National Plant Biosecurity Surveillance Strategy Implementation Plan

2021-2031

Plant Health
AUSTRALIA

Australian Government
Department of Agriculture,
Water and the Environment

Acknowledgements

Subcommittee on National Plant Health Surveillance (SNPHS)

The SNPHS has been established under the Plant Health Committee (PHC) to provide coordination and leadership for plant pest surveillance in Australia. The subcommittee comprises representatives from the Australian Government, state and territory governments, PHA and the CSIRO. The principal focus of SNPHS is to maintain and improve Australia's plant health surveillance capacity and capability in support of the economy, environment and community.

Copyright statement

Attribution

Contents

Overview

The *National Plant Biosecurity Surveillance Strategy Implementation Plan* (implementation plan) has been developed to support the rollout of the *National Plant Biosecurity Surveillance Strategy 2021–2031* (the strategy).

The strategy is structured around a shared vision and outlines the goals and expected outcomes for implementation. It provides a framework to strengthen Australia's plant health surveillance system and ensure Australia has the people, resources, infrastructure, policies, standards and tools to provide for the highest-quality surveillance delivery. The vision, goals and expected outcomes are shown below.

Vision	A plant health surveillance system that protects Australia's plant industries, economy, environment and community through the improved detection and knowledge of plant pest and weed status.					
Goals	**1** Stronger regional, national and international connections	**2** Enhanced and improved capability for an effective surveillance system	**3** Barriers to surveillance and reporting identified and removed	**4** Increased adoption of innovative tools, technologies and approaches	**5** Risk based surveillance systems and processes developed and maintained	**6** Improved information standards, analyses and infrastructure
Expected outcomes	A cooperative and collaborative national approach to surveillance driven by partnerships	Skilled people are available to support surveillance	Improved awareness of biosecurity risks and participation in surveillance by plant industries, environmental groups and the community	More effective technologies and approaches to detect plant pests and weeds	Greater confidence in the information generated from surveillance activities	Robust and credible information on Australia's plant health and plant pest status

Each goal is supported by a series of actions that will guide and support national policy relating to the delivery of plant health surveillance activities and inform investment in research, development and extension. The actions can also be used to guide state/territory, regional and local efforts or efforts by individual governments, plant industries and stakeholder groups.

The strategy applies to plant pests and weeds that impact Australia's plant industries, environment and community. For the purpose of the strategy, plant pests are defined as any species, strain or biotype of invertebrate or pathogen injurious to plants, plant products or bees. The application of the strategy to weeds covers exotic weed species and declared weed species not known to be established in a particular jurisdiction, which pose high potential impacts.

The implementation plan complements the goals and actions presented in the strategy. It has been developed to measure progress and provide more detail on the implementation of these measures, including performance measures, key contributors[1] and indicative timeframes for delivery[2]. A planned timeline for implementing the different components of the strategy is provided in Appendix 1 – Implementation plan timeline.

Together the 2021–2031 strategy and implementation plan form part of a suite of strategies that supports the broader national biosecurity system through their alignment with the Intergovernmental Agreement on Biosecurity (IGAB) and the National Plant Biosecurity Strategy.

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1   A key contributor is considered to be an organisation and/or group that contributes cash or in-kind support towards the delivery of an action in the strategy.

2   All timeframes are indicative and should not preclude the commencement of any actions before the date set out in the implementation plan

Governance

The National Plant Biosecurity Strategy Implementation Group (implementation group) will oversee implementation, reporting and review of the suite of national plant biosecurity strategies to ensure continued alignment and complementarity across the strategy suite.

The implementation group will be coordinated by PHA and include representatives from the following groups:

- PHA
- Australian Government Department of Agriculture, Water and the Environment
- Plant Health Committee (PHC)
- Subcommittee on Plant Health Diagnostics
- Subcommittee on National Plant Health Surveillance (SNPHS)
- Plant Biosecurity Preparedness Working Group (or similar)
- Environment and Invasives Committee (EIC)
- Plant Industries Biosecurity Committee (PIBC)
- Plant Biosecurity Research Initiative (PBRI)
- A non-government organisation with environmental and/or community interests.

