



Draft NSW Biosecurity Strategy

Biosecurity: a shared responsibility

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Foreword

'Biosecurity' is the protection of the economy, environment and community from pests, weeds and diseases. Effectively managing biosecurity is all about sharing the responsibility: everyone has a role to play.

In the past, biosecurity efforts have focused largely on land-based primary industries. Agricultural pests, weeds and diseases pose a clear threat to profitability, and farmers know there are direct financial rewards from managing biosecurity on their farms.

The new NSW Biosecurity Strategy will strengthen our primary industries biosecurity management and extend what we have learned to areas that are less well prepared for managing risks, including the natural environment and smaller landowners with non-commercial livestock.

The natural environment is there for everyone to share and enjoy – whether bush walks on the weekends, family camping trips or days at the beach – so it is important that we all take part in protecting these areas from pests, weeds and diseases.

Similarly landowners with small bush blocks or weekend getaways have an important role to play in making sure they and their neighbours are not unwitting pest protectors.

The NSW Government has recently expanded Property Identification Code requirements to include a broader range of livestock including sheep, cattle, goats, pigs, deer, bison, buffalo, camels, horses, donkeys, llama, alpaca or more than 100 poultry birds.

Expanding the requirement for Property Identification Codes acknowledges that even people with one or two horses, or just a couple of alpacas, have an important role to play when it comes to protecting our State from infectious animal diseases.

It is important that biosecurity risks are managed for the whole of NSW and Australia, across property boundaries and state borders. Pests, weeds and diseases do not respect borders or fence lines so much is to be gained from a common approach and coordination of activities.

There is increasing national focus on biosecurity, and efforts are under way to further develop a nationally integrated system. No jurisdiction, government agency or industry can stand alone when it comes to managing biosecurity threats so partnerships between Commonwealth, State and Territory Governments, industries and communities are being strengthened and substantial progress has been achieved.

The recent establishment of Biosecurity NSW within the Department of Primary Industries brings the major plant and animal biosecurity activities within one agency. Biosecurity NSW will lead engagement with other NSW agencies that play a role in biosecurity to ensure NSW Government resources are coordinated effectively to prevent or respond to biosecurity threats.

This draft NSW Biosecurity Strategy is an important step in engaging with the broader community on biosecurity issues. All NSW landowners are encouraged to take part in the consultation process, and comments received on the draft strategy will be considered before the NSW Biosecurity Strategy is finalised in early 2013.

Katrina Hodgkinson MP
Minister for Primary Industries

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Vision

Biosecurity: A shared responsibility

'Biosecurity' means protecting the economy, environment and community from the negative impacts of animal and plant pests, weeds and diseases. Biosecurity is essential for the health, wellbeing and prosperity of everyone in NSW.

Our vision is that biosecurity is recognised as a shared responsibility. We believe that working toward this vision will enable NSW to effectively meet the current and future challenges posed by biosecurity risks. The effective management of biosecurity risks will in turn contribute to community wellbeing by supporting a strong economy and a healthy environment.

Introduction

'Biosecurity' means protecting the economy, environment and community from the negative impacts of animal and plant pests, weeds and diseases. Biosecurity risks include insects, pest animals, weeds and animal and plant diseases, both on land and in water.

Broad goals for biosecurity

Biosecurity is about risk management. The broad goals for biosecurity in NSW are to manage pest, weed and disease risks by:

- preventing their entry into NSW
- quickly finding, containing and eradicating any new entries
- effectively minimising the impacts of those pests, weeds and diseases that cannot be eradicated.

Scope of strategy

The draft NSW Biosecurity Strategy covers risks to primary industries, the natural and built environments, and our lifestyle. The draft strategy deals with the management of risks from pests, weeds and diseases that affect:

- plant and animal industries, including agriculture, aquaculture, recreational and commercial fishing and forestry
- biodiversity and the natural environment (terrestrial and aquatic)
- human health, through direct transfer of diseases from animals to humans (such diseases are known as zoonoses), or indirectly through the ingestion of pathogen-contaminated food
- lifestyle, recreation and social amenity
- infrastructure and service industries, including energy, shipping and water supplies.

Many of the treatments used to manage biosecurity risks include chemicals such as pesticides, herbicides and antibiotics. The draft NSW Biosecurity Strategy does not address chemical contamination and residue issues, but it acknowledges that these chemicals must be used appropriately to avoid chemical contamination and the development of resistance.

The draft NSW Biosecurity Strategy also does not address the following:

- animal welfare issues
- direct human health issues
- genetically modified organisms and crops.

Aims and objectives of the strategy

The draft NSW Biosecurity Strategy outlines how government, industry and the community need to work together to identify and manage biosecurity risks. It **aims** to highlight why biosecurity is important for NSW. It also identifies the outcomes that will be achieved by implementing the strategy, and what needs to be done to manage biosecurity risks effectively.

The **objectives** of the draft strategy are to:

- communicate a clear vision and build support for a strong and integrated biosecurity system for NSW
- help achieve the government's priorities as set out in *NSW 2021*, particularly by contributing to the goals for a strong economy and strengthening local environments and communities

- help meet NSW's obligations under national biosecurity agreements
- provide the foundation for all stakeholders – government agencies, non-government organisations, industry and community groups – to work together, and help to make best use of the synergies across all groups
- identify a clear set of outcomes and actions that are meaningful to the NSW community as a whole
- provide a framework for more detailed planning, monitoring and reporting of biosecurity programs.

The draft strategy outlines the roles and responsibilities of the government and non-government sectors, industry and community across the entire biosecurity spectrum. It defines how key stakeholders can work together to minimise, respond to and manage biosecurity risks, and it provides a framework for decision-making and actions at state level.

We recognise that biosecurity risks can change very quickly. The NSW Biosecurity Strategy will be periodically reviewed and evaluated so that any necessary changes can be made.

Why is it important to manage biosecurity risks?

Effective biosecurity is important because it contributes to our wellbeing and prosperity. We need to manage biosecurity risks effectively to protect the economy, food security, our natural environment and the community.

Economy

Many international markets prefer Australian products because they are free of many of the pests, weeds and diseases found in other parts of the world. Similarly, our ability to trade animal and plant products with other Australian states and territories is also underpinned by our biosecurity status. Some pests and diseases that exist in Australia today are found only in specific parts of the country. Those parts that don't have them don't want them. NSW agricultural and forestry industries are heavily export focused, and our strong biosecurity status is crucial for developing and maintaining both overseas and domestic markets. This status provides significant economic advantages, as well as environmental and social benefits. NSW's crop and livestock production has a gross value exceeding \$9 billion each year and accounts for about 20% of Australian agricultural production, all of which is protected by maintaining our biosecurity status.

