks – it will multiply the effectiveness of our risk analysts, scientists and those working at the border and in responses – because they have the knowledge to make the best decisions. It will also deliver key processes and platforms on which collaboration can happen.

To do this the biosecurity system needs rich data that can be easily accessed and integrated. This includes data for biosecurity risk analytics, the creation of practical and easy-to-use products for animal tracing and citizen science, and new technologies and scientific research. This programme of work attempts to unlock the potential of biosecurity data.

This means that we should think about what data we hold that we are prepared to share. We should also develop protocols for data sharing and align our data standards to enable others to find, access and use data for biosecurity.

Key components of enabling smart data and the capabilities required to deliver it are:

Improved research & analytics

Data is findable, accessible, sharable and reusable.

- A catalyst project to establish an information sharing environment, national organism register, and common data standards
- Actions to grow networks of biosecurity data users/providers
- Establish a biosecurity data commons: a set of principles, governance strategies, and utilities that enable people to store, manipulate and share data.

Free-flowing information

Data and information is shared and open wherever possible.

- A call for everyone to improve accessibility of data and make it available for sharing
- Review your current information sharing processes
- Actions to develop data and information assets.

Biosecurity intelligence

We analyse global biosecurity threats and manage them before they arrive.

- A catalyst project to develop a biosecurity intelligence function focused on pre-border threat analysis
- A call for everyone to develop and share networks with international counterparts
- Actions to support international collaboration.

Catalyst Projects

We've identified some high priority projects that could make it easier for all of us to support the delivery of this programme of work, and quickly deliver value to the biosecurity system.

Project description	Value to system participants
<p>A biosecurity information sharing environment and common data framework (including the New Zealand Organisms Register).</p> <p>Biosecurity data from many contributing sources will be available in a single online environment including surveillance programmes, species surveys, citizen science reporting, and organism collections.</p> <p>This will be a federated database which enables data to be downloaded, including tools for analysis, and will require all data to conform to the biosecurity data commons framework (i.e., through common data standards and protocols).</p> <p>Strengthening and securing the future of the New Zealand Organisms Register (NZOR) will be critical groundwork for this project.</p>	<p>Scientists and researchers will have consistent, traceable, and up-to-date information on species present in New Zealand as well as those most likely to arrive.</p> <p>People and organisations in the biosecurity system will have access to a growing pool of interoperable and useful data for risk analysis, intelligence, species distribution, etc.</p> <p>It will enable, for example, real-time up-to-date distribution maps for invasive species, from many data sources.</p> <p>The future of NZOR will be secured to ensure we are able to mobilise, integrate, and share authoritative taxonomic information critical to maintaining New Zealand's biosecurity decision support systems and processes.</p>
<p>Biosecurity system intelligence and information</p> <p>This catalyst project builds on the Ministry for Primary Industry's biosecurity intelligence function to allow and encourage wider system participants to contribute to and gain value from it.</p> <p>The project is about creating the pathways for connection, to allow movement of information and intelligence across the system. It will help businesses that understand patterns internationally to contribute that knowledge to other system participants.</p> <p>Data on the global movement of pests and diseases will be scanned from international media, academic articles and other sources to better understand biosecurity risk.</p> <p>Participants in the system will have access to, and ability to feed in to this system. This will be done in ways that enable the core regulatory purposes of the intelligence function to not be compromised.</p>	<p>Participants across the system will contribute to and have access to powerful data analytics to identify trends and patterns on global movement of pests and diseases.</p> <p>This will help New Zealand regulatory agencies and wider system participants target resources to risk and prepare for new threats.</p>

How you can enable smart data

The catalyst projects will make it cheaper and easier for participants to share and align their data. All participants in the system are encouraged to identify data they are willing to share, and make shareable when appropriate.

People who make their data findable, accessible and usable will benefit from:

- A stronger biosecurity system because the full potential of data is supporting biosecurity
- Integrating your data with others' data unlocks a huge amount of value for all parties. Sharing data can reduce duplication and inefficient investment.
- Applying good data standards and ensuring your data can be used by others is likely to make your own data analysis efforts easier in the long run.

Laying the groundwork

Review your data to find out what you can share and what you need.

Identify what data could be useful for others in the system, if you made it available. Do others hold data that could be useful to you?

The value of data is enhanced when as many skilled users as possible have access to it. Review the data you collect (and could collect) and identify data that could be useful to others. Consider your own data needs, and whether there may be data held by others that could support your biosecurity work.

Building networks

A critical part of this Plan is building networks – this can be as simple as getting the right people or organisations in a room together talking about the issues.

Networks of data owners and users.

Many participants in the biosecurity system own and use data. Data owners are best positioned to ensure their data is findable, accessible and reusable. A network between data owners and users in important areas of the biosecurity system will drive conversations about sharing and aligning data. In 2005 the owners and users of organism data established a vision for a shared catalogue of taxonomic names; this led to the establishment of the New Zealand Organisms Register – a critical part of New Zealand's biosecurity system infrastructure.

When exploring options for sharing and using data, mana whenua need to be part of that conversation, especially where tikanga issues or taonga species are involved. Include anyone who may be holding or providing the data, so tools and apps are designed to be practicable and useful (e.g., citizen scientists using apps, or farmers providing cattle tracking data).

Aligning and collaborating with others

Contribute to a biosecurity data commons.

A data commons is a process of sharing data and working to connect it through common standards and agreements. It provides a framework to support engagement, collaboration and discussion. You could use the biosecurity data commons framework to drive conversations with others in the biosecurity system.

The outcome could be that your and others' data becomes more findable, accessible and reusable.

Connected programmes and initiatives

Connection and alignment with some other relevant external programmes and initiatives.

There are a number of external programmes and initiatives that will complement and enhance the successful implementation of the Biosecurity 2025 *Enable smart data* programme of work, including

- New Zealand Data Commons (Bioheritage Science Challenge)

Critical Areas of Focus for New Zealand

At a system level, biosecurity drivers and outcomes change depending on the viewpoint, area of focus or the domain and they can interact and influence the system in a number of ways. Over the next 5-7 years, as the work programmes of the Implementation Plan get under way, there will be four areas of critical focus for New Zealand.

These four areas are crucial to pest and disease exclusion, eradication and management, so have been identified as needing special attention and input by all New Zealanders. They include:

Elevation of Te Ao Māori

A Māori worldview, including Māori beliefs and concepts, have been embedded in the work of the *Implementation Plan*. The goal of this focus area is to recognise the role of Māori as kaitiaki and the centrality of mātauranga Māori in New Zealand's biosecurity system.

Strengthen global biosecurity

The goal of this focus area is to strengthen global biosecurity by achieving closer working relationships with international partners and collaborating to develop a global risk management strategy. The more risk is managed before departure the better the biosecurity outcomes for everyone.

Respond to climate change

Climate change is altering how pests and diseases affect all areas of the biosecurity system. The goal therefore is to make sure our strategies and actions are adaptable and flexible across the system so we can effectively manage the changing risks and uncertainties that are driven by climate change.

Protect New Zealand's marine environment

The goal is to help New Zealanders and others understand the interconnectedness of the world's ocean environment and the importance of working together to manage marine-related pests and diseases. Caring for New Zealand's marine environment will be enhanced through new initiatives including developing a vision for marine biosecurity and determining how to manage marine pathways around New Zealand.

On the following pages their importance to the biosecurity system is described through:

- A 'roadmap' to the Implementation Plan
- Key objectives / outcomes sought
- Approaches relevant to achieving outcomes
- Planned actions.

Other critical focus areas have also been identified. They are listed below and activities that address them are integrated into the Plan. In future, similar 'analysis' could be prepared for them:

- Human health related aspects of biosecurity
- Youth participation and engagement
- Community participation, alignment and support
- Freshwater biosecurity
- Industry and business roles, responsibilities, leadership and participation.

CRITICAL AREAS OF FOCUS FOR NEW ZEALAND

There are four critical areas New Zealand needs to focus on over the next 5–7 years. The goal of this focus area is to recognise the role of Māori as kaitiaki and the centrality of mātauranga Māori in New Zealand's biosecurity system. A Māori world view, including Māori beliefs and concepts, has been embedded in the work of the **Implementation Plan**.

Elevation of Te Ao Māori

Māori as landowners with economic interests in primary production (agriculture, horticulture, forestry, fishing, and marine farming) and tourism, rely on robust biosecurity processes to safeguard their businesses.

At the same time, Māori bring a unique knowledge

and perspective (mātauranga Māori) to biosecurity in their role as kaitiaki (guardians) of New Zealand's taonga, and as partners with the Crown through Te Tiriti o Waitangi. The biosecurity system will be much stronger with Māori supporting, driving and benefiting from it.

Understanding of Te Ao Māori concepts about the protection, sustainability and management of the environment and taonga for present and future generations is essential for any organisation or individual engaged in biosecurity activities in New Zealand.



Kaupapa

Māori participation in system stewardship and leadership roles. The biosecurity system will benefit through Māori having formally acknowledged roles and responsibilities as kaitiaki. Barriers will be identified and addressed and Māori values and mātauranga will be realised when decisions are made.

Building Māori capability and capacity. Developing capability will enhance educational and vocational pathways to promote biosecurity careers amongst Māori. The system will draw knowledge from a variety of sources including mātauranga Māori me ana tikanga (the knowledge systems, values and practices through which Māori engage and interact with their environment).

The environment and taonga species are actively protected via robust relationships. Māori values and mātauranga are explicitly considered in designing and implementing responses; include building systems to protect mātauranga and foster high trust relationships with national biological collections. More science resources will be put into understanding native taonga species and the unique and specific roles they play in biosecurity.