Representatives, with support from Plant Health Australia, will be responsible for integrating and influencing the work of the group they represent in delivering or supporting delivery of the actions identified in the strategies.

Action plans

The strategy will be supported by detailed action plans to ensure a more coordinated and focused approach.

The action plans will outline the specific tasks required for each action to achieve the outcomes, goals and vision in the strategy. These plans will also identify organisations and/or groups with responsibility for implementing each task, resources required and timeframes. To ensure tasks achieve the intended quality, value and applicability, a program logic approach could be used that includes process and outcome components of how the implementation measures the impact of actions.

Development of the action plans will be guided by the implementation group in consultation with relevant plant health surveillance stakeholders, national committees and/or working groups.

Review and reporting

The implementation group will monitor and review progress in implementing the strategy. Annual evaluation reports will be developed and presented to PHC, SNPHS, EIC, PIBC and PBRI. A comprehensive review of implementation will be undertaken on two occasions, in the fourth and the eighth year.

The status reports and findings from the review will be made publicly available and used by the implementation group to refresh the strategy, implementation plan and action plans. This process will ensure national, regional and local effort in delivering the 2031 vision remains agile and responsive to changing priorities and a changing biosecurity context.

National Plant Biosecurity Surveillance Strategy at a glance

Vision	A plant health surveillance system that protects Australia's plant industries, of plant pest and weed status.		
Goals	**1** Stronger regional, national and international connections	**2** Enhanced and improved capability for an effective surveillance system	**3** Barriers to surveillance and reporting identified and removed
Actions	**1.1** Establish a shared and agreed understanding of roles and responsibilities of surveillance stakeholders. **1.2** Define surveillance priorities that stakeholders will work on collaboratively to achieve national surveillance goals. **1.3** Establish coordinated surveillance programs to maximise the effective detection of plant pests and weeds. **1.4** Establish and enhance regional, national and international networks and partnerships. **1.5** Develop and maintain a national framework for funding and coordinating surveillance activities across Australia.	**2.1** Identify and address current and emerging capability gaps for people involved in surveillance. **2.2** Coordinate training and professional development pathways to support the ongoing needs of the national surveillance system. **2.3** Increase national surveillance biometric capability and build data literacy across surveillance practitioners. **2.4** Develop communication and engagement mechanisms to increase stakeholder awareness and uptake of surveillance activities. **2.5** Establish and maintain diagnostic skills, expertise and resources to support surveillance.	**3.1** Improve the protection and support for stakeholders reporting plant pests and weeds. **3.2** Establish and promote initiatives to improve surveillance for exotic and regionalised plant pests and weeds in urban and peri-urban areas. **3.3** Establish mechanisms to integrate surveillance for priority plant pests into existing monitoring practices and systems.
Expected outcomes	A cooperative and collaborative national approach to surveillance driven by partnerships	Skilled people are available to support surveillance	Improved awareness of biosecurity risks and participation in surveillance by plant industries, environmental groups and the community
Implementation	National Plant Biosecurity Surveillance Strategy		

economy, environment and community through the improved detection and knowledge

4 Increased adoption of innovative tools, technologies and approaches

4.1 Develop and implement a framework to assess the suitability of tools, technologies and approaches for the national surveillance system.

4.2 Identify and implement new tools, technologies and approaches to improve the detectability of plant pests and weeds.

4.3 Identify, assess and promote laboratory and in-field diagnostic methods to support surveillance.

More effective technologies and approaches to detect plant pests and weeds

5 Risk based surveillance systems and processes developed and maintained

5.1 Establish a framework to identify priority plant pests, weeds, commodities and conveyances, and high-risk areas for surveillance.

5.2 Develop, update and endorse National Surveillance Protocols for priority and emerging plant pests.

5.3 Develop nationally agreed guidelines to support surveillance design and analysis during and following emergency responses to plant pest incursions.