To access new, and safeguard existing domestic and international markets, it is important that we have world class quality assurance processes and schemes in place. The financial consequences of temporary or prolonged market closures due to pest or diseases outbreaks can be enormous. For example, a 12 month outbreak of foot and mouth disease would reduce Australia's gross domestic product by between \$8 billion and \$13 billion, including a loss of revenue for NSW livestock industries of over \$3,000 million. A 12 month long incursion of the wheat disease Karnal bunt would result in a loss of \$350 million. With a national outbreak of citrus canker, losses would be in the order of \$410 million, and an outbreak of highly pathogenic avian influenza infecting people as well as birds could cost over \$10,000 million.

Pests and diseases also have a negative impact on industries other than those directly involved with agriculture. For example, during the foot and mouth disease outbreak in the United Kingdom in 2001, the tourism industry in the Lakes District lost a whole season of income and total losses to the country were estimated to be in the order of £8 billion.

The failure of our wheat crops and the resulting loss of export markets for wheat due to a Karnal bunt infection in Australia would see a substantial decrease in activities at grain export terminals. This could lead to job losses in the transport sector and at ports around the country.

Failure to protect our marine environments from the introduction of new marine pests and diseases will reduce the value of marine tourism. The direct value of marine tourism and

recreational activities in Australia is estimated to be \$12 billion, which equates to 19% of the total value of the tourism sector for Australia (\$64 billion in 2009–10).

Food security

There is no doubt that the people of NSW, along with others around the world, share a heightened awareness of the constraints facing world food production.

Modelling indicates that global food output will need to have doubled between now and 2050 to meet expected demand. It is clearly important that we do everything we can to protect our food production capacity from pests, weeds and diseases that negatively affect productivity; this includes protecting our stored and dried food products and our agricultural resources.

Environment

Effective management of biosecurity risks helps to protect our biodiversity and our distinctive ecosystems and natural environment.

Pests and weeds are among the biggest threats to biodiversity and the natural environment in NSW. Around 19% of native terrestrial mammal species in NSW have become extinct since European settlement. Pest animals (especially cats, foxes and rabbits) are considered to be the primary causes of most of these extinctions. Pest animals are also contributing to the decline of many other native animals (in particular, bird and reptile species), including approximately 40% of NSW's threatened species.

Over 1350 species of exotic plants have become established in the wild in NSW. At least 300 of these weeds are highly invasive and pose a substantial threat to biodiversity. A large number of these are escaped garden plants. Many weeds are widespread and beyond the scope of eradication or containment programs.

The number and distribution of introduced species becoming established in the natural environment is increasing, with around 10 new species being identified each year. Pest populations usually have high reproductive capability, can colonise new areas rapidly, and recover quickly after targeted control programs to control their numbers have concluded. The absence of natural predators or environmental control measures often adds to this impact.

Community

Biosecurity risks, if not adequately managed, can directly affect both human health and people's ability to enjoy their surroundings. Managing biosecurity risks directly benefits the community.

Human health. Between 1940 and 2004, 60% of the new diseases that appeared in people worldwide came from animals. Avian influenza (bird flu), swine flu, mad cow disease, Nipah virus, SARS (severe acute respiratory syndrome), AIDS, rabies, Hendra virus, anthrax, Menangle virus, Lyssavirus, and many other diseases can and do move from animals to people, causing severe disease in many cases. Biosecurity management aims to decrease the impact of these zoonoses on people.

If they are not controlled and are allowed to contaminate food, organisms found in livestock, such as the bacteria *Salmonella*, pathogenic *Escherichia coli*, *Campylobacter* and *Listeria*, can also cause disease and death in people.

Unfortunately many of the chemicals and antibiotics used to treat pests and diseases can also adversely affect human health, so part of our responsibility is to ensure that they are used appropriately. Failure to do so can lead to contamination of food. Inappropriate or long-term use can also lead to pests, weeds and diseases developing chemical or antibiotic resistance, so looking for alternative methods of pest, weed and disease control is also a vital part of managing biosecurity risks.

Public amenity. Australians value their outdoor way of life. Some pests, weeds and diseases, if they are not managed, can threaten these values. Biosecurity risks such as the red imported fire ant (RIFA) can have a major impact on lifestyle. RIFA, originally from South America, has

invaded parts of the southern USA and an area around Brisbane, Queensland. In the USA these ants have caused severe problems where they have been allowed to spread. Their vicious bite can kill animals and severely limit people's enjoyment of outdoor activities. Before a control program was undertaken in the affected suburbs of Brisbane, everyday activities such as walking and backyard barbecues had become impossible.

Many weeds can also have detrimental effect on people, causing severe illnesses such as asthma.

What happens when biosecurity risks get out of control?

The potential impacts of not managing biosecurity risks effectively are best demonstrated by some facts:

- Between 1940 and 2004, 60% of new human diseases came from animals. These include diseases such as avian influenza, mad cow disease, ebola, AIDS and SARS.
- A 12 month outbreak of foot and mouth disease in Australia could cost the economy between \$8 billion and \$13 billion.
- Indonesia stopped Australia's \$100 million a year live cattle export trade following an anthrax incident in NSW.
- Hendra virus, which is present in flying fox colonies in Eastern Australia, has been responsible for the deaths of four people in Queensland.
- Weeds and pest animals are estimated to cost the NSW economy over \$1.3 billion a year in losses to agricultural production and the cost of control measures. This does not include impacts on biodiversity, landscape, tourism and water.
- One case of mad cow disease in Japan in 2001 resulted in a 60% drop in beef consumption within a month.
- The long-term survival of many native plants, including paperbarks, tea trees and many rainforest shrubs, is threatened by myrtle rust.

Who are the key players in biosecurity?

Government, industry, and the community as a whole all have a role to play in the management of biosecurity risks.

Government

Governments at the national, state and local levels all have important roles to play in biosecurity risk management. It is important to remember that pests, weeds and diseases do not recognise state borders. This means that biosecurity activities must be carried out within a national framework, with all governments collaborating closely to deliver positive outcomes.