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BIOSECURITY 2025

Current projects

- **Hapū Biosecurity Kaitiakitanga Grants Programme.**
- **Creating kaitiakitanga as an environmental services enterprise.**
Organisations can contract kaitiaki expertise.
- **Biosecurity Communication Network**
– Māori communicators participate and contribute.
- **Biosecurity Award nominations** – celebrating Māori biosecurity champions.
- **Sharing data when you can** – incorporate, protect and utilise the value in mātauranga Māori.
- **Contribute to the data commons** – establish common data sharing standards that can help build relationships.

Tauranga Moana programme increasing iwi/hapū collaboration with councils, government agencies and industry.

Building biosecurity surveillance and response management in iwi through Tauranga Moana.

Regional council partnership with mana whenua around natural resources.

Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008.



What we can do

- Build Māori capability by working with tertiary institutions to create pathways for young Māori into biosecurity careers.
- Identify how to support mātauranga Māori and Kaupapa Māori responsiveness in the biosecurity science plan.
- Identify and address the barriers to Māori participating in biosecurity management, at local, regional, national and international levels.
- Review readiness/response and pest management in the system and establish formal roles and responsibilities for Māori.
- Māori have a formal participative role in the stewardship and leadership of the system.
- Ensure Māori engagement is embedded in official biosecurity policy frameworks.
- Tikanga and Treaty programmes and the concept of kaitiakitanga for non-Māori are implemented.

Te Ao Māori and the Implementation Plan



By establishing system stewardship arrangements, providing leadership to drive delivery of Biosecurity 2025, and monitoring and reporting on system health. Māori bring a unique knowledge and perspective to biosecurity in their role as kaitiaki (guardians) of New Zealand's taonga, and as partners with the Crown through Te Tiriti o Waitangi. In these roles, Māori can support, drive, and benefit from the implementation of this Plan.



By proactive biosecurity behaviours and support collaboration across the system. It is recognised Māori have strong values for the moana, whenua and taiao (ocean, land and environment). It is important these connections are cultivated and promoted. Raising awareness of the importance of biosecurity and promoting Māori connection to the ocean, land and environment will support a resilient system.



By biosecurity organisations sharing knowledge, and working together in science, research and technology. Supporting and promoting existing mātauranga and new knowledge and protect mātauranga against exploitation.



With a systems approach to investment in biosecurity skills and strategic assets, including regulatory frameworks and networks. The skills, expertise and capabilities of Māori and mana whenua will empower an enduring biosecurity system. Kaitiakitanga needs to be made central by improving connections between Māori, iwi, hapū and non-Māori system participants.



By establishing ways to share data, to unleash its value for analytics, science, research and intelligence. Māori collections are important for iwi and hapū and the protection of these collections are paramount. Trust will allow Māori to share their data so its value is recognised and protected and New Zealand's unique biodiversity is protected for our future.

It takes all of us to protect what we've got

IT'S TIME TO GET STARTED

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Read about Biosecurity 2025 online www.thisisus.nz

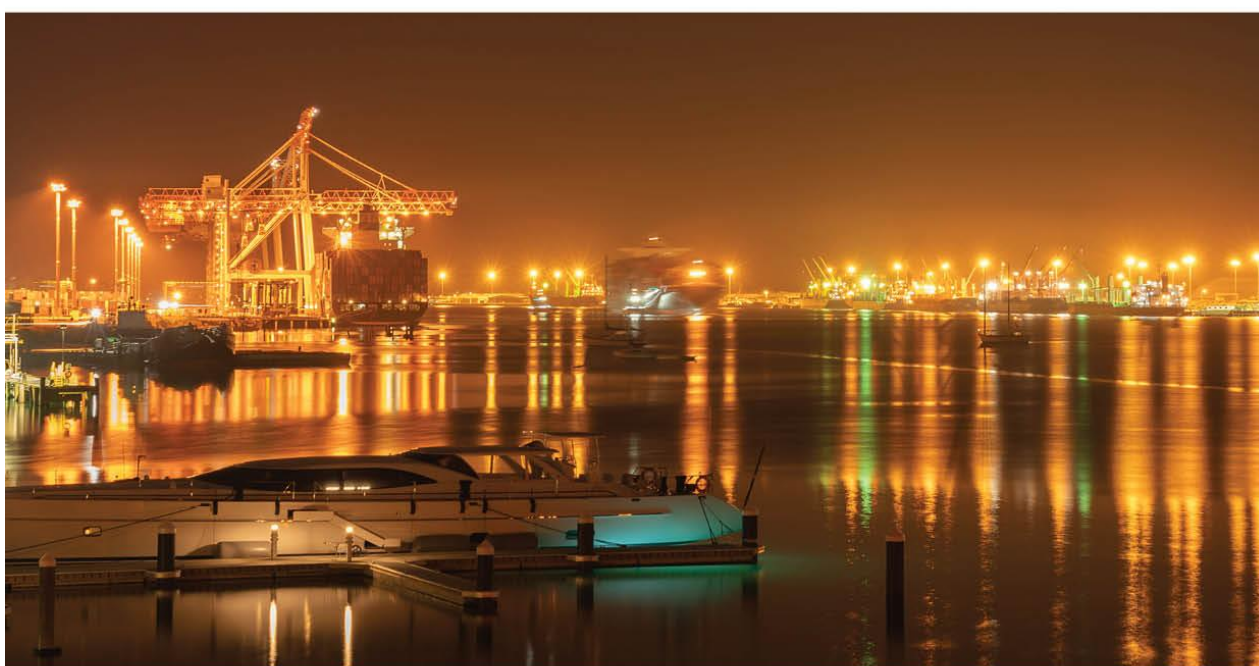
CRITICAL AREAS OF FOCUS FOR NEW ZEALAND

There are four critical areas New Zealand needs to focus on over the next 5–7 years. The goal of this focus area is to recognise the international dimension of our biosecurity system. Find out more in the **Implementation Plan**.

Strengthening global biosecurity

New Zealand is part of the global community – international trade and travel affects biosecurity risks in New Zealand, as well as risks elsewhere in the world.

We need to manage biosecurity risks early in the supply chain, including offshore. We also need to demonstrate to our international partners that we take our responsibilities seriously, so that we do not spread pests to other countries.



Managing biosecurity risk at an international level

- Show leadership, promote good practice and play our part internationally – in managing risk to us and other countries.
- Promote good practice for managing biofouling at the International Maritime Organisation.
- Use a risk-based approach based on up-to-date science and good evidence.
- Work with key stakeholders, including ports and tourism operators, to improve the awareness of biosecurity risk from other countries.
- Importers and exporters assessing and taking responsibility for any biosecurity risks along supply chains as part of “business as usual”.
- Manage biosecurity risks early – before travelling or making an online purchase.
- Working with and sharing research internationally, including Australia, Canada, US and the Pacific.
- Participating in or leading work on international standard setting.

KO TĀTŌU THIS IS US

BIOSECURITY 2025

Global connections

Changing trade patterns and e-commerce

As the volumes of goods and people continue to rise, so too does the complexity of global supply chains.

Technology and data sharing will allow greater transparency across those supply chains, allowing us to manage risks better.

Protecting the marine environment

The marine environment connects us to the rest of the world.

Protecting our marine environment means playing our part in international forums. We take a regional approach to protecting our corner of the world by working with Australia and the Pacific Islands.

Climate change adaptation

Climate change is a global issue and New Zealand's biosecurity risks will change, as pests and diseases move.

Understanding the changing risks and threats will allow us to anticipate future problems and ensure international settings are right.

Elevation of Te Ao Māori

Māori are active internationally and connect with other indigenous peoples.

This increases the understanding and opportunities to contribute to better biosecurity outcomes here and elsewhere.



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CRITICAL AREAS OF FOCUS FOR NEW ZEALAND

There are four critical areas New Zealand needs to focus on over the next 5–7 years. Climate change is altering how pests and diseases affect all areas of the biosecurity system. We need to climate-proof our system. Find out more in the **Implementation Plan**.

Respond to climate change

Climate change will affect all areas of the biosecurity system.

The goal is to make sure our strategies and actions are adaptable and flexible across the system so we can effectively manage the changing risks and uncertainties driven by climate change.

Elements of climate change: average temperatures will increase; rainfall patterns and sea levels will

change; floods, droughts and storms will increase in frequency and severity.

For New Zealand a warmer world means:

- Different pests and diseases will establish themselves.
- Existing pests will change distribution patterns and behave differently, affecting biocontrols, and sleeper pests will become active.

- New Zealand's plants and animals may become pests elsewhere.

Biodiversity and production systems will face different risks, as pests move into new areas, and will need different management approaches.

Māori as kaitiaki are dependent on land and marine economies and will face particular climate change challenges.



Climate-proofing our biosecurity system

- Understand the impact it will have on the biosecurity system, pests, diseases and risk management.
- Increase prevention strategies, including ensuring surveillance and monitoring systems are sensitive to expected changes.
- Include climate change adaptation in decision-making and long-term future planning for pests and diseases.
- Prioritise actions in the most vulnerable areas, including freshwater and marine ecosystems.
- Work with other countries to understand the changing risks of pests and diseases worldwide.

Suggested projects

- Ensure climate change is a priority in the long-term management of pests and diseases.
- Climate change material introduced into training and advice for community, iwi and regional organisations.
- Climate change data and information-sharing prioritised for long-term planning for pest management.