Greater confidence in the information generated from surveillance activities

6 Improved information standards, analyses and infrastructure

6.1 Implement and maintain an interoperable and integrated national surveillance information management system to collate, share and analyse surveillance data.

6.2 Evaluate and enhance the quality of general surveillance data captured for the national surveillance system.

6.3 Develop and implement a process for measuring and reporting the effectiveness of surveillance programs.

Robust and credible information on Australia's plant health and plant pest status

Implementation Plan and action plans

Strategic direction to 2031

GOAL 1

STRONGER REGIONAL, NATIONAL AND INTERNATIONAL CONNECTIONS

EXPECTED OUTCOME:

A cooperative and collaborative national approach to surveillance driven by partnerships

Performance indicators	
Short term (1–3 years)	▪ Surveillance needs and activities required to support the plant health surveillance system identified. ▪ Major stakeholders identified and roles and responsibilities established. ▪ Regional, national and international networks identified that provide the greatest benefit. ▪ Framework for determining surveillance priorities developed.
Medium term (4–6 years)	▪ All stakeholders aware of their roles and responsibilities. ▪ Ongoing networks established between stakeholders including governments, plant industries and the wider community to support surveillance activities. ▪ Mechanisms established for the ongoing review and monitoring of surveillance priorities. ▪ National framework developed and endorsed for funding and coordinating surveillance activities across Australia.
Long term (7–10 years)	▪ All stakeholders fulfilling their obligations. ▪ Coordinated surveillance programs established for all major plant industries and key threats of national concern. ▪ Established networks reviewed and changes implemented to meet current need.

Action	Priority	Timeframe	Key contributors (cash and in-kind)	Dependency
1.1 Establish a shared and agreed understanding of roles and responsibilities of surveillance stakeholders.	High	Short to medium term	▪ Australian Government ▪ State/territory governments ▪ Plant industries ▪ PHA ▪ Community groups ▪ Environmental groups	Links to 2.4
1.2 Define surveillance priorities that stakeholders will work on collaboratively to achieve national goals.	High	Short to medium term	▪ SNPHS ▪ EIC	Links to 1.3
1.3 Establish coordinated surveillance programs to maximise the effective detection of plant pests and weeds.	High	Medium to long term	▪ Australian Government ▪ State/territory governments ▪ Plant industries ▪ PHA ▪ Community groups ▪ Environmental groups ▪ Surveillance program coordinators	Links to 1.2, 5.2 and 6.3
1.4 Establish and enhance regional, national, and international networks to strengthen partnerships between stakeholders.	High	Ongoing	▪ Australian Government ▪ State/territory governments ▪ Plant industries ▪ PHA ▪ Community groups ▪ Environmental groups ▪ Supply chain participants[3]	Links to 4.1
1.5 Develop and maintain a national framework for funding and coordinating surveillance activities across Australia.	High	Medium term	▪ Australian Government ▪ State/territory governments ▪ Plant industries ▪ PHA	

3   Participants involved in performing activities along the supply chain, including producers, processors, retailers and exporters.

GOAL 2

ENHANCED AND IMPROVED CAPABILITY FOR AN EFFECTIVE SURVEILLANCE SYSTEM

EXPECTED OUTCOME:

Skilled people are available to support surveillance

Performance indicators	
Short term (1–3 years)	▪ Critical capability gaps for people involved in surveillance identified. ▪ Mitigation plan developed to address identified capability gaps for people involved in surveillance. ▪ Professional development framework aligned to critical gaps in capability across the national plant health surveillance system. ▪ Communication plan developed for the national plant health surveillance system.
Medium term (4–6 years)	▪ Emerging capability gaps for people involved in surveillance identified. ▪ Training material developed to address critical gaps in capability across the national plant health surveillance system. ▪ Contemporary communication tools identified and used to increase awareness of surveillance across the biosecurity continuum. ▪ Diagnostic expertise available through NPBDN to identify nationally prioritised plant pests.
Long term (7–10 years)	▪ Emerging capability gaps for people involved in surveillance identified. ▪ Increase in the number of participants with specialist biometric skills to support surveillance. ▪ Material developed to promote the national plant health surveillance system and its achievements. ▪ Increase in diagnostic capacity and capability across Australia to support surveillance.

