# Webinar: Preparing for H5 avian influenza (bird flu)

**19 June 2025**

**Louise Palfreyman**

- Good afternoon, everyone, and thank you for joining us today. My name's Louise Palfreyman and I lead the Australian Government H5 Bird Flu Taskforce. I'm joined today by several experts from the agriculture, health, and environment portfolios in the federal government to speak to you about a virus currently found overseas, but not yet in Australia. It's called H5, high pathogenicity avian influenza, but it's also known simply as H5 bird flu.

Before we begin, I'd like to acknowledge the traditional custodians of the lands where we are virtually meeting today. I'm coming to you from the land of the Ngunnawal and Ngambri people, and I pay my respect to their Elders past and present, and I extend that respect to any Aboriginal and Torres Strait Islander people who are joining us today.

Today, we are going to be talking about what is bird flu, the situation overseas, and what we are doing to prepare for a potential outbreak of the H5 strain of bird flu. Now, let's begin with some terminology and why biosecurity matters. Biosecurity is about protecting Australia from pests and diseases that could harm our people, our animals and our environment, and our way of life. It's a system that's constantly working. Australia has a robust biosecurity system that plays a crucial role in ensuring that we remain free from many of the pests and diseases that affect animal production and welfare overseas.

This keeps our animals and plants and people healthy and supports Australia's international reputation as an exporter of high-quality and clean agricultural produce. Our disease and pest-free status is helped by our geographic isolation and our ability to enforce stringent biosecurity and quarantine protocols at our border. For a disease like H5 bird flu, our distance from other countries has protected us thus far, but we can't stop migratory birds from crossing our borders.

The other relevant aspects of our biosecurity system is our national disease surveillance systems, emergency response capability, and the strong partnerships between all levels of government and industry, and we'll be talking about how this will help us to prepare, and if necessary, respond to a disease outbreak.

Throughout today's session, you'll also hear us mention something called One Health. It recognises that the health of people and animals and the environment are deeply connected. Diseases like H5 bird flu don't respect sector boundaries, and this disease has already moved between species and ecosystems overseas, and that's why we need experts from human health, animal health, and environmental science to be sharing data and working closely to understand the interrelated impacts and plan robust response strategies.

Biosecurity is a shared responsibility. And whether you work in government, industry, research, or if you're a member of the public, everybody has a role to play in keeping Australia safe from disease threats. And keeping people informed is a big part of that, and that's why we're really pleased that you've joined us today to learn more about how we're preparing together.

And I'm about to hand over now to Dr. Beth Cookson, who's Australia's Chief Veterinary Officer. Her leadership is central to safeguarding Australia's animal health status and biosecurity.

**Dr. Beth Cookson**

- Thanks, Louise, and good afternoon everyone. As we start today, I would like to also acknowledge the traditional custodians of the country from which I join you from, the Djabugay people, here in far North Queensland.

I'll, today, give a quick overview of avian influenza, what it is, what the global situation looks like, the risks it poses to Australia, and what we're doing to keep watch through our ongoing surveillance efforts. Avian influenza, or sometimes known as bird flu, is a virus that affects all bird species. Infections can also occur in mammals, including humans.

There are many types of avian influenza viruses, and some are more harmful than others. They can vary in how they spread and the severity of disease they cause in different birds and animals. We categorise the virus as low pathogenicity avian influenza or high pathogenicity avian influenza, and that term refers to how harmful the virus is to chickens. Low pathogenicity strains usually cause a little to no illness in chickens, whereas high pathogenicity strains can cause severe disease and death.

It is important to note that this term is not describing how harmful the virus is to humans. Low pathogenicity viruses are naturally found in wild birds, especially water birds like ducks. In Australia, many wild birds carry these strains without getting sick, and they're present in those wild bird populations all of the time.

Sometimes, when a low pathogenicity strain spreads amongst poultry populations, it can change or mutate into the more severe high pathogenicity form. That has happened in Australia before, including recently in 2024 and 2025. So you may also have heard the terms H5 and H7 used in relation to avian influenza strains, and that is another way to describe the virus and differentiate between different strains. In Australia, we have had outbreaks only of the H7 high pathogenicity strain before.