KO TĀTŌU THIS IS US

BIOSECURITY 2025

CLIMATE CHANGE

What we can do



Elevation of Te Ao Māori

Building capability among Māori will contribute to good biosecurity actions combatting the impacts climate change will have on our cultural connections to the environment as kaitiaki, and economically.

Protecting the marine environment

The marine environment connects us all to each other and to the rest of the world. Addressing climate change effects on marine biosecurity risk will strengthen system performance in the marine environment.

Strengthening global biosecurity

Climate change is a global issue and New Zealand will feel the impacts from overseas. Understanding the changing risks and threats will allow us to plan for tomorrow, today.

Climate change adaptation

Include climate change in biosecurity strategies and plans – nationally, regionally and locally.

Respond to Climate Change and the Implementation Plan



Kaitiakitanga will be important in anticipating and managing the impacts of climate change on the biosecurity system. Exercising kaitiakitanga will depend on establishing system stewardship arrangements, providing leadership to drive delivery of Biosecurity 2025, and monitoring and reporting on system health.



Communities need to be aware how climate change will affect and change their backyards, the risks and what they can do to help mitigate these. To create a movement we need to encourage proactive biosecurity behaviours and support collaboration across the system. Awareness campaigns should focus on climate change and its impact on biosecurity.



Biosecurity organisations share knowledge, and work together in science, research and technology. Climate change data is prioritised so we can understand impacts on our biosecurity system. Connecting climate change officials through **Bionet** to share knowledge and craft best biosecurity practice.



A system approach to investment in biosecurity skills and strategic assets, including regulatory frameworks and networks, need to be future-focused including climate change. Biosecurity issues and risks from climate change need to be understood and recognised so the system becomes responsive to expected changes. Regional and national pest management strategies and plans should incorporate the impacts of climate change.



Sharing data and unleashing its value through analytics, in science, research and intelligence, will improve decision-making on changing biosecurity and climate risks.

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CRITICAL AREAS OF FOCUS FOR NEW ZEALAND

There are four critical areas New Zealand needs to focus on over the next 5–7 years. The goal is to help New Zealanders and others understand the importance of working together to manage marine-related pests and diseases. Find out more in the **Implementation Plan**.

Protect New Zealand's marine environment

Our marine environment extends from the seashore to the outer limits of New Zealand's exclusive economic zone. We have one of the longest coastlines, one of the largest marine areas and one of the most diverse marine environments in the world.

Most of us live close to the coast – one-third of us

fish, dive or gather shellfish. The marine and coastal area – takutai moana – is significant to the Māori way of life and economy – customary and commercial.

Good biosecurity is vital to caring for our marine environment and supporting our well-being. To ensure we can keep enjoying the coast, the water and the

life it supports, and continue to make a living from fishing, aquaculture and tourism, we need to:

- Keep pests and diseases out of New Zealand.
- Stop pests from spreading around the country.



Chris Williams

Why this is important

As an island nation, our marine environment defines who we are – our actions today shape the marine environment that future generations inherit.

The marine environment connects us all – to each other and the rest of the world. This means we need a strong marine biosecurity system to make our marine environment resilient to pests, diseases and a changing climate.

We need to invest in the marine biosecurity system to make sure we have the right people and the right information to make good decisions today and into the future.

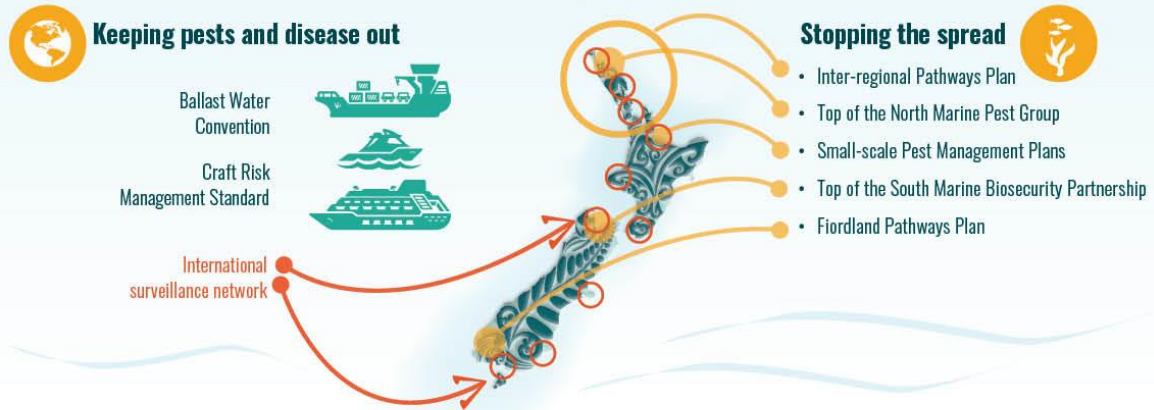
What we can do

- Work across systems and areas to improve marine biosecurity – internationally, nationally, regionally and locally.
- Tell the marine biosecurity story to highlight its importance.
- Motivate people to act – ourselves and our visitors.
- Harness science and technology to inform action.
- Ensure the right information is readily available to everyone.
- Get the stewardship settings right to support leadership across the system.
- Develop a skilled marine biosecurity workforce.
- Make sure the right infrastructure is in place so people can do the right thing.

KO TĀTĀOU THIS IS US

BIOSECURITY 2025

Strengthen the marine biosecurity system by:



What	Push biosecurity system out as far as possible	Work with Australia and the Pacific	Work with industry	Use science and risk assessment	Resilient NZ marine system	Regional and local pests and pathways	Industry efforts	Sustain practice communities
How	IMO Biofouling Guidance Ballast Water Convention	'GloFouling' programme	Shipping, marina and port companies Importers and exporters	In-water cleaning research, NZ Organisms Register	Raise the profile and develop a shared vision for marine biosecurity	Biosecurity partners Pest plans Pathways management	GIA Biosecurity management plans	Marine Porthole Antifouling and In-water Cleaning Guidelines

Protect New Zealand's marine environment and the Implementation Plan



By providing leadership to drive delivery of Biosecurity 2025. Monitoring and reporting on system health are prerequisites to understanding and prioritising where action is required.



Ko Tātou This Is Us is building a team of 4.7 million to raise awareness and get better biosecurity behaviours, on land and in the marine environment. Collaboration – Māori, central and local government, industry and the community – is the foundation for better biosecurity outcomes.



Sharing knowledge (research, science and experience) on the marine environment and its associated pests and diseases is essential to managing existing and emerging risks. The statement of current biosecurity research, science and technology priorities will specifically include marine biosecurity needs.



Our world is changing and the marine environment is complex. We need to build resilience, as we cannot foresee and respond to all future challenges. Marine priorities are key to future investments in biosecurity skills and strategic assets, including regulatory frameworks and networks.



Establishing ways to share data, unleash its value for analytics, science, research and intelligence will improve how we predict, respond and manage marine biosecurity risks.

It takes all of us to protect what we've got

IT'S TIME TO GET STARTED

Get involved and ask questions by emailing biosecurity2025@mpi.govt.nz

Read about Biosecurity 2025 online www.thisisus.nz

Appendices

Appendix 1. The biosecurity system – a network of networks

The biosecurity risk management system involves many participants. The ‘biosecurity system’ can be defined as – the interconnected activities, processes and responsibilities which deliver biosecurity.

The system spans activities offshore, at the border, and within New Zealand, which together contribute to the protection of four inter-linked values, as illustrated in the diagram below. The Plan includes activities that address risk management activities at all of these levels.



There are a wide range of participants across the system, including industry organisations, signatories to the Government Industry Agreement for Readiness and Response, Māori/iwi groups, central government agencies, regional councils, philanthropic organisations, universities, Crown research institutes, and others.

These organisations and agencies have different legal or regulatory frameworks within which they operate, and their responsibilities and obligations vary widely. Each has their own lines of accountability to different constituencies and authorities, such as to shareholders, ratepayers, boards of directors, members, or Ministers.

Each participant may have multiple biosecurity-related roles or obligations. For example, MPI has statutory decision-making obligations as well as operational delivery responsibilities related to biosecurity.

These participants work at multiple levels, across multiple network nodes – a network of networks. Within each of these networks may be tens, hundreds, and in some cases, thousands of constituents.

Appendix 2. System stewardship characteristics and responsibilities

It is proposed a biosecurity stewardship council be established which incorporates kaitiaki, and reflects the breadth of system participants. Its core characteristics/responsibilities are set out below, and will support delivery of the core system-wide functions.

Goals from the Biosecurity 2025 Direction Statement	System stewardship characteristics/responsibilities
<p>System oversight Biosecurity system stewardship provides whole of system oversight, including monitoring progress of implementing Biosecurity 2025.</p>	<p>System stewardship arrangements:</p> <ol style="list-style-type: none"> a. Take a long-term strategic view and provide whole-of-system oversight b. Work in partnership with the Minister for Biosecurity, Biosecurity New Zealand, Māori, and other stakeholders to convene participants at national, regional and local levels c. Add value, and result in ongoing demonstrable improvements to New Zealand’s biosecurity system d. Are sufficiently well resourced to – <ul style="list-style-type: none"> • Monitor and report on system performance, gaps and opportunities, progress implementing Biosecurity 2025 • Update system strategy as necessary • Provide system leadership e. Have sufficient support across the system to – <ul style="list-style-type: none"> • Be recognised, accepted, and enduring • Influence setting of investment priorities • Encourage continuous system improvement. f. Have capability to – <ul style="list-style-type: none"> • Enable, support, and reveal leadership at all levels • Encourage innovation, entrepreneurship and agility • Articulate and deliver clear messages.
<p>Inclusive Biosecurity system stewardship reflects the range of activities and participants in the biosecurity system.</p>	<p>System stewardship arrangements are seen by participants as:</p> <ol style="list-style-type: none"> g. Being broadly accountable – to government and ministers, to system participants, and the public, for delivery of the strategic vision h. Embracing viewpoints, values and roles of everyone in the system i. Being accessible and connected.
<p>Visible System stewardship arrangements provide participants with clarity of how stewardship is being exercised, and who to approach to contribute to that process.</p>	<p>System stewardship arrangements:</p> <ol style="list-style-type: none"> j. Foster a culture of openness, transparency, shared responsibility and trust k. Support cohesiveness and alignment between parts of the system l. Provide advocacy for the system m. Encourage the results of decision-making and the rationale for decisions to be made public n. Enable participants to contribute to strategic system priority setting.