NSW is a signatory to the Intergovernmental Agreement on Biosecurity (IGAB) and its complementary emergency response agreements, including the Emergency Animal Disease Response Agreement (EADRA), the Emergency Plant Pest Response Deed (EPPRD) and the National Environmental Biosecurity Response Agreement (NEBRA). These agreements outline the roles and responsibilities of, and cost-sharing arrangements among, all Australian governments and industry bodies that are signatories to them, in regard to responding to emergency animal and plant pest and disease incidents. It is important that costs are shared on the basis of the principles of the 'risk creator' and the 'beneficiary'.

The NSW Government plays an important role in the management of biosecurity risks by leading the development and implementation of policies and strategies that encourage a comprehensive and responsive biosecurity system and by ensuring that there is a strong legislative and regulatory framework underpinning the system.

The government will help industries and the community to manage biosecurity risks by:

- building awareness about biosecurity
- leading and coordinating prevention, preparedness, responses and recovery programs for outbreaks of significant emergency pests, weeds and diseases
- helping to develop non-regulatory quality assurance and Interstate Certification Agreements that support market access arrangements
- protecting and managing natural areas, including National Parks, through weed management and feral animal control
- coordinating diagnostic, surveillance, tracing and monitoring systems
- conducting research in priority biosecurity areas.

Industry

Industries benefit from effective management of biosecurity risks: they gain greater market access by demonstrating freedom from disease and projecting a clean, green image to consumers.

For the agricultural, fishing and aquaculture, and forestry industries this might mean increased productivity and healthy and safe products. Tourism and recreation industries reap the benefits of sound biosecurity management through increased numbers of tourists enjoying NSW's healthy and sustainable environments.

Industry groups and their members play an important role in achieving these outcomes.

In some cases, industries also contribute to increased biosecurity risks, for example through inappropriate use of chemicals and pesticides or failure to manage risks (e.g., allowing diseased animals to move from property to property). Industries such as international shipping, through contaminated ballast water or biofouling (the build-up of living organisms on ships' hulls), or land-based transport, through the spread of pests and weeds on machinery and equipment, are becoming areas of increasing focus for biosecurity management.

Industries must continue to play an important role in biosecurity management by:

- identifying and managing biosecurity risks that may threaten their or other businesses
- working with governments and other stakeholders to develop and implement policies and strategies that will protect Australia and NSW's biosecurity status
- educating their members about their roles and obligations
- being vigilant by keeping a watchful eye out for unfamiliar pests, weeds and diseases
- reporting biosecurity risks
- participating in responses to biosecurity incursions
- complying with regulations, especially in relation to record-keeping and reporting biosecurity incidents
- participating in the development and implementation of industry standards, guidelines and codes of practice
- participating in the development of response agreements, cost-sharing arrangements and allocation of resources where appropriate.

Community

Active participation of the community is an essential component of effective biosecurity risk management. Members of the community can be very effective 'eyes and ears' with respect to the detection of biosecurity incursions. In addition, the ongoing management of established pests, weeds and diseases greatly benefits from the participation of the community in voluntary programs such as Landcare.

Members of the community have a general responsibility for:

- being aware of, and managing, biosecurity risks where they occur on their land or in their animals or plants (e.g., by undertaking weed control on private lands and waterways)
- quickly reporting significant or unusual pests, weeds and diseases
- participating in community programs that build resilience in the natural environment and help reduce the risks from pests, weeds and diseases.

Managing increasing risk

New challenges for biosecurity

Biosecurity risk management includes measures to prevent the entry, establishment and spread of pests, weeds and diseases that could cause significant harm to the economy, environment or people. It is recognised that biosecurity risks cannot be reduced to zero however processes will be put in place so that a high level of protection is provided.

Risk assessment processes and decision-making frameworks are in place to provide a transparent mechanism for assessing imports and exports, but biosecurity risks are constantly changing. In the past, Australia's geographic isolation helped protect us from external threats. This is no longer the case, and we are becoming increasingly vulnerable to the entry of pests, weeds and diseases. Some of the key factors influencing increasing biosecurity risks are described below.

Globalisation of trade

Globalisation is integrating the world economy and increasing the volume and range of products traded internationally. Rapid growth in tourism and in passenger and cargo movements is increasing the risk of pest, weed and disease incursions, despite the best efforts of border security.

For example, shipping is a vital component of Australia's trade, in particular for our mining and gas industries. Each year between 2002 and 2009 there were, on average, 12,500 vessel entries into Australian waters, more than half of which were bulk carriers. The number of international vessels arriving at Australian ports is expected to continue to rise with increases in trade volumes. Studies have shown that 70% of introduced marine pest species in Australia arrived here in the ballast water, or on the hulls, of vessels. The need for appropriate management of marine invasions is now being widely acknowledged and acted upon by the shipping industry and governments internationally.

NSW is on the doorstep of some of the world's largest and fastest-growing food markets, including China, India, Korea, Indonesia and other markets of the Asia Pacific. NSW is also well positioned to provide fresh produce for markets in Europe and America, in particular during the Northern Hemisphere winter months, to service seasonal markets for perishable products such as cherries and table grapes. Rising population, incomes and urbanisation in developing nations are increasing the demand for NSW products, including meat, milk, fruit and vegetables. In addition, Free Trade agreements with countries such as Singapore, Thailand, the USA and New Zealand are opening up new markets for NSW food.

Population growth

The world's rapidly growing human population, combined with changing demographics, migration patterns and land clearing, is placing increased pressure on natural ecosystems and driving competition for resources. Urbanisation affecting the natural environment, as well as the growing popularity of small 'hobby' farms, is extending the interface between urban and rural areas ('periurban' areas), increasing the risk of animal and plant pests and diseases affecting food production, the environment (particularly wildlife) and human health. This is highlighted by the fact that 60% of emerging infectious diseases in humans have originated in animals, and the vast majority of these diseases have been from wildlife. The increasing pressure of human populations encroaching on areas previously populated by wild animals suggests that this trend is likely to continue.

Climate change

Although the precise impact of climate change on biosecurity risks to NSW is not clearly understood, climate change and variability are recognised as major threats to environmental

systems and thus to industries such as agriculture. Over the coming decades, NSW is expected to experience more extreme weather events and increases in average temperatures.

The predicted change in weather patterns and local conditions is likely to favour the establishment and spread of some biosecurity risks but limit the distribution and impact of others. For example, the geographic distribution of some insects is likely to alter as a result of climate change. Insects can help pollinate plants but can also damage crops. Changes in insect distribution will affect the horticultural and cropping industries. Some insect-borne livestock viruses (arboviruses), such as bluetongue, three-day sickness and Japanese encephalitis, are all likely to spread farther south and to therefore cause disease in areas where they are not currently found.