We have never had an outbreak associated with a H5 high pathogenicity strain. And many of you, through the media and other sources, would also be aware that H7 bird flu was detected on four poultry farms earlier this year in northern Victoria. There have been no new detections of H7 in poultry since late February and the Victorian government successfully implemented disease eradication activities in that area.

Standing down the response on the 13th of June 2025, so that was just less than a week ago. The National Consultative Committee on Emergency Animal Diseases will meet tomorrow to consider whether we have sufficient evidence to confirm that Australia has, once again, returned to freedom from high pathogenicity avian influenza.

Around the world, we have seen a rise in the serious outbreaks of the H5 strain of HPAI, and that's specifically known as Clade 2.3.4.4b. What has changed with this strain is that the high pathogenicity form has adapted to be maintained in wild bird populations, and that means the strain is spreading more easily. It's spreading over further distances and it is affecting a wider range of species than what we have seen with previous strains of bird flu. Overseas, this virus has caused major losses of poultry, as well as mass mortalities among wild birds and mammals, especially marine mammals and mammals that eat birds.

More than 500 different species of birds and over 90 species of mammals have been affected by H5 bird flu overseas. And that situation continues to evolve, which we continue to monitor closely any developments happening overseas. Some of you may also have heard about the situation in the United States specifically. As of June 2025, the US has reported more than 174 million poultry impacted by the disease since 2022. There are now over 1,070 dairy herds affected across 17 states since the virus was found in cattle in 2024, and it has also been reported in alpacas, pigs, cats, and goats.

In the US, there have been 70 human cases of H5 bird flu since April 2024. Importantly, with this strain, most of those have been mild and there's been no human-to-human transmission. The overall public health risk, as reported by the World Health Organisation, is considered low.

In terms of detections nearer to Australia in late 2024, the virus was detected in the Crozet and Kerguelen Islands which lie in the Southern Ocean, about 450 kilometres from Australian Antarctic Territories. Wild animals affected there include penguins, albatrosses, petrels, and elephant seals. Scientific studies have shown that the virus reached these islands from South Georgia Islands in the Southern Atlantic, meaning that the virus is capable of travelling very long distances.

That continued spread of the virus into new regions reinforces the need for preparedness and why we consider the risk to Australia to have increased. As bird flu continues to spread overseas, the Australian government is focused on being as prepared as possible in case the virus reaches our shores. This includes understanding how the virus could enter the country and the most likely way that the virus can come to Australia is through migrating wild birds. Unfortunately, there's no way to stop new bird flu viruses from entering Australia this way, as birds move freely across borders and continents.

And there's also been a lot of focus on what time of year might be considered a higher-risk time. And the reality is that the threat of H5 bird flu is year-round. That's why it's important we treat this as an ongoing risk, not just something that comes and goes with the seasons. Australia lies beneath several key wild bird flyways, and you can see those on the screen there. That includes the East Asian-Australasian Flyway and the Pacific Flyway. Those pathways also include parts of Asia where the virus is known to be circulating.

So waterbird, shorebirds, or seabirds could potentially bring the virus here during their seasonal movements. Bird flu could also enter Australia via birds travelling from the sub-Antarctic and Antarctic regions where the virus has been detected. There is still a lot we don't know about bird movements from those regions. However, we are taking that possibility seriously, especially, as I mentioned, due to the long-distance movement of some cases recently.

We are working closely with scientists, wildlife experts, and biosecurity professionals to better understand the risks and ensure we are ready to respond quickly if the virus arrives. So, I'll talk a little bit now about what an emergency response would look like if the disease came to Australia, and we do have well-established national response arrangements in place to respond to emergency animal diseases, including bird flu.