Core system-wide functions

Six core system-wide functions to strengthen the biosecurity system have been identified. Their delivery will be supported by the biosecurity stewardship council:

Future-focused strategic oversight

Strategic oversight is focused on future threats and opportunities to the biosecurity system. Strategic implications of new technologies and innovations are reflected in plans and activities. Mitigation of implications from long term potential risks (e.g., biosecurity risks related to climate change) are also reflected in plans and activities across the system.

Monitoring system performance

System performance is monitored to maintain awareness of how well the system is functioning, and how its parts interact with each other. Such evidence gathering supports prioritisation of funding and effort across the system. Decision-makers are able to respond with agility to changed circumstances. International linkages and monitoring of emerging risks enables implications to be addressed, in many cases before threats get to New Zealand. Decisions regarding deployment of resources are able to be made rapidly during time-critical circumstances because of greater certainty about system performance. The system can learn and improve as it moves between crises response and business as usual.

Identifying gaps

Gaps across the system must be able to be identified, including regarding roles and responsibilities or areas with insufficient resourcing. This means recommendations are able to be proposed on how to address identified gaps, and how to respond to issues raised by stakeholders. Risks associated with the fragmentation of the biosecurity system are able to be mitigated.

Reporting on performance

Public reporting enables greater understanding of how well the system is performing, including how well Biosecurity 2025 goals and outcomes are being met, and the extent to which people's values and interests are being taken into account in decision-making. Improved openness and transparency supports public trust and confidence in the system. It also fosters increased participation.

Building awareness and understanding

Awareness and understanding are supported by advocacy for the system as a whole, articulating system goals, and calling on all New Zealanders to play their part. This includes Māori participation in building understanding of the importance of biosecurity. It also includes driving stronger public discourse on biosecurity-related issues.

Facilitating engagement

Engagement and participation is supported by signalling its critical importance to system resilience. It is facilitated through encouraging communication, networking and sharing of best practice.

Appendix 3. Shared responsibility model/approach for the Implementation Plan

The proposed stewardship council will adopt a 'shared responsibility' model/approach, to encourage and facilitate on-going and enhanced collaboration with participants to deliver Biosecurity 2025.

Key elements of this approach to convene participants at national, regional and local levels are:

- **Framework** – The Biosecurity 2025 Direction Statement sets out the goals and outcomes we are seeking to achieve for the biosecurity system. This Plan, with its programmes of work, provide a framework for delivering those goals and outcomes, focused particularly on what needs to be done over the next two-to-three years. It will guide prioritisation and monitoring over time.
- **Catalyst projects** – The catalyst projects are foundational or transformational activities intended to kick start the programmes of work, support collaboration across the biosecurity system, and make it cheaper and easier for everyone to contribute to the achievement of the Biosecurity 2025 goals and outcomes.
- **Prioritisation** – Stakeholders will periodically review and collectively confirm overall priority activities within the programmes of work. This prioritisation will, in turn, guide further stakeholder engagement with (and resourcing for) such actions. The Plan, as a living document, will be updated to reflect this (re)prioritisation.
- **Connected action** – Stakeholders may wish/need to collaborate actively to ensure effective responses to agreed priorities. At the very least, such collaboration may involve aligning activity across one or more stakeholders, but it could extend to active integration of capability/resources across multiple stakeholders.
- **Review and feedback** – Stakeholders will need timely feedback on progress being made on the programmes of work, and how they relate to the system goals and outcomes, so they can assess the effectiveness of their own contributions and consider objectively the need/appropriateness to vary any such contributions. Transparency in this review/feedback process will be vital, particularly with overlapping/integrated interests of various stakeholders.

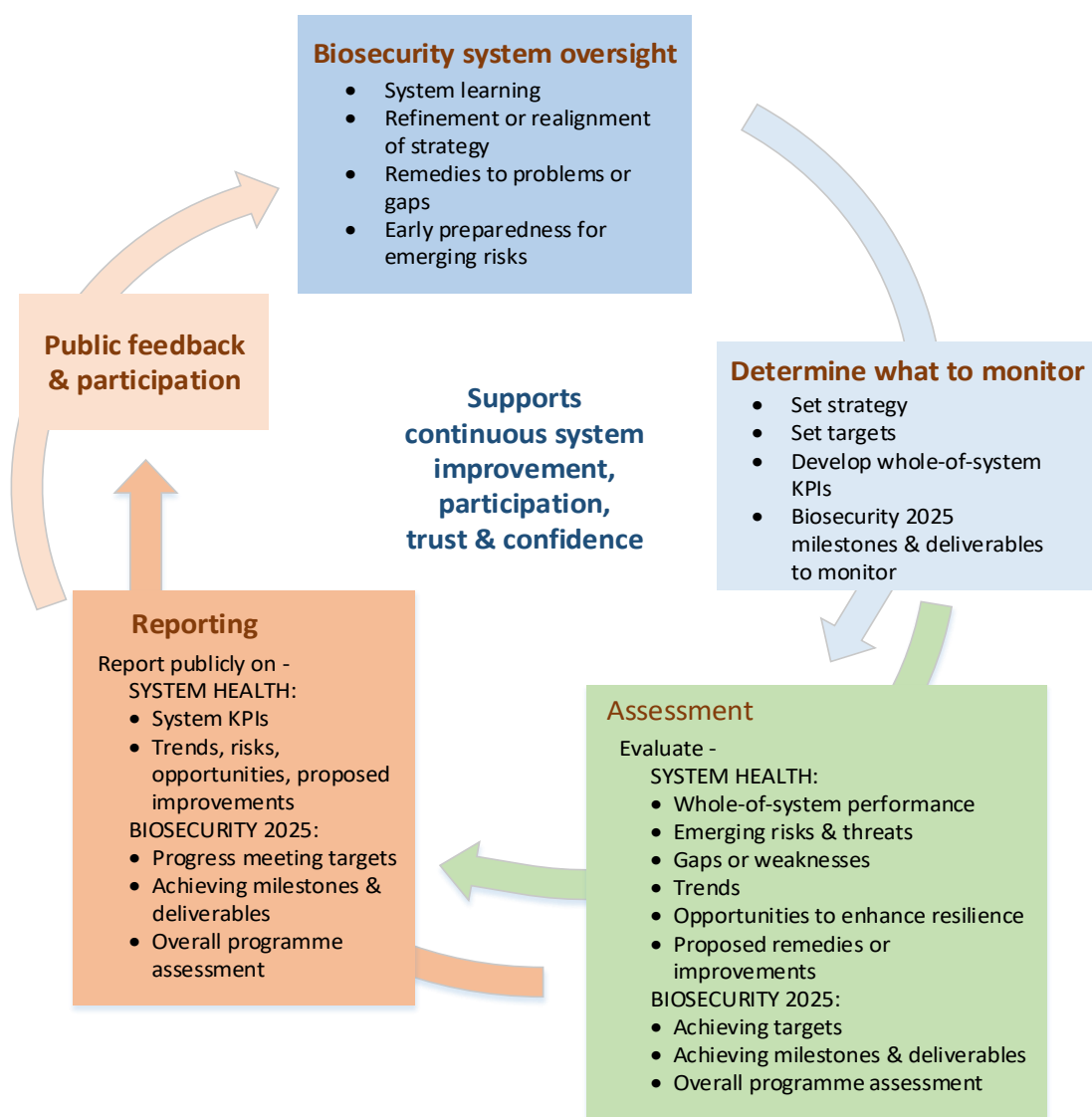
Appendix 4. Performance monitoring

This Plan sets out two inter-related aspects of monitoring that will be undertaken as part of the Biosecurity 2025 programme implementation:

- Monitoring biosecurity system health, and
- Monitoring progress implementing Biosecurity 2025 – including key actions, programmes and targets.

The diagram below illustrates how together they will contribute to assessment and strategic analysis, and how they will support transparent and accountable system stewardship.