The extent to which weed species will spread, and the possible impacts on scarce resources such as productive agricultural land and water, remain unclear. In addition, damaging tropical and subtropical pest species (e.g. cane toads, cattle ticks and tilapia fish) may increasingly move south as the climate there becomes warmer.

Imports of plant and animal materials

Every year new plant and animal materials are imported into Australia. Without these new materials, our industries would cease to prosper and develop and would slowly lose competitiveness on world markets. Our plant industries rely on new genetic material to develop varieties with improved productivity and resistance to pests and diseases. However, this new material brings with it its own challenges that need to be carefully assessed and managed. A number of plant species that were legally introduced into Australia have subsequently proved to be invasive in NSW environments and are now considered pests. It is significant that 70% of weeds in Australia are garden escapees. Early detection of new weed species is an ongoing challenge. Left undetected, 'sleeper' weeds can be costly to eradicate and can have significant impacts on industry and the environment. For example, if we had not been able to identify tropical soda apple, this weed may still be spreading across NSW unchecked.

In addition, some animal and plant materials enter Australia illegally and therefore go unchecked, posing biosecurity risks that are initially unmanaged. The biosecurity risks posed by these illegal introductions are significant. For example, the illegal introduction of contaminated meat products remains the most likely pathway for the introduction of foot and mouth disease into Australia. The consequences of a single outbreak of this disease would be devastating for our national economy.

Competing priorities for resources

There have always been, and will continue to be, competing priorities for resources and funding in both the private and the public sector. In the current economic climate, this is unlikely to change. The global financial crisis has placed significant pressures on government and industry, and for many businesses maintaining profitability in recent years has been increasingly challenging. In such times, active and constructive partnerships and clear decision-making process are crucial.

The future of biosecurity management in NSW

Australia's biosecurity regulations are among the toughest in the world, and NSW has a strong track record in safeguarding our \$9 billion primary industries sector and natural environment from pests, weeds and diseases. Important service industries and overall community wellbeing have also been protected. However, given the diverse nature of the challenges that we face, we must find smarter ways to manage biosecurity risks to ensure that optimum use is made of scarce resources.

NSW needs to:

- develop and implement innovative and effective biosecurity systems, for example, for pest, weed and disease surveillance and product tracing

- train and develop people so that we have the full range of skills and capabilities we need
- form closer partnerships among government, industry and the community
- create a clear understanding in the community of the value of biosecurity
- develop and implement a contemporary and responsive legislative and regulatory framework.

Most importantly, processes are required that support good decision-making underpinned by a robust analysis of risks. Risk analysis involves identifying high-risk biosecurity threats, prioritising activities, developing and delivering targeted biosecurity programs, and providing for an equitable spread of costs for delivering those programs.

Of course, no measure or strategy can completely remove the risk of a pest, weed or disease entering, or becoming established or spreading in, NSW. Nor is the eradication of all biosecurity risks a technically feasible or realistic objective. Consistent with the Australian Government's definition of acceptable level of risk, NSW aims to minimise biosecurity risks while simultaneously maximising trade.

The draft NSW Biosecurity Strategy communicates a vision for an integrated biosecurity system and outlines outcomes, future directions and proposed actions for implementation.

The **outcomes** of this draft strategy are that:

- 1. Biosecurity contributes to sustainable economic growth.**
- 2. Biosecurity protects the environment and the community.**
- 3. Biosecurity is underpinned by a responsive and consistent legislative framework.**
- 4. Biosecurity is a shared responsibility.**

These outcomes, together with relevant future directions and actions, will be considered in the following sections of the draft strategy, and they are also summarised in the **Outcomes summary table**. A detailed implementation plan that will specify actions, targets and time-frames for delivery against the outcomes will be developed following finalisation of the NSW Biosecurity Strategy.

Outcomes 1 and 2

1. Biosecurity contributes to sustainable economic growth.
2. Biosecurity protects the environment and community.

Background

Management of biosecurity risks contributes to sustainable economic growth, protecting the environment and improving community wellbeing. Outcomes 1 and 2 are interdependent, and although similar directions and approaches may be taken to achieve them, each may require different specific actions.

Agricultural industries in NSW produce more than \$9 billion worth of food and fibre products each year. NSW is Australia's most valuable agricultural state, with over 40 000 farmers producing meat, milk, wool, grains, and horticultural crops such as wine grapes, fruit and vegetables.

Early detection, identification, eradication or effective management of pests, weeds and diseases is critical for maintaining and increasing productivity and market access, and it underpins the continued economic success of our industries.

Effective management of biosecurity risks is also important to other industries. For example, our timber industry contributes nearly \$1 billion to the NSW economy each year, and the state's seafood industry employs about 4,000 people and generates in excess of \$0.5 billion of economic activity each year.

Managing biosecurity risks is equally important for a healthy environment and for community health and wellbeing. A number of significant biosecurity risks, including the escape of garden plants and their proliferation as weeds, and the illegal importation of birds, fish and other animals, continue to threaten our native fauna and flora. NSW has over 850 national parks and reserves that provide a range of recreational facilities and tourist attractions, including rainforests, snowfields, grasslands and cultural sites. Our state forests and marine parks also provide the community and visitors to NSW with abundant recreational opportunities.

Achieving these outcomes

Future directions

To achieve these outcomes, NSW will:

1. Improve diagnostic, surveillance, reporting and tracing systems.
2. Improve our capacity to respond to biosecurity emergencies.
3. Improve the management of established pests, weeds and diseases.
4. Strengthen biosecurity science and research.
5. Increase the number of well-trained and resourced people.

1. Improve diagnostic, surveillance, reporting and tracing systems

Timely detection, notification and identification of a suspected animal or plant pest or disease is critical to ensure that it does not have time to establish and spread. Landowners, occupiers and the community all have important roles to play in the early detection of biosecurity risks. Timely reporting of outbreaks of pests, weeds and diseases is vital to ensure that steps can be taken quickly to contain and eradicate new outbreaks.

Notification. The NSW government has established telephone hotlines and web-based systems for reporting suspected pests, weeds and diseases. It is important that we continue to promote these existing systems and develop and implement innovative ways to simplify and further encourage early identification and notification.