Action	Priority	Timeframe	Key contributors (cash and in-kind)	Dependency
2.1 Identify and address current and emerging capability gaps for people involved in surveillance.	Very high	Ongoing	▪ Australian Government ▪ State/territory governments ▪ PHA ▪ Research and development corporations ▪ Environmental groups ▪ Community groups ▪ Surveillance program coordinators	Links to 2.2
2.2 Coordinate training and professional development pathways to support the ongoing needs of the surveillance system.	High	Ongoing	▪ SNPHS ▪ EIC ▪ Training providers ▪ Surveillance program coordinators	Links to 2.1
2.3 Increase national surveillance biometric capability and build data literacy across surveillance practitioners.	High	Medium to long term	▪ Australian Government ▪ State/territory governments	
2.4 Develop communication and engagement mechanisms to increase stakeholder awareness and uptake of surveillance activities.	Very high	Ongoing	▪ Australian Government ▪ State/territory governments ▪ Plant industries ▪ Environmental groups ▪ PHA	Links to 1.1
2.5 Establish and maintain diagnostic skills, expertise and resources to support surveillance.	High	Ongoing	▪ Subcommittee on Plant Health Diagnostics ▪ All laboratories involved in plant biosecurity ▪ Universities	Relies on delivery of the National Plant Biosecurity Diagnostic Strategy

GOAL 3

BARRIERS TO SURVEILLANCE AND REPORTING IDENTIFIED AND REMOVED

EXPECTED OUTCOME:

Improved awareness of biosecurity risks and participation in surveillance by plant industries, environmental groups and the community

Performance indicators	
Short term (1–3 years)	▪ Opportunities to improve the protection and support for growers reporting new plant pests and weeds identified.
	▪ Mechanisms to enhance surveillance efforts in urban and peri-urban areas and the environment developed.
	▪ Existing and new surveillance activities identified and integrated into surveillance programs for plant pests and weeds.
Medium term (4–6 years)	▪ Surveillance systems actively adopted and supported by growers, plant industries, environmental groups and the community.
	▪ Surveillance programs for plant pests and weeds of national concern extended to cover urban and peri-urban areas as well as the environment.
	▪ Improved reporting of suspect plant pests and weeds in urban and peri-urban areas and the environment to relevant authorities.
	▪ Collation of surveillance data from routinely used tools and digital platforms investigated.
Long term (7–10 years)	▪ Improved reporting of suspect plant pest and weed detections to relevant authorities by growers, plant industries, environmental groups and the community.
	▪ Surveillance data collected in a consistent manner and to a consistent quality allowing national reporting and analysis.

Action	Priority	Timeframe	Key contributors (cash and in-kind)	Dependency
3.1 **Improve the protection and support for stakeholders reporting plant pests and weeds.**	Very high	Medium to long term	▪ Australian Government ▪ State/territory governments ▪ PHA ▪ Plant industries ▪ Environmental groups	
3.2 **Establish and promote initiatives to improve surveillance for exotic and regionalised plant pests and weeds in urban and peri-urban communities.**	Very high	Short to medium term	▪ State/territory governments ▪ Local councils ▪ Community groups ▪ Plant industries ▪ Environmental groups	Links to 2.2 and 4.2
3.3 **Establish mechanisms to integrate surveillance for priority plant pests into existing monitoring practices and systems.**	High	Medium to long term	▪ Plant industries ▪ Commercial partners ▪ Universities ▪ Research and development funders	

GOAL 4

INCREASED ADOPTION OF INNOVATIVE TOOLS, TECHNOLOGIES AND APPROACHES

EXPECTED OUTCOME:

More effective technologies and practices to detect plant pests and weeds

Performance indicators	
Short term (1–3 years)	• Framework developed and endorsed to assess the minimum requirements for the adoption of new tools, technologies and approaches.
Medium term (4–6 years)	• Suitability of tools, technologies and approaches identified through the framework. • Increase in the adoption of in-field and laboratory-based diagnostic methods to support surveillance.
Long term (7–10 years)	• Suitability of all new tools, technologies and approaches assessed against the framework. • Increase in the adoption of new tools, technologies and approaches across the national plant health surveillance system. • All National Diagnostic Protocols have diagnostic procedures to support surveillance for inclusion of in-field approaches.

Action	Priority	Timeframe	Key contributors (cash and in-kind)	Dependency
4.1 Develop and implement a framework to assess the suitability of tools, technologies and approaches for the national surveillance system.	Very high	Short term	• SNPHS • EIC	
4.2 Identify and implement new tools, technologies and approaches to improve the detectability of plant pests and weeds.	High	Ongoing	• Australian Government • State/territory governments • PHA • Research and development corporations • Environmental groups • Community groups • Plant Surveillance Network Australasia Pacific	Links to 4.1
4.3 Identify, assess and promote laboratory and in field diagnostic methods to support surveillance.	High	Ongoing	• Australian Government • State/territory governments • PHA • Research and development corporations • Diagnostic providers[4]	Links to 3.2 in the National Plant Biosecurity Diagnostic Strategy

4   Includes universities, consultants and museums.

GOAL 5

RISK-BASED SURVEILLANCE SYSTEMS AND PROCESSES DEVELOPED AND MAINTAINED

EXPECTED OUTCOME:

Greater confidence in the information generated from surveillance activities

Performance indicators	
Short term (1–3 years)	▪ Framework developed and endorsed to identify priority plant pests, weeds, commodities and conveyances, and high risk areas for surveillance. ▪ Nationally agreed guidelines developed to support surveillance design and analysis during and following emergency responses to plant pest incursions.
Medium term (4–6 years)	▪ Increase in the number of National Surveillance Protocols (NSPs) for nationally prioritised plant pests.
Long term (7–10 years)	▪ Improved consistency of surveillance efforts across governments and plant industries through the availability and use of NSPs.

Action	Priority	Timeframe	Key contributors (cash and in-kind)	Dependency
5.1 Establish a framework to identify priority plant pests, weeds, commodities and conveyances, and high risk areas for surveillance.	High	Short term	▪ Australian Government ▪ State/territory governments ▪ PHA ▪ Environmental groups	
5.2 Develop, update and endorse National Surveillance Protocols for priority and emerging plant pests.	High	Ongoing	▪ Australian Government ▪ State/territory governments ▪ PHA ▪ SNPHS ▪ Plant industries ▪ Surveillance program coordinators	Links to 1.3
5.3 Develop nationally agreed guidelines to support surveillance design and analysis during and following emergency responses to plant pest incursions.	High	Short term	▪ Australian Government ▪ State/territory governments ▪ Plant industries	

GOAL 6

IMPROVED INFORMATION STANDARDS, ANALYSIS AND INFRASTRUCTURE

EXPECTED OUTCOME:

Robust and credible information on Australia's plant health and plant pest status

Performance indicators	
Short term (1–3 years)	▪ Needs analysis of national plant health surveillance systems conducted. ▪ Mechanisms established for plant industries, environmental groups and the community to collect and share data that supports market access and protects the environment. ▪ Governance arrangements developed and performance measures established for measuring and reporting the effectiveness of surveillance programs.
Medium term (4–6 years)	▪ Review of all plant health surveillance information systems used within the Plant Surveillance Network Australasia Pacific conducted. ▪ Framework developed and endorsed to integrate general surveillance data with specific surveillance. ▪ Surveillance data collected from plant industries, environmental groups and the community is used to support market access and to protect the environment. ▪ National process in place for measuring and reporting the effectiveness of surveillance programs.
Long term (7–10 years)	▪ Suitable information management systems in place to facilitate the collection, sharing and analyses of surveillance data. ▪ Surveillance data collected from plant industries, environmental groups and the community is used to support market access.