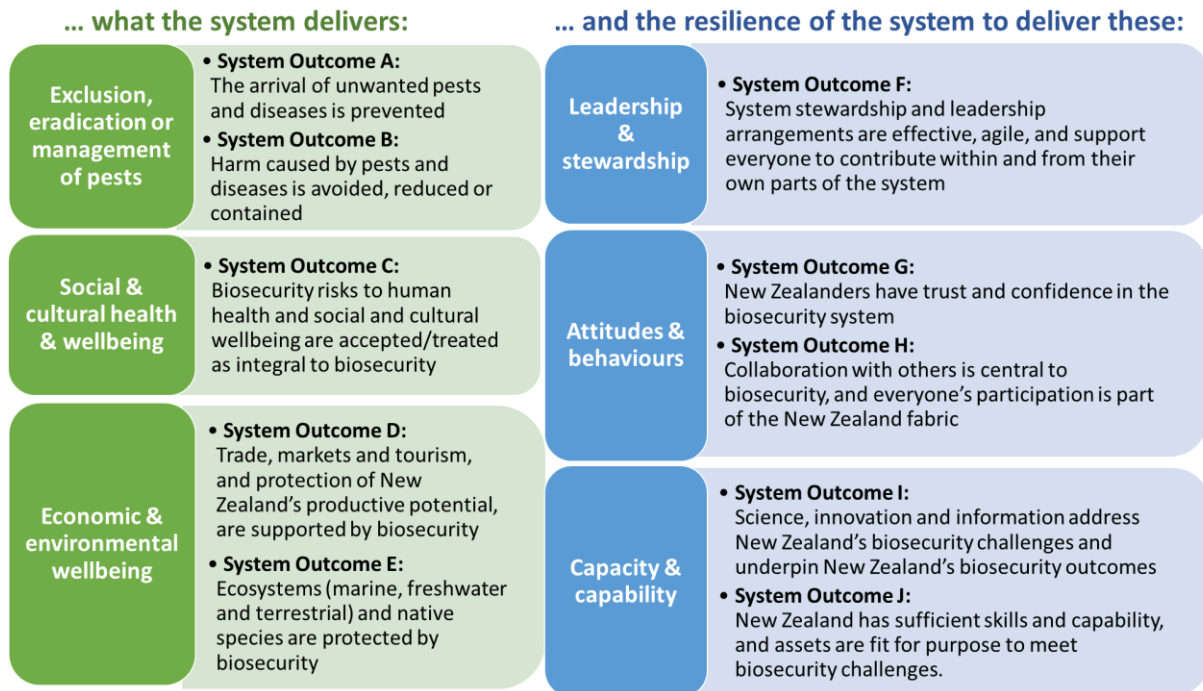
Performance monitoring to support stewardship of a learning system



Monitoring biosecurity system health

A project is currently underway to develop KPIs to measure biosecurity system health based on the whole-of-system outcomes shown below. These outcomes reflect the wide engagement that has been undertaken for the Biosecurity 2025 programme, and incorporate the mission, values, principles, goals, outcomes and targets from the Biosecurity 2025 Direction Statement.

Assessing the health of the biosecurity system is the combination of looking at:



Monitoring and reporting on biosecurity system health will provide information for the following purposes:

- The biosecurity stewardship council will use the information to maintain a strategic view of the system, including identifying emerging strategic issues, and gaps regarding roles, responsibilities and resourcing – to support continuous improvement across the biosecurity system.
- Participants in the biosecurity system and stakeholders will be able to use the information at multiple levels to:
 - Assess system performance over time, discern trends and emerging risks
 - Evaluate how their own efforts may be contributing to achieving/ maintaining the health of the system
 - Identify opportunities for innovation and system improvement
 - Inform advice regarding prioritisation of activities and investment decision-making
 - Enable people to have trust and confidence in the performance of the biosecurity system by reporting on system performance proactively and transparently

A 'State of Biosecurity Report' will be produced which will combine the above information with strategic analysis of implications, emerging risks and opportunities.

Other means of reporting of the results of monitoring system health will include holding a periodic (perhaps annual) biosecurity summit to report on system performance, enable wider engagement on leadership and governance issues, and explore emerging risks and opportunities.

Monitoring progress implementing Biosecurity 2025

Monitoring and reporting on Biosecurity 2025 will include:

Progress meeting key programme deliverables

As part of establishing projects and programmes to implement Biosecurity 2025, consideration will be given to which milestones, deliverables and activities should be incorporated into the monitoring and evaluation programme.

It is expected that only key significant deliverables will merit monitoring and reporting at system level to support system leadership and governance responsibilities. They will be those which are necessary to ensure that momentum for delivery of key programmes is maintained, and to enable monitoring and mitigation of potential impediments to delivery.

Progress meeting goals and outcomes of the Strategic Directions

The Direction Statement states that progress towards the outcomes and goals will be reviewed regularly.

The first review will be undertaken in 2019, and the second one will be in 2022; in 2025 the review will include an evaluation of whether the direction for the biosecurity system needs to be refreshed or replaced.

The monitoring and reporting undertaken on system health, as described above, will inform these progress reviews. It is therefore expected the reviews will be able to draw on this information, without requiring substantial additional research or data collection.

Progress meeting targets

The Direction Statement set out targets for Biosecurity 2025 that are aspirational and are intended to “sharpen the focus for implementation”. It said that unlike the goals and outcomes, they do not cover the full breadth of the strategic directions. They “set a stake in the ground for the key achievements we want by 2025”.

The targets have been amended through the process of developing this Plan, and they are set out in Appendix 5. The targets have been incorporated into the monitoring and evaluation framework described above, and they will be assessed as part of the progress reviews. They will not be separately reported on.

Appendix 5. Targets

The Direction Statement set out targets for Biosecurity 2025 that are aspirational and are intended to “sharpen the focus for implementation”. They have been amended through the process of developing this Plan, and they are set out below.

Biosecurity 2025 Targets

1. 75% of adult New Zealanders understand what biosecurity means and why it is important.
2. 80% of New Zealanders accept those involved in managing, controlling and eradicating pests and diseases use appropriate tools and activities, such as controlled spraying, use of poison baits and/or movement restrictions.
3. 80% of New Zealanders and visitors find it easy to understand what they need to do if they find a pest or disease.
4. 500,000 New Zealanders regularly take action to control plant or animal pests in their communities.
5. 90% of relevant businesses are actively managing pest and disease risk associated with their business and have committed to biosecurity actions through key planning and strategy documents and/or adopting active biosecurity management practices. Initial focus will be on the five international risk pathways: craft, mail, cargo, passengers and express freight. Later this will be extended to domestic risk pathways, such as coastal shipping and movement of equipment between farms.
6. At least \$80 million of public and private investment in science for biosecurity, with at least 50% of investment focused on identified critical biosecurity areas.
7. Halve the cost of managing a significant established pest. This will be achieved through innovative science and new tools and approaches to pest management.
8. 80% of New Zealand biosecurity science publications are translated to understandable format and made available to end-users.
9. 90% of end-users surveyed feel they are able to effectively access New Zealand biosecurity science results and use new knowledge in biosecurity operations.
10. End-user surveys indicate that greater than 80% are satisfied with progress in biosecurity tool development.
11. A publicly-accessible network enables electronic access to organism data held by central government agencies, regional councils and Crown research institutes. Organism data, linked together from multiple sources and including information on species name, distribution and impact, is crucial to identify and manage biosecurity risks.
12. Automated and targeted alerts about emerging risks are available to all participants across the biosecurity system.
13. Key data sets for biosecurity targeting early biosecurity interventions have been identified, and 80% of this data is available to participants in the biosecurity system through an agile and adaptive data sharing system.
14. 90% of key system participants believe that the governance arrangements contribute to a more effective biosecurity system. “Key system participants” – for the purposes of this target – would be those people or organisations who are sufficiently engaged in and knowledgeable about the system and its governance arrangements to be able to have a view on this.
15. At least 150,000 people with identified skills can be quickly drawn on to provide support during biosecurity incursions. This will be delivered by the National Biosecurity Capability Network or its successor.

Appendix 6. How the Implementation Plan relates to other strategies, plans and policies

The Plan has drawn on many other strategies, plans and policies from across the system which touch on Biosecurity 2025 goals and outcomes. This Plan gains strength by supporting relevant linkages between and across different strategic programmes and initiatives. It is not intended to cut across or undermine any other plan. However, over time it is hoped that as new strategies are developed, and existing strategies are reviewed, the linkages between them and this Plan will become stronger, and relevant aspects of the plans and policies will become increasingly aligned.

Some of the key policies and programmes (existing and currently in development) that have strategic relevance to Biosecurity 2025 are below.

-
- *The New Zealand Biodiversity Strategy*
 - *National Policy Statement for Indigenous Biodiversity*
 - *Predator Free 2050 Strategic Plan*
 - *Department of Conservation Biodiversity Monitoring and Reporting System*
 - *National Policy Direction for Pest Management 2015*
 - *Regional council biosecurity strategies and pest management strategies and plans*
 - *National Science Challenges*
 - *National Policy Statement for Freshwater Management*
 - *Government Industry Agreements for Biosecurity Readiness and Response*
 - *New Zealand Wilding Conifer Management Strategy*
 - *Fiordland Marine Biosecurity Plan*
 - *Aquaculture Biosecurity Handbook*
 - *National Pest Plant Accord*
 - *Australia + New Zealand Science, Research and Innovation Cooperation Agreement*
 - *A decadal plan for taxonomy and biosystematics in Australia and New Zealand 2018–2027*
 - *The Data Commons Blueprint*
 - *Ministry for Primary Industries Science Strategy*
 - *Gateway Work Experience/Career Programme*
 - *Micro-Credentials Programme / EduBits*
 - *Young Enterprise Programme*
 - *Waikato River Authority Vision and Strategy*
 - *Data Investment Framework*
 - *New Zealand's Data Future's Forum Key Recommendations & Catalyst Projects*
 - *Addressing New Zealand's Biodiversity Challenge – A Regional Council thinkpiece on the future of biodiversity management in New Zealand*
 - *Enriching New Zealand through sustainable tourism growth: Government's tourism strategy [draft]*
 - *Environmental Education for Sustainability Action Plan 2017-2018*
 - *Living Standards Framework, and Living Standards Dashboard*
-

Appendix 7. The Biosecurity Data Commons Framework

This resource is a starting place for creating a biosecurity data commons. It outlines the main priorities the Strategic Direction 3 working group determined for improving data effectiveness for the biosecurity system.