If Australia experiences a H5 bird flu outbreak, there will be a rapid and coordinated national response led by DAFF, with state and territory governments leading response activities within their borders. The response may be in wildlife or it may be in poultry, or it might be both at the same time. So we are working closely with other Australian Government departments, state and territory governments, sector partners, communities, and businesses to manage an outbreak and provide support to affected industries.

Early detection and working together is important, as is the preparedness that we're doing now to make sure that we know what our respective roles would be should we have to respond. The Department of Agriculture, Fisheries and Forestry would also manage international reporting obligations and work with relevant trading partners to minimise trade disruptions in affected commodities where possible. Another really critical part of our national system is surveillance, and of course our goal would be to detect the introduction of the virus as quickly as possible.

We do have ongoing surveillance for bird flu in both wild birds and poultry and have been watching this disease for a very long time. Each year, thousands of healthy wild birds are tested for avian influenza as part of the National Avian Influenza in Wild Bird Surveillance program. Those samples come from all across the country and help us keep a close eye on what's happening in our environment. Over the last 20 years, about 154,000 wild birds have been tested for influenza viruses.

In the north, the government's Northern Australia Quarantine Strategy works with local communities and Indigenous ranger groups to raise awareness and monitor bird populations for signs of disease. Wildlife disease outbreaks in wild birds or mammals are investigated for avian influenza where possible. These investigations are conducted by state and territory governments, and results are collated by Wildlife Health Australia. Poultry producers, of course, are an important part of the surveillance system. They regularly monitor the health of their flocks and report signs of disease.

In fact, the detections of H7 bird flu in Australian poultry over the last year show us that this system is working. Those outbreaks were identified and managed quickly. Monitoring and surveillance is also occurring at Australia’s Antarctic and sub-Antarctic stations, as well as Australia's external territories, and we're even partnering with countries within our Pacific region to raise awareness and facilitate monitoring for avian influenza to ensure we have the best information available to inform the risk to the region and to Australia.

So I'll just touch briefly now on what the signs of bird flu are in birds and how the disease spreads. There are a range of symptoms which may appear in a group of birds that might look like sudden death. It might look like respiratory signs such as coughing, nasal discharge, or sneezing.

It could involve head or limb swelling, diarrhoea, unusual behaviour or posture, or an unusual reduction in egg production. The virus can spread through close contact with infected wild birds, including when infected wild birds contaminate feed or water supplies.

It can also spread through contact with infected meat, eggs, and feathers. However, it is important to note that the food that is cooked properly remains safe. Equipment, clothing, and footwear used around infected birds can also carry the virus. As I mentioned before, in rare cases, humans can become infected with bird flu, usually through direct contact with infected birds or contaminated environments.

The good news is that with the Clade 2.3.4.4b H5 strain overseas, most cases have been mild. The current strains don't easily spread between people. Knowing the signs of disease is an important way that you can help with our surveillance efforts for this disease threat. If you see groups of sick or dead birds, they can be reported to our Emergency Animal Disease Hotline on 1800 675 888. That number is available on our website.

We'll now show a short video of one of our vets up in Northern Australia talking about the surveillance activities underway through the Northern Australia Quarantine Strategy.

**Northern Australia Quarantine Video**

- We are involved with looking for the virus in key areas across Northern Australia. So there are some places where we go to, like, say, Darwin, we go there every month and take samples. Other areas we take samples are include Broome, Kununurra, Nhulunbuy, and the Torres Strait.

We're also collaborating with a lot of Indigenous rangers who are, I guess, value-adding into the work that we do, so they're adding more data and more samples to that space. We're also collaborating with DCCEEW and working in the northern external territories. So Indian Ocean territories, like Christmas Island, Cocos Keeling.

That's the hope, that we're hoping to try and create almost this network of sampling sites in Australia and outside of Australia to, almost dare I say, be the canary in the coal mine to look for the presence of the virus to then warn the rest of Australia that this virus, this H5N1, the really bad one which we don't have here in Australia, that is on its way.