Diagnosis. Accurate and timely diagnosis of plant and animal pests and diseases is crucial, as management actions will vary depending on the type of risk. It is also fundamental to credible surveillance and tracing systems. The Elizabeth Macarthur Agricultural Institute at Camden, NSW, is part of a national network of diagnostic facilities and is recognised for its world-class research into the development and delivery of improved diagnostics. Given the large numbers of pests, weeds and diseases in Australia, it is crucial that we continue to develop our diagnostic capabilities in a collaborative manner. Correct and timely identification of a potential biosecurity risk could save millions of dollars in production or markets that would otherwise be lost if an industry had to shut down while a diagnosis was being made.

Surveillance. Surveillance helps with early detection of biosecurity threats, allowing appropriate management actions to be implemented in a timely manner. It also helps to track the spread of pests, weeds or diseases. The ongoing risks of introduction of new pests, weeds and diseases mean that surveillance systems have to be well coordinated and cost effective. Good surveillance systems also provide the necessary evidence of absence of pests and diseases for ongoing market access.

NSW's animal disease surveillance programs, which are conducted by the government with the support of industry, have helped to eradicate major endemic diseases such as brucellosis and tuberculosis in cattle. Plant disease surveillance in NSW, on the other hand, has largely been reactive and has lacked an emphasis on active surveillance to detect new incursions.

The current systems must be fundamentally reviewed so that surveillance activities are better prioritised and coordinated. Robust science and risk-management frameworks must underpin the prioritisation of surveillance activities. Surveillance activities that are effectively prioritised and coordinated will provide us with consistent and compatible data that can then be accessed not only within NSW but also nationally.

Traceability. Product traceability is an increasingly important element of the export certification demanded by NSW's valuable food export markets. The ability to trace a product posing a biosecurity risk back to its source is an essential part of a robust biosecurity system for demonstrating best-practice biosecurity control. Being able to demonstrate traceability from origin to consumer helps to safeguard Australia's reputation as a safe and reliable source of food and other agricultural and horticultural products.

Being able to trace livestock and plants is also an essential part of managing disease outbreaks and control programs. Knowing where the livestock or plants came from, how they got there, whether any other animals or plants could have been infected, and whether the affected livestock or plants have been taken to other parts of the state is vital information.

NSW is presently implementing the NLIS (National Livestock Identification System) across the major livestock industries, and this is already helping us to track the movements of some livestock and the spread of weeds. This system must be further developed and expanded if it is to reach its potential, and systems with similar aims need to be developed for the plant-based industries.

Proposed actions

To improve diagnostic, surveillance, reporting and tracing systems, NSW will:

- improve early detection and reporting systems, drawing on the latest technologies and diagnostics
- ensure that surveillance activities are underpinned by robust science and prioritised according to risk
- improve current tracing systems so that they meet export market requirements
- continue to develop more efficient ways of demonstrating proof of freedom from pests and diseases
- increase focus on coordinated surveillance activities and strategic information management and accessibility
- develop and implement effective surveillance systems in natural environments
- consider including plant industries and peri-urban properties in property registration and traceability systems.

2. Improve our capacity to respond to biosecurity emergencies

The Intergovernmental Agreement on Biosecurity and its associated deeds and agreements (EADRA, EPPRD and NEBRA) define a number of significant animal and plant pests or diseases as emergency pests and diseases. These deeds and agreements also document how new pests and diseases are to be assessed to determine whether they require an emergency response. Most of these pests or diseases are presently exotic to Australia and NSW. However some, such as Hendra virus and anthrax, do occur in Australia but are limited in their distribution and occur infrequently.

Being prepared and responding quickly are the keys to avoiding or limiting the devastating impact of an emergency pest, weed or disease outbreak. NSW responds to a substantial number of biosecurity threats each year, and with the increased globalisation of trade and tourism it is very possible that the number of annual incursions will increase.

NSW has a sound reputation as a leader in biosecurity emergency response management. We have a well-established emergency management framework (NSW State Disaster Plan) that is supported by national plans. Consistent with the theme that pests, weeds and diseases do not recognise borders, NSW works closely with the Commonwealth and with other states and territories to manage biosecurity risks. This enables a coordinated response to emergencies by all agencies that have responsibilities for emergency management.

A number of established agricultural industries and businesses also have plans in place that give details of their systems for minimising biosecurity risks, as well as their emergency prevention, preparedness, response and recovery arrangements. However, newer and/or smaller agricultural industries, as well as the forestry and aquatic sectors in general, are less well prepared for biosecurity emergencies. In addition, systems for addressing biosecurity risks to the environment have been identified as requiring further development.

It is critical that it is widely understood that investment in early detection and emergency responses is far more cost-effective than long-term management of established pests, weeds and diseases. New and emerging pests, weeds and diseases and risks need to be considered, as does the extent to which climate change and other factors will influence the spread of established pests, weeds and diseases.

Proposed actions

To improve our capacity to respond to emergencies, NSW will:

- identify and prioritise biosecurity threats across both aquatic and terrestrial environments
- improve biosecurity prevention, preparedness, response and recovery across all sectors, but particularly where gaps currently exist, for example in fisheries and forestry industries and the environment
- improve cross-jurisdictional collaboration in biosecurity management, in particular in relation to emergency management and early detection.

3. Improve the management of established pests, weeds and diseases

Biosecurity involves managing risks and making decisions on the basis of an understanding of the potential threats, the likely pathways of their introduction and spread, and the factors influencing change. Ideally, intervention should be applied to the areas of highest risk and return.

Over 1350 introduced plants have become naturalised in NSW, and more than 300 of them are having significant impacts on the environment. Weed species pose some of the greatest threats to biodiversity and primary production in NSW. Ongoing introductions of non-native plants, through trade of plant materials, dispersal of aquatic weeds during flood events and transport of fodder across regions, pose substantial challenges to the NSW Government, industry and the community. One of the most effective ways to minimise the impacts of invasive plants is to prevent their initial incursion. Once weeds get into a new area, they have the ability to rapidly establish and successful control often depends on a timely and rapid response.

Once it has been determined that a pest, weed or disease cannot be eradicated, appropriate management arrangements need to be implemented. A recent example of this occurred with myrtle rust. Following an unsuccessful nationally supported emergency response that attempted to eradicate myrtle rust, it was agreed that eradication was not possible. A national program of asset protection and research is now being undertaken to learn how myrtle rust will affect Australian plants and how it can be managed in the future.