Building trust, sharing and ensuring data sovereignty

Description	Outcome
<p>Designing data for reuse</p> <p>Free-flowing data means it's easy to use data for a new purpose while maintaining trust and protecting people's privacy.</p>	<p>Many participants in the biosecurity system are using data to reduce biosecurity risk. They draw linkages between things, and deliver insights on how risk is changing.</p>
<p>Data tikanga, trust and sovereignty</p> <p>Data should adhere to appropriate guidelines to support tikanga, trust and sovereignty especially for data on taonga species.</p>	<p>Everyone knows who is accessing their data and what they are using it for. The special relationship between Māori and taonga species is respected and Māori are active and engaged in processes to collect and analyse culturally sensitive data.</p>
<p>Open and semi-open access</p> <p>Data should be open by default with clear policies and processes to protect private and sensitive data. This includes developing smart information sharing agreements to support data sharing.</p>	<p>Participants in the biosecurity system have access to the data they need.</p>

Technical standards to support data interoperability

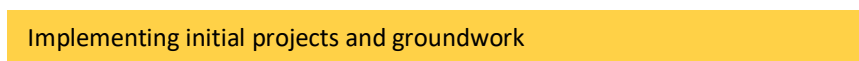
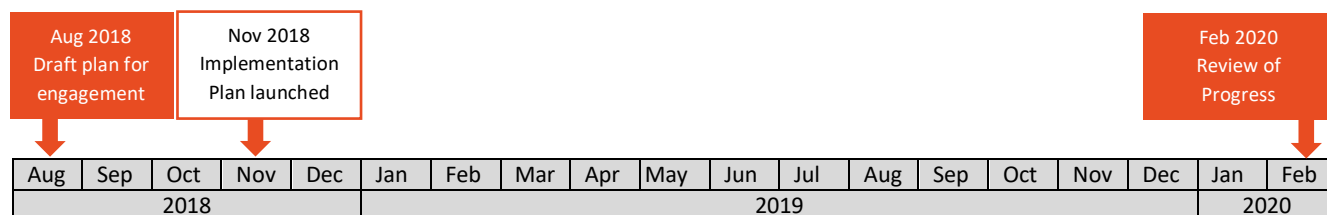
Description	Outcome
<p>Findable and rich meta-data</p> <p>Having rich meta-data to describe the data and making sure it is findable (e.g., through web portals). Meta-data should be available to all (even if the data itself isn't).</p>	<p>People know the quality, content, and utility of datasets. It's easier for them to integrate and use data. They can also find what data exists and if it's closed data, they may be able to negotiate for access.</p>
<p>Common standards for data integration</p> <p>Common standards makes it easier to share data. This includes community agreed formats, language and vocabularies. This approach also reduces the need for consolidating and duplicating data in single locations (i.e., supports federated databases).</p>	<p>Data is much easier and cheaper to integrate. The efficiency of data analysts, scientists and researchers is greatly increased. Data doesn't need to be consolidated into single warehouses because databases are accessible and interoperable.</p>
<p>Data whakapapa and building mātauranga</p> <p>Elements of mātauranga Māori and species whakapapa are incorporated in data.</p>	<p>Data builds mātauranga Māori and supports the connection of an organism to its cultural and historical context.</p>

Strategic alignment

Description	Outcome
<p>Strategic design for data assets</p> <p>Nationally significant data assets (e.g., databases) should be streamlined, interoperable, and frequently reviewed to make sure they are fit for purpose and easy for people to use.</p>	<p>Databases, collection tools, data sharing sites and apps are designed to build upon and rationalise existing products rather than replicate them. People required to contribute data will want to contribute.</p>

Appendix 8. Work programme timelines

Timeline for *Exercise kaitiakitanga* – short-term activities



Initial projects and groundwork
Drive delivery of Biosecurity 2025

- Convene biosecurity system participants to jointly agree priorities for further action and to identify/commit resources to enable these priorities to be addressed. This will include Māori, regional councils, Government Industry Agreement signatories, industry, community, central and local government, NGO, philanthropic, research and education stakeholders, and others.
- Connect, align and accelerate activities across multiple stakeholders.
- Report on progress implementing Biosecurity 2025.

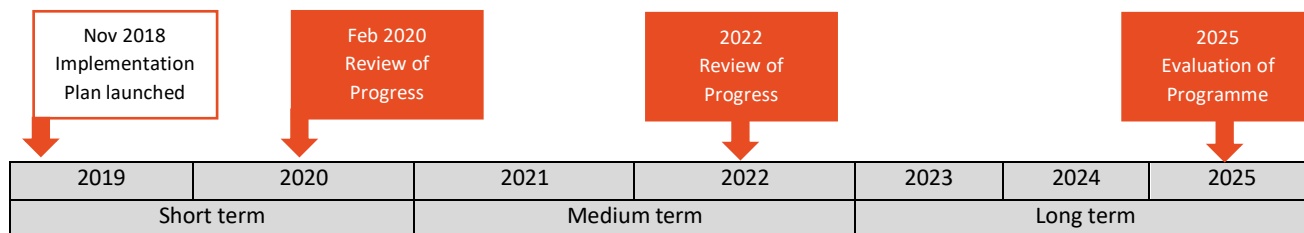
Strategic initiatives

- Post border review - Readiness, response and pest management parts of the biosecurity system, including greater clarity of roles and responsibilities.
- Māori formal roles in the biosecurity system - This work will inform and be informed by the post border review.
- Develop programme to increase Māori participation at all levels of system.
- Develop methodology for valuing biosecurity impacts on market and non-market resources and taonga.
- Review processes to manage risk offshore - Including accreditation of off-shore facilities and managing bio-fouling pathways.

Catalyst projects - Major projects to transform the biosecurity system and help everyone to contribute

- **Establish biosecurity system stewardship arrangements:**
 - Establish biosecurity stewardship council, resourced with sufficient capacity to maintain strategic view of system, monitor and report on system health, take responsibility for oversight and delivery of *Ko Tātou This Is Us*, and drive delivery of Biosecurity 2025 programmes of work.
 - Convene the four implementation-focused oversight groups: Information Advisory Group; Science and Technology Oversight Group; Building a Team of 4.7 Million Oversight Group; Assets and Skills Oversight Group.
- **Biosecurity system map and state of biosecurity:**
 - Develop whole-of-system KPIs and measures.
 - Establish a monitoring and reporting programme.
 - Publish annual state of biosecurity report
 - Identify critical biosecurity system needs – baseline assessments and gap analyses re biological databases and collections, science, research, mātauranga and technology, capability, infrastructure and network development needs, sustainable funding arrangements identification and development of system level capability and infrastructure development
 - Provide online public access to the system map and clearinghouse of key biosecurity information.

Timeline for *Exercise kaitiakitanga* – medium-to-long-term activities



Continuing engagement on Implementation Plan

Continuing implementation of catalyst projects

Periodically review strategic fit of system stewardship arrangements.

Identify and address barriers to Māori participation in biosecurity management - Particularly in local, regional, national and international sectors.

Identify what is needed to support and resource mātauranga Māori, kaupapa Māori responsiveness - Including incorporating mātauranga Māori and kaupapa Māori in Biosecurity Science Plan.

Identify and influence potential investment in biosecurity science - Including stock-take and establishment of funding, tool commercialisation, and investment avenues.

Ensure effective processes are in place for managing the biosecurity risk New Zealand poses to other countries.

Identify tools, processes and guidance to mainstream biosecurity into local government policies, plans and actions.

Identify drivers for trust and confidence - Will contribute towards meaningful performance measures as part of the whole-of-system KPIs.

Undertake assessment of why people are drawn to or leaving biosecurity-related careers.

Identify impediments to implement pathway management plans.