**Louise**

- Hello again. That video was shown with, thanks to our colleagues from the Northern Australia Quarantine Strategy, and also thanks to Dr. Cookson for so clearly explaining the facts about this disease. I'd like to now introduce Dr. Brant Smith. He's the National Animal Disease Preparedness Coordinator and also the First Assistant Secretary for Animal Biosecurity at the Department of Agriculture, Fisheries and Forestry. Dr. Smith will be providing an overview and an update on H5 bird flu preparedness activities that are underway in the agricultural portfolio.

**Dr. Brant Smith**

- Thank you, Louise. As we've heard from Dr. Cookson, the far-reaching impacts that this disease is having overseas highlights the importance of this work here in Australia. To address this threat, the Australian government is investing over $100 million to strengthen surveillance, preparedness, and response capability in alignment with this One Health approach.

This significant investment was informed by outcomes from Exercise Volare, which was a series of national simulation exercises that occurred across August and September last year. The exercises simulated a detection of H5 bird flu in wildlife in Australia and engaged key partners, including state and territory agencies, Wildlife Health Australia, Animal Health Australia, industry representatives, and non-government stakeholders. The exercise highlighted the strengths of Australia's national response arrangements and opportunities to further enhance our preparedness.

For the agriculture portfolio, the additional investment included $37 million to protect Australian agriculture by enhancing national coordination of response arrangements and national communications. It will also strengthen surveillance and boost biosecurity capability across the production sector and environmental biosecurity. There is a further $35.9 million to boost and accelerate H5 bird flu preparedness planning and protective action to target actions for our most at-risk species and important natural places. Another $22.1 million is being used to manufacture and store pandemic influenza vaccines.

These will be discussed later by my colleagues from the environment and health portfolios. To coordinate all this national activity, a dedicated Australian Government, HPAI Preparedness Taskforce, was established in July 2024. The taskforce is being jointly led by the agriculture, health, environment, and emergency management portfolios to ensure a whole-of-government approach to this cross-sectoral disease threat.

So far, there's been significant progress through a range of activities and investments that I will detail shortly. We continue to work closely with state and territory governments, animal and wildlife health organisations, industry groups, and the non-government sector on this range of activities to better prepare for a potential outbreak.

We also continue to work with international governments, including the UK, the US, and Canada, to learn from their experiences in managing H5 Bird flu and with New Zealand on its preparedness activities, including vaccination programs in threatened species. A key piece of work undertaken by the Australian Government in the last few months has been the development of a new national management agreement for managing H5 bird flu in wildlife. It has involved all the agriculture, environment, and health agencies in every state and territory and is now in effect.

This provides a clear framework for governance and cost sharing between governments for managing an outbreak response in wildlife under a One Health approach to this cross-sectoral disease threat. Under this agreement, the Australian Government will provide a 50% capped contribution to fund agreed response measures by jurisdictions.

The remaining 50% will be covered by states and territories, and it will use a similar decision-making forum in the event of a concurrent H5 bird flu outbreak in wildlife and livestock that we've used previously, so that impacts can be considered at the same time with the same parties, which will make sure that it's efficient and coordinated in our actions.

The National Management Agreement is being complemented with response guidance that is being developed for government-led agencies who will need to respond to suspected or confirmed cases of H5 bird flu affecting wildlife. We have also coordinated a nationally consistent approach to managing sick and dead wildlife in the event of an outbreak.

Again, this has been done in close consultation with agriculture, environment, and health agencies across the jurisdictions. The key message in the national principles for carcass management is to avoid, record, report. Essentially, we don't want people to touch sick or dead animals if they think they may have H5 bird flu. The animals should be left where they are, and details can be reported to the Emergency Animal Disease Hotline that Dr. Cookson mentioned before. That's 1800 675 888.

Additional national guidance is being prepared for situations where the do-not-touch message might not be considered appropriate. There may be situations in the context of a disease outbreak where there is a greater need to dispose of a potentially infected bird on private land. For instance, backyards where children and pets are playing, they may not be able to easily avoid a dead animal. We will continue to work with our states and territory colleagues to finalise this risk-based advice in readiness should an outbreak occur.