Proposed actions

To manage established pests, weeds and diseases more effectively, NSW will:

- develop and adopt an integrated decision-making framework to prioritise and inform decisions on where to direct investment
- improve the effectiveness of local and regional pest, weed and disease management activities
- develop biosecurity risk mitigation strategies for established pests, weeds and diseases in collaboration with interstate jurisdictions and industries so that arrangements are harmonised across borders.

4. Strengthen biosecurity science and research

Science and research are critical to achieving effective biosecurity. They provide detection tools for diagnosis and surveillance, as well as evidence-based strategies and solutions to eradicate or manage biosecurity risks. All these activities must meet community expectations regarding environmental protection and human health.

Science provides enormously valuable inputs into managing risk and uncertainty, and ultimately into the effectiveness of any decision. For example, it is through science that we identify new technologies and approaches to new and emerging biosecurity challenges.

This draft strategy recognises that the capacity to prevent, respond to and manage biosecurity risks in NSW depends upon an effective and responsive research capability. Our underpinning science is used to inform risk analyses, policy development and decision-making.

Tactical research and development enables the prevention of, preparedness for, and rapid response to, immediate biosecurity challenges. This includes the development of new and improved diagnostic techniques for existing and emerging pests, weeds and diseases and of integrated pest and disease management systems.

Strategic research and development anticipates and monitors future and emerging biosecurity challenges. This includes bio-economic and population modelling and forecasting of the impacts of climate change on the prevalence and range of pests, weeds and diseases.

Proposed actions

To strengthen biosecurity science and research, NSW will:

- develop biosecurity research priorities in collaboration with industry and the Commonwealth, and with other states and territories
- work with the Commonwealth and with other states and territories and industry to develop a nationally integrated biosecurity diagnostic network
- strengthen research partnerships and encourage research to address knowledge gaps, in particular in the areas of climate change impact, social science and resistance to antibiotics and chemicals
- improve capacity to manage animal pests using techniques that incorporate best-practice animal welfare outcomes and use remote sensing or other innovations
- invest in biological control programs for key environmental weeds.

5. Increase the number of well-trained and resourced people

It is critical to continue to build on our capability and capacity to achieve biosecurity outcomes. This means that we must have people with the right training, skills and knowledge, as well as the technology, tools and infrastructure to help them in their work. The government does not need to provide all of these resources, but it has an important coordinating role in relation to their availability.

People. Today, biosecurity requires people with a broader range of skills than ever before, including in policy development, project management, risk assessment, surveillance techniques, research and diagnosis, compliance monitoring, management of service providers, conflict management, and community engagement, to name a few.

Ensuring that we have enough people with appropriate skills is an important element of building a modern biosecurity system. We need to continue to build baseline capacity within the NSW public sector but to also look at ways of sharing these responsibilities through partnerships with the private sector and industry.

Technology. Equally important for good biosecurity outcomes are the development and adoption of new technology.

NSW has a strong track record of developing and adopting new technologies for biosecurity, resulting from:

- an innovative approach based on a close working relationship between research and diagnostic functions, resulting in quick availability of the latest technology

- a willingness to invest in new technology as soon as it becomes available
- a willingness to invest in training our people
- an integrated 'all sectors, all hazards' model for responding to emergency pest, weed and disease incidents, whether terrestrial or aquatic; such a model includes surveillance, field operations, laboratories, extension and research
- integration with national strategies such as the National Plant Biosecurity Strategy, and participation in sub-committees on Animal Health Laboratory Standards and National Plant Health Diagnostic Standards.

Both the public and private sectors need to continue to invest in new technology and people so that we can detect and eradicate pests, weeds and diseases quickly.

Information management systems. Information management systems are also essential tools in the biosecurity system. They support surveillance, incursion responses, program management and communications.

NSW has in place a number of excellent systems for detecting and tracing the spread of animal and plant diseases and pests. However, there is potential to improve on the accessibility of information and make more strategic use of the information gathered to allow us to take a more proactive approach to surveillance.

Proposed actions

To increase the number of well-trained and -resourced people, NSW will:

- develop skills, knowledge and capability for the delivery of biosecurity activities within government and among stakeholders
- continue to develop, adopt, and invest in new technologies such as geospatial solutions, hand-held devices and web interfaces
- develop and adopt information management systems that allow for strategic information management and easy access to information.

Outcome 3

3. Biosecurity is underpinned by a responsive and consistent legislative framework.

Background

A consistent and integrated approach to managing biosecurity risks requires a legislative framework that is easily understood and consistently applied. The effectiveness of any biosecurity system is underpinned by the quality of its regulation and compliance programs.

The impacts of serious biosecurity incidents have the potential to extend far beyond a single area or jurisdiction. Robust, harmonised regulation and compliance programs therefore need to be in place to support efforts to prevent, contain, eradicate and manage biosecurity risks across the spectrum.

The Australian Government has responsibility for international trade and travel movements into and out of Australia, quarantine and border security.

The states and territories have responsibility for land and water management within their jurisdictional boundaries. State and territory governments have progressively implemented their own legislation and policies to respond to state and territory level biosecurity issues and challenges.

Much of NSW's biosecurity legislation was developed in the early part of the last century and has been amended on an ongoing basis since then. The NSW Government has started a review of all biosecurity-related legislation with a view to developing a new NSW Biosecurity Act. It is intended that this new legislation will provide a consistent and responsive legislative and regulatory framework.

The aim of the legislation will be to contribute to economic growth and to protect the environment and community within NSW. The new legislation will adopt a risk-based approach for responding to pests, weeds and diseases. Its purpose will be to:

- encourage better self-management of biosecurity risks
- clearly define the rights, responsibilities and obligations of government, industry and the community with respect to biosecurity
- support and comply with national policies and commitments
- achieve compatibility with legislation in other jurisdictions
- meet international standards and not jeopardise overseas and domestic market access
- reduce red tape by providing support for industry co-regulation and quality assurance programs
- define cost-recovery mechanisms
- facilitate emergency responses and easy transition to longer-term management of biosecurity risks.

Achieving this outcome

Future directions

To achieve this outcome, NSW will:

1. Implement a consistent and contemporary legislative framework.
2. Reduce red tape and support market access.
3. Encourage industries, businesses and stakeholders to self-manage biosecurity risks.

1. Implement a consistent and contemporary legislative framework

NSW currently has about 20 Acts dealing with different aspects of biosecurity management. For example, there are separate Acts relating to plant pests, plant diseases, animal pests, animal diseases, noxious weeds and fish biosecurity issues, to name a few.