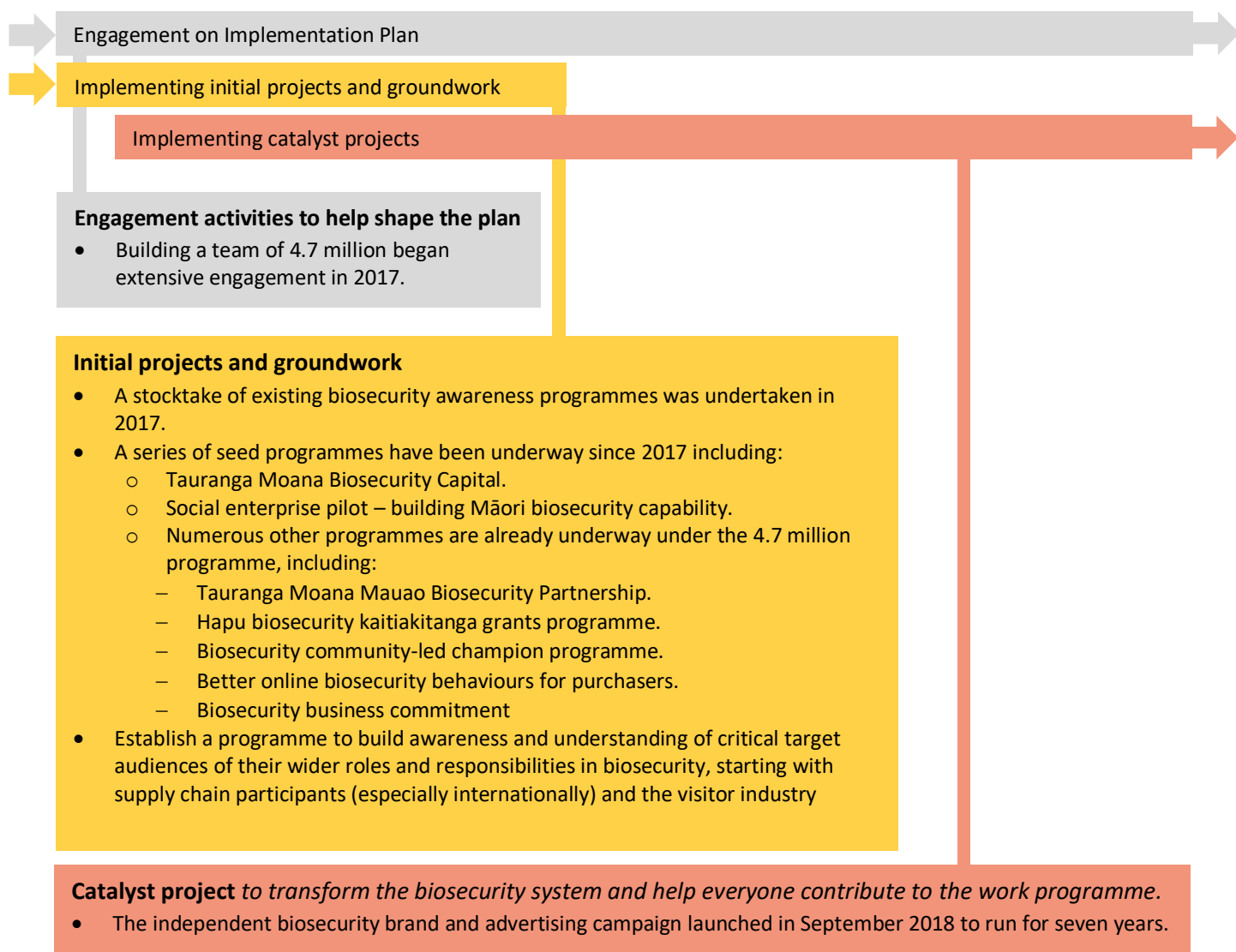
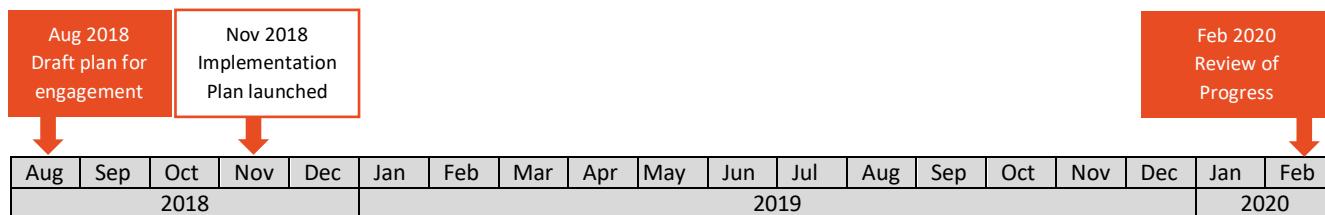
Review of biosecurity freshwater management.

Review regulatory and legislative data sharing environment - Ensure sharing arrangements between biosecurity system participants are fit for purpose.

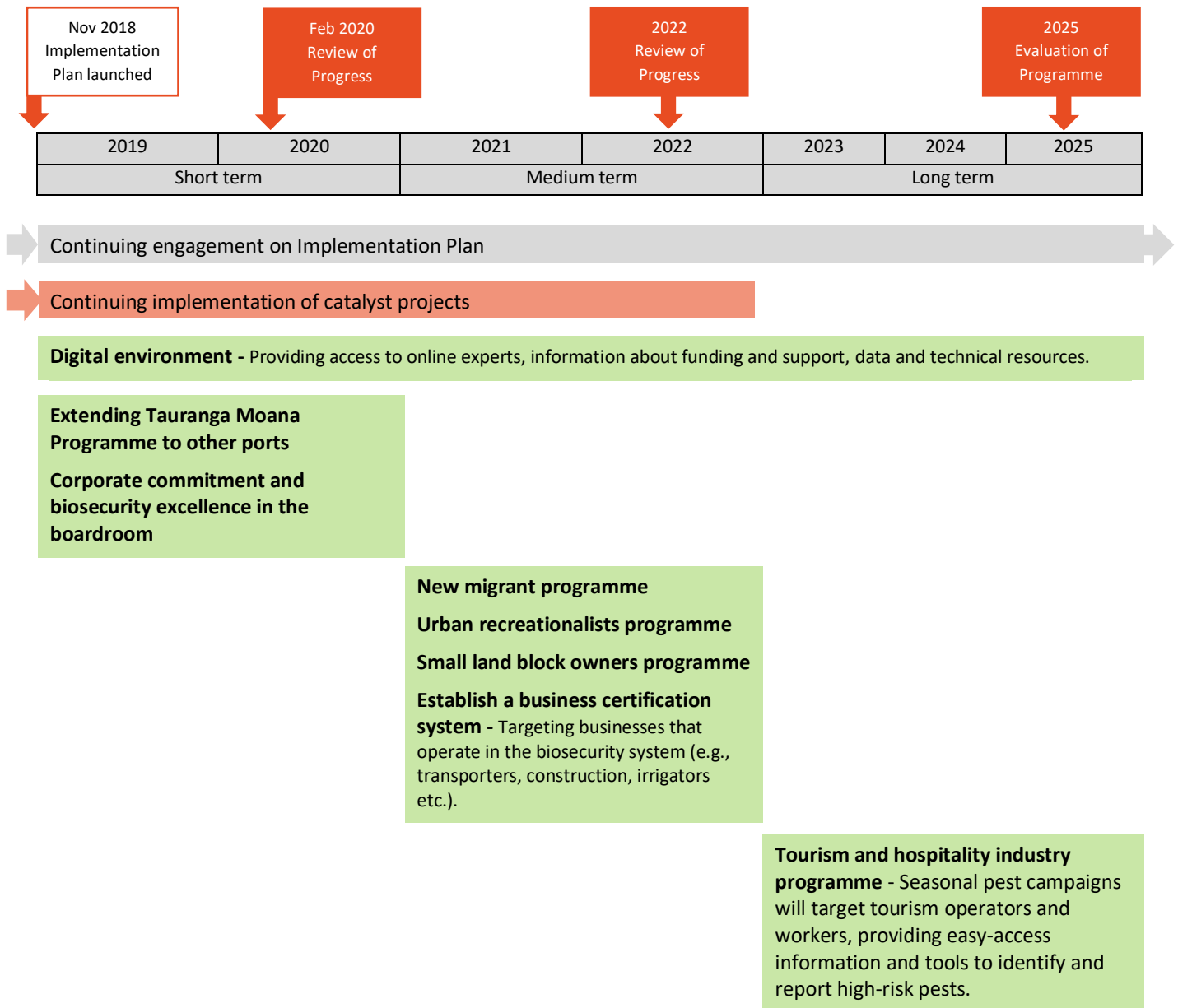
Review and refresh the strategy in 2025

Timeline for *Create a movement* – short-term activities

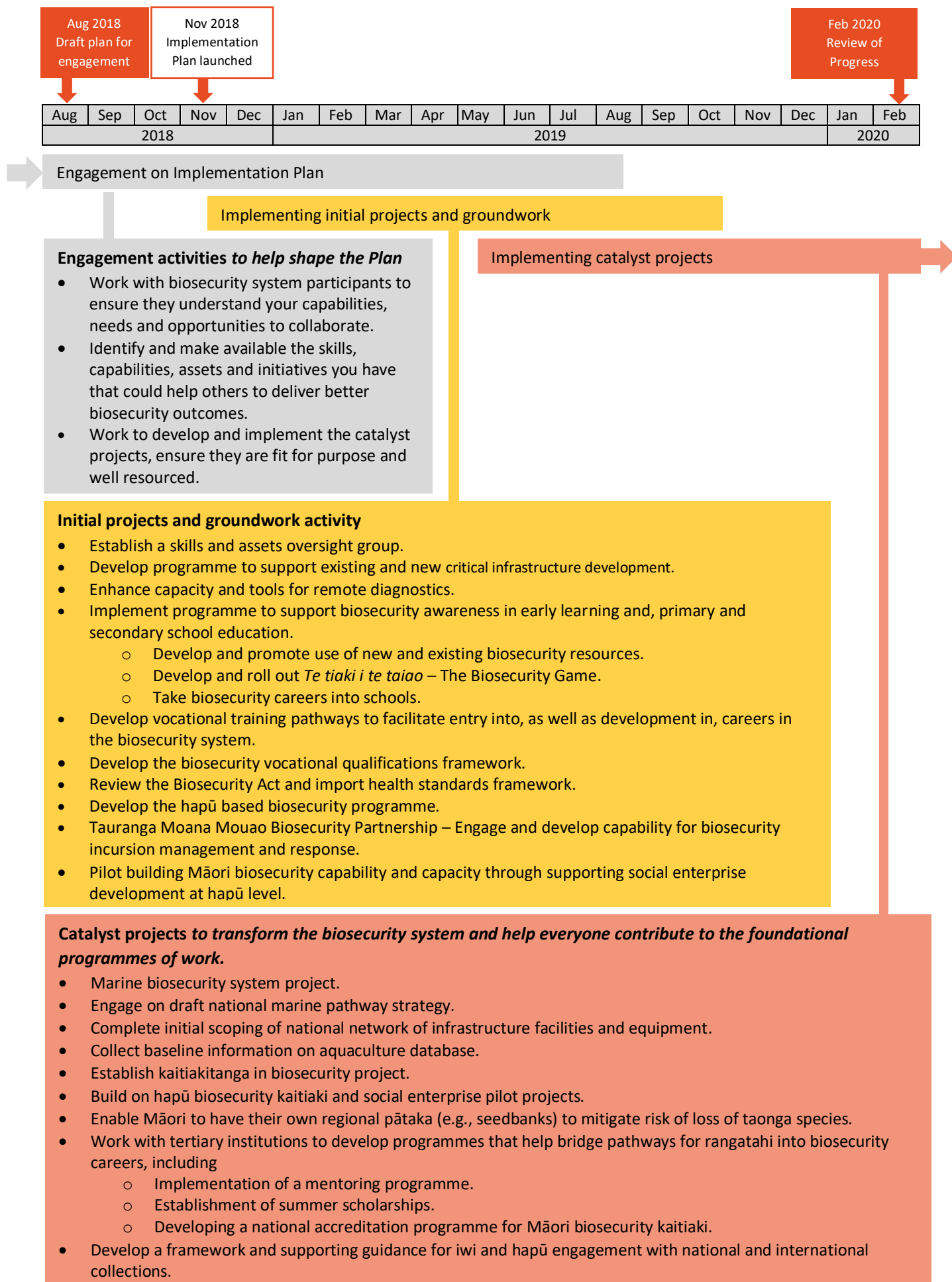
Unlike the other programmes of work, these activities have been underway since 2017. Several projects have been implemented and the catalyst project of an independent brand and advertising campaign is ready to launch.