Action	Priority	Timeframe	Key contributors (cash and in-kind)	Dependency
6.1 Implement and maintain an interoperable and integrated national surveillance information management system to collate, share and analyse surveillance data.	Very high	Long term	▪ Australian Government ▪ State/territory governments ▪ PHA ▪ Plant industries	
6.2 Evaluate and enhance the quality of general surveillance data captured for the national surveillance system.	High	Short to medium term	▪ Australian Government ▪ State/territory governments ▪ Plant industries ▪ Environmental groups ▪ Community groups	Links to 4.2
6.3 Develop and implement a process for measuring and reporting the effectiveness of surveillance programs.	High	Medium to long term	▪ Australian Government ▪ State/territory governments ▪ PHA ▪ Plant industries ▪ Environmental groups ▪ Surveillance program coordinators	Links to 1.3

Appendix 1. Implementation Plan Timeline[1]

■ VERY HIGH PRIORITY   ■ HIGH PRIORITY   ■ MEDIUM PRIORITY

Goal 1. Stronger regional, national and international connections

Action	
1.1	Establish a shared and agreed understanding of roles and responsibilities of surveillance stakeholders.
1.2	Define surveillance priorities that stakeholders will work on collaboratively to achieve national surveillance goals.
1.3	Establish coordinated surveillance programs to maximise the effective detection of plant pests and weeds.
1.4	Establish and enhance regional, national and international networks and partnerships.
1.5	Develop and maintain a national framework for funding and coordinating surveillance activities across Australia.

Goal 2. Enhanced and improved capability for an effective surveillance system

Action	
2.1	Identify and address current and emerging capability gaps for people involved in surveillance.
2.2	Coordinate training and professional development pathways to support the ongoing needs of the national surveillance system.
2.3	Increase national surveillance biometric capability and build data literacy across surveillance practitioners.
2.4	Develop communication and engagement mechanisms to increase stakeholder awareness and uptake of surveillance activities.
2.5	Establish and maintain diagnostic skills, expertise and resources to support surveillance.

Goal 3. Barriers to surveillance and reporting identified and removed

Action	
3.1	Improve the protection and support for stakeholders reporting plant pests and weeds.
3.2	Establish and promote initiatives to improve surveillance for exotic and regionalised plant pests and weeds in urban and peri-urban communities.
3.3	Establish mechanisms to integrate surveillance for priority plant pests into existing monitoring practices and systems.

Goal 4. Increased adoption of innovative tools, technologies and approaches

Action	
4.1	Develop and implement a framework to assess the suitability of tools, technologies and approaches for the national surveillance system.
4.2	Identify and implement new tools, technologies and approaches to improve the detectability of plant pests and weeds.
4.3	Identify, assess and promote laboratory and in-field diagnostic methods to support surveillance.

Goal 5. Risk-based surveillance systems and processes developed and maintained

Action	
5.1	Establish a framework to identify plant pests, weeds, commodities and conveyances, and high-risk areas for surveillance.
5.2	Develop, update and endorse National Surveillance Protocols for priority and emerging plant pests.
5.3	Develop nationally agreed guidelines to support surveillance design and analysis during and following emergency responses to plant pest incursions.

Goal 6. Improved information standards, analysis and infrastructure

Action	
6.1	Implement and maintain an interoperable and integrated national surveillance information management system to collate, share and analyse surveillance data.
6.2	Evaluate and enhance the quality of general surveillance data captured for the national surveillance system.
6.3	Develop and implement a process for measuring and reporting the effectiveness of surveillance programs.

1   All timeframes are indicative and should not preclude the commencement of any actions before the date set out in the implementation plan.

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31

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