Although individual Acts in NSW have been reviewed and amended over the years, there has never been a comprehensive review of all biosecurity-related legislation. As a result, there is duplication and inconsistency among Acts, particularly in relation to emergency management, compliance provisions and enforcement powers.

The existing legislation focuses largely on government management of emergency responses and ongoing control programs. In many areas, it relies on outdated regulatory tools that are difficult to adapt to contemporary biosecurity management requirements.

There is a need to ensure that our legislation is consistent with national policies and commitments and that it is compatible with that of other states and territories – particularly those bordering on NSW – to enable more effective management, enforcement and compliance activities.

The NSW Government has a clear role to play in biosecurity management, but other stakeholders – in particular industry and the community – also have important roles. The new legislation will clarify the rights, responsibilities and obligations of these stakeholders and empower better self-management of biosecurity risks.

The new legislation will be informed by NSW's past experience in biosecurity management. Time-frames and powers will better match the circumstances, and a broader range of management tools than is currently available will be developed. This will provide for more effective and efficient management tools that reflect the level of risk.

Proposed actions

To make the NSW legislative framework consistent and contemporary, NSW will:

- review existing NSW legislation, taking into consideration legislation in other jurisdictions
- develop and implement a new NSW Biosecurity Act.

2. Reduce red tape and support market access

Access to export markets for our food products depends on us being able to demonstrate that we have credible and high-quality systems and processes in place to show that our products are free from pests and diseases. Our regulatory systems need to be robust and trustworthy. At the same time, we need to look at ways to simplify and streamline regulatory frameworks so as not to overburden our industries. This will allow them to continue to be competitive now and into the future.

With NSW currently administering many Acts that deal with biosecurity, there is considerable scope to develop legislation that is more responsive to biosecurity risks and can be implemented more efficiently by government and industry. Removing inconsistencies and duplication will reduce the risk of error, reduce red tape, and help to provide cost savings for industry and government through decreased regulatory burden.

The legislation will allow for more industry-based codes of practice and accreditation and compliance schemes that can be audited by third parties while retaining the government approvals processes required by interstate and overseas markets.

Proposed actions

To reduce red tape and support market access, NSW will:

- streamline certification systems
- develop an audit framework based on risk and compliance history
- streamline regulation.

3. Encourage industries, businesses and stakeholders to self-manage biosecurity risks

In the past, biosecurity risks have been managed largely by government through regulatory tools such as bans and restrictions, which are enforced by inspectors.

In recent years there has been a move towards partnerships between government, industry, and the community, with each sector taking an active role in reducing the impacts of biosecurity risks. All stakeholders have an obligation to manage biosecurity risks. Biosecurity regulation needs to recognise and formally acknowledge this shift and provide support for a range of approaches to managing biosecurity risks, such as through codes of practice and best-practice processes and procedures. This will help us to manage biosecurity more effectively by making the best use of available resources and people. A key area where this can occur is through auditing, surveillance, and reporting by industry and local community members of new pests, weeds and diseases.

Proposed actions

To encourage industries, businesses and stakeholders to self-manage biosecurity risks, NSW will:

- work with industry to develop regulatory standards and, where appropriate, third-party auditing schemes
- support industry to develop best-practice guidelines.

Outcome 4

4. Biosecurity is a shared responsibility

Background

'Biosecurity is a shared responsibility' is the final and over-arching outcome of this strategy. Engagement of all stakeholders – industry, other jurisdictions, and (most importantly) the wider community – is imperative for good biosecurity outcomes in NSW. For NSW environments, industries and communities to stay healthy and prosperous, biosecurity must be recognised as a shared responsibility by everyone.

Achieving this outcome

Future directions

To achieve this outcome, NSW will:

1. Engage the community in biosecurity management.
2. Build strong partnerships with industry, the community and other jurisdictions.

1. Engage the community in biosecurity management

Biosecurity is important to the health, wellbeing and prosperity of everyone who lives in NSW. It is in everyone's interest to help create a biosecure NSW. The value of biosecurity needs to be explained well so that everyone can understand its importance, namely what it means for them and for future generations.

For example, members of the community – be it private landholders, bushwalkers or tourists – are often best placed to detect a new pest, weed or disease. Early identification and reporting of new incursions is vital and greatly increases the chances of eradication. Tourists, including Australians returning from overseas or interstate, need to make sure that they do not return with biosecurity risk materials that may endanger NSW or Australia's biosecurity status.

The tools to identify and report biosecurity risks must be widely promoted and readily accessible. It is important that people know what they are looking for and why, what to do if they find it, who to notify, and what might happen after they report it. Investing in education and community engagement will achieve:

- greater commitment to pest, weed and disease reporting
- greater support for ongoing prevention work
- greater understanding and compliance during an emergency response
- greater support for recovery efforts.

Engaging the community in biosecurity matters is a major task for government. Industries and non-government organisations are also actively involved in keeping pests, weeds and diseases out of NSW, as well as in managing those that are already here. They also have an important role to play in communicating their successes and challenges to the community.

The wider community is becoming increasingly aware of environmental issues. Continuing urbanisation has meant that the community has become more aware of the value of the natural environment. People expect a quick and effective response to risks to the environment. In addition, many community members actively participate in volunteer programs to help protect the environment.

However, many people do not understand the link between promoting healthy ecosystems and minimising pest, weed and disease risks. Healthy habitats are more resilient to these threats. Raising community awareness of biosecurity issues in natural environments will help promote the role the community can play in protecting NSW from pests, weeds and diseases.

Effective community engagement processes are informed by a good understanding of community perceptions and expectations. This not only improves the impact and effectiveness of these processes but also helps create longer-term and self-sustaining programs. A wide range of new tools and approaches is now available; an example is social media networks that can be used to understand, involve and engage target audiences and communities. Ways to use these platforms to engage the community more proactively in biosecurity issues will be explored.

Equally important for community engagement will be incorporating the results from science and research in focused education and information campaigns about priority biosecurity issues, such as feral animals, marine pests and noxious weeds. Better, clearer ways to communicate scientific knowledge to the wider community in a simple and easy-to-understand format will be investigated.