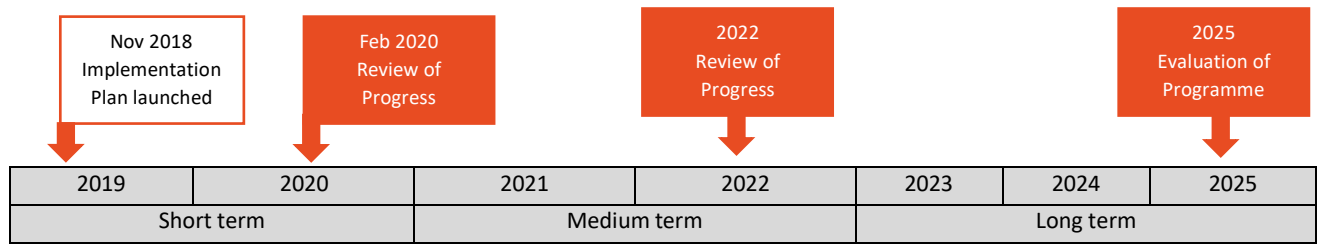
Timeline for *Create a movement* – medium-to-long-term activities



Timeline for *Build resilience* – short-term activities



Timeline for *Build resilience* – medium-to-long-term activities



Continuing engagement on Implementation Plan

Continuing implementation of catalyst projects

Programme to make biosecurity career information available.

Build biosecurity capability internationally to improve management of risk offshore.

Establish programme to broaden reach of biosecurity training (e.g., to intersecting industries and businesses) - Ensure new and existing educational resources are widely available, including online and embedded into wider training courses.

Build corporate governance and strategic leadership capability - Develop courses and in-house training material for directors and leadership teams.

Tikanga and Treaty programme, concept of kaitiakitanga for non-Māori – Include a review of literature and collections of narratives.

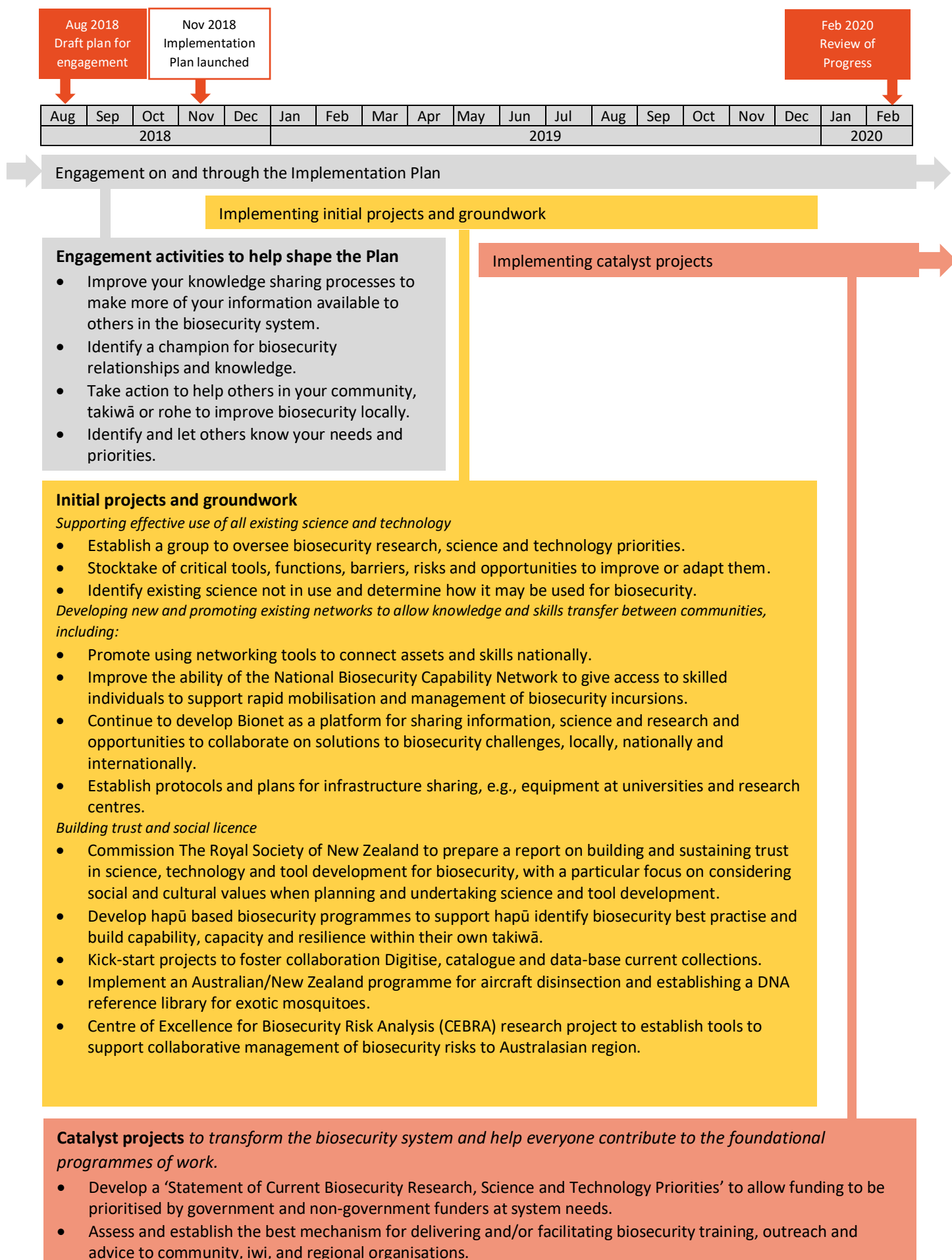
Develop Resource Management Act national policy statement on biosecurity – To provide direction to local authorities and communities on how to better provide for biosecurity in plans.

Recognise and celebrate success and expertise – To raise the profile, recognise the value of and promote biodiversity.

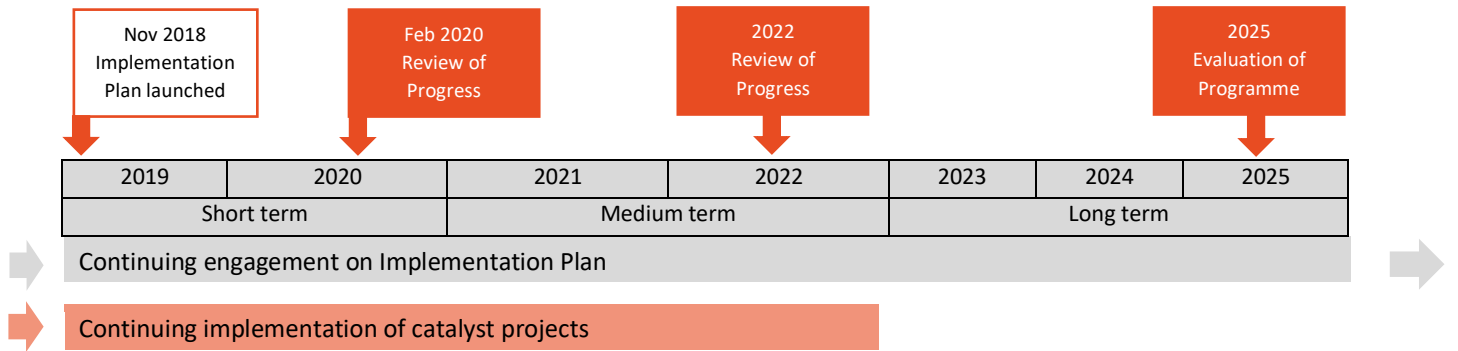
Organise conferences relevant to biosecurity.

Ensure access to biosecurity treatment and facilities (e.g., radiation).

Timeline for *Collaborate in knowledge* – short-term activities



Timeline for *Collaborate in knowledge* – medium-to-long-term activities



Development and communication of an integrated Biosecurity Science Plan - Identify the science needs of the biosecurity system incorporating Māori values and Kaupapa Māori to set science and technology development and implementation priorities.

Build strong stakeholder engagement into tool development – Use co-innovation framework and provide support for citizen-led initiatives where appropriate.