Proposed actions

To engage the community in biosecurity management, NSW will:

- provide advice to industries and the general community about how they can discharge their biosecurity obligations
- develop and implement a communications plan to improve community engagement and raise the level of awareness of, and participation in, biosecurity activities
- include the community in developing engagement processes and practices
- work closely with land managers and community groups on activities directed at ongoing management of established pests, weeds and diseases
- develop and promote easy-to-use pest, weed and disease reporting mechanisms making use of the latest technologies
- by leading and facilitating targeted education and information programs, increase the capacity and capability of the community to participate in biosecurity activities.

2. Build strong partnerships with industry, the community and other jurisdictions

Biosecurity activities in NSW are done within a national framework, because pests, weeds and diseases have no respect for state boundaries.

A key reform at the national level has been the development of a new national agreement on biosecurity, the Intergovernmental Agreement on Biosecurity (IGAB). The IGAB calls for a stronger science- and risk-based approach to biosecurity. As well, the IGAB facilitates an improved working relationship between governments, industry and the community through pre-agreed governance and cost-sharing arrangements under complementary agreements, and it provides for the states and territories to be consulted on a range of key issues.

Strong partnerships that are reinforced by formal agreements, including cost-sharing arrangements among governments, agencies and industries, are vital for effective biosecurity management. However, there are still many industry sectors in NSW that are not signatories to the existing emergency response agreements and this needs to be addressed.

Proposed actions

To build strong partnerships with industry, the community and other jurisdictions, NSW will:

- work in collaboration with other jurisdictions to develop the national biosecurity system
- continue to participate in forums to develop, agree on and formalise consistent national biosecurity arrangements in all states and territories
- with neighbouring jurisdictions, develop and coordinate risk-mitigation strategies for established pests, weeds and diseases
- work with industry and other stakeholders to develop and implement arrangements for biosecurity prevention, preparedness, response and recovery, including funding arrangements that better reflect the shared responsibility for biosecurity.

Summary table. Outcomes, future directions and proposed actions for the NSW Biosecurity Strategy

Outcomes 1 and 2

1. Biosecurity contributes to sustainable economic growth

2. Biosecurity protects the environment and community

Future directions	Proposed actions
1. Improve diagnostic, surveillance, reporting and tracing systems.	<ul style="list-style-type: none"> • Improve early detection and reporting systems, drawing on the latest technologies and diagnostics. • Ensure that surveillance activities are underpinned by robust science and prioritised according to risk. • Improve current tracing systems so that they meet export market requirements. • Continue to develop more efficient ways of demonstrating proof of freedom from pests and diseases. • Increase focus on coordinated surveillance activities and strategic information management and accessibility. • Develop and implement effective surveillance systems in natural environments. • Consider including plant industries and peri-urban properties in property registration and traceability systems.
2. Improve our capacity to respond to biosecurity emergencies.	<ul style="list-style-type: none"> • Identify and prioritise biosecurity threats across both aquatic and terrestrial environments. • Improve biosecurity prevention, preparedness, response and recovery across all sectors, but particularly where gaps currently exist, for example in fisheries and forestry industries and the environment. • Improve cross-jurisdictional collaboration in biosecurity management, in particular in relation to emergency management and early detection.
3. Improve the management of established pests, weeds and diseases.	<ul style="list-style-type: none"> • Develop and adopt an integrated decision-making framework to prioritise and inform decisions on where to direct investment. • Improve the effectiveness of local and regional pest, weed and disease management activities. • Develop biosecurity risk mitigation strategies for established pests, weeds and diseases in collaboration with interstate jurisdictions and industries so that arrangements are harmonised across borders.

Outcomes 1 and 2 *continued*

Future directions	Proposed actions
4. Strengthen biosecurity science and research.	<ul style="list-style-type: none"> • Develop biosecurity research priorities in collaboration with industry and the Commonwealth, and with other states and territories. • Work with the Commonwealth and with other states and territories and industry to develop a nationally integrated biosecurity diagnostic network. • Strengthen research partnerships and encourage research to address knowledge gaps, in particular in the areas of climate change impact, social science and resistance to antibiotics and chemicals. • Improve capacity to manage animal pests using techniques that incorporate best practice animal welfare outcomes and use remote sensing or other innovations. • Invest in biological control programs for key environmental weeds.
5. Increase the number of well-trained and resourced people.	<ul style="list-style-type: none"> • Develop skills, knowledge and capability for the delivery of biosecurity activities within government and among stakeholders. • Continue to develop, adopt, and invest in new technologies such as geospatial solutions, hand-held devices and web interfaces. • Develop and adopt information management systems that allow for strategic information management and easy access to information.

Outcome 3**3. Biosecurity is underpinned by a responsive and consistent legislative framework**

Future directions	Proposed actions
1. Implement a consistent and contemporary legislative framework.	<ul style="list-style-type: none"> • Review existing NSW legislation, taking into consideration legislation in other jurisdictions. • Develop and implement a new NSW Biosecurity Act.
2. Reduce red tape and support market access.	<ul style="list-style-type: none"> • Streamline certification systems. • Develop an audit framework based on risk and compliance history. • Streamline regulation.
3. Encourage industries, businesses and stakeholders to self-manage biosecurity risks.	<ul style="list-style-type: none"> • Work with industry to develop regulatory standards and, where appropriate, third-party auditing schemes. • Support industry to develop best-practice guidelines.

Outcome 4

4. Biosecurity is a shared responsibility

Future directions	Proposed actions
<p>1. Engage the community in biosecurity management.</p>	<ul style="list-style-type: none"> • Provide advice to industries and the general community about how they can discharge their biosecurity obligations. • Develop and implement a communications plan to improve community engagement and raise the level of awareness of, and participation in, biosecurity activities. • Include the community in developing engagement processes and practices. • Work closely with land managers and community groups on activities directed at ongoing management of established pests, weeds and diseases. • Develop and promote easy-to-use pest, weed and disease reporting mechanisms, making use of the latest technologies. • By leading and facilitating targeted education and information programs, increase the capacity and capability of the community to participate in biosecurity activities.
<p>2. Build strong partnerships with industry, the community and other jurisdictions.</p>	<ul style="list-style-type: none"> • Work in collaboration with other jurisdictions to develop the national biosecurity system. • Continue to participate in forums to develop, agree on and formalise consistent national biosecurity arrangements in all states and territories. • With neighbouring jurisdictions, develop and coordinate risk-mitigation strategies for established pests, weeds and diseases. • Work with industry and other stakeholders to develop and implement arrangements for biosecurity prevention, preparedness, response and recovery, including funding arrangements that better reflect the shared responsibility for biosecurity.