As I mentioned earlier, to enhance our preparedness and response, the Australian Government has committed a significant amount of funding. This includes $12 million for states and territories to purchase new equipment for biosecurity surveillance and response for outbreaks in the production sector or in Australian wildlife. This will include items, such as biosecurity trailers and mobile command vehicles, portable autoclaves to sterilise field equipment, as well as depopulation equipment. And I'm pleased to report we have already provided more than half these funds, and the jurisdictions are making steady progress in purchasing the equipment that they need.

A range of other investments are also underway to boost scientific and biosecurity capability nationally, including working with our partners to support the development of new and humane methods of depopulation for an outbreak response, including nitrogen-based techniques. This has included co-investing in trials with the Australian Chicken Meat Federation.

We are also working with Egg Farmers Australia to improve bird flu awareness, communication, and biosecurity standards across the Australian chicken layer egg industry.

Mindful of the unique US situation, we've invested in a risk assessment for Australian dairy cattle with support from Dairy Australia. The Commission Report will also consider risks of H5 bird flu in other livestock, such as beef cattle, pigs, sheep, and goats, and it will provide evidence-based guidance to inform developing a national response policy and preparedness strategies should the disease occur in these species. We are also investing in validating commercial avian influenza RAT kits for rapid screening and response options, including in response at remote places.

This includes evaluating the accuracy of these tests and exploring field applications, such as in Antarctica. We are developing rapid decision support tools for the potential use of biosecurity measures, such as vaccinating and housing orders in a response. We're also reviewing Australia's current surveillance arrangements for avian influenza and conducting an economic evaluation of our current bird flu response strategy and alternative response strategies. In terms of vaccination, we have developed a new avian influenza vaccination policy for rare, protected, and valuable avian species that are not poultry.

In essence, this will support decisions to potentially vaccinate some priority native species. This policy is available on the department's website. H5 avian influenza vaccine, which does not contain any live virus, has been procured for use in rare, protected, and valuable Australian bird species. This vaccine arrived in Australia earlier in the year, and trials are underway to provide safety data for vaccine use in small Australian birds, but not poultry. This vaccine has been used overseas to protect threatened bird species, such as free-ranging Californian condors.

A review of Australia's avian influenza vaccination policy for poultry has also commenced, involving government, industry, and other stakeholders. This is in line with a notable shift on global attitudes towards vaccinating poultry for avian influenza, which we are monitoring carefully. Our poultry industry is actively involved in this conversation. The Australian Government is also working on preparedness activities for Commonwealth places and Australian external territories. We've reviewed the regulatory and policy arrangements, roles and responsibilities, and preparedness activities for these places.

This includes Commonwealth leased and owned land on mainland Australia and Australian external territories, such as Christmas Island, Cocos Keeling Islands, and Norfolk Island. Significant planning is currently underway for Norfolk Island, which has been identified as a priority area for initial focus. This work is being undertaken collaboratively with Parks Australia, the federal environment and infrastructure departments, and key on-island stakeholders.

Coordinated national communications are a key focus with strategies, governance arrangements, and a suite of materials, such as printed resources, translated content, and social media assets to provide clear, trusted messaging on H5 bird flu. These resources are available at birdflu.gov.au for anyone to access, and we encourage you to stay informed through this platform. Engagement with First Nations communities is being supported through a dedicated H5 bird flu stakeholder and communications working group. Culturally appropriate communication materials have been developed to assist engagement at a local level.

We're very mindful of the role of wild birds and the cultural and environmental significance of some of these species and sites to First Nations communities. An outbreak would be particularly distressing, and it's important that we are able to engage on these issues early. There's ongoing collaboration with Indigenous rangers through the Northern Australian Quarantine Strategy and many conversations being led by the state and territory colleagues.

So what can you do? Biosecurity is a shared responsibility, and we all have a part to play in protecting our nation against diseases like H5 bird flu. Staying informed, as you're doing today, through participating in this webinar is key. You are our eyes and ears on the ground, and it's important to understand what to look out for and what to do if you suspect that an animal has bird flu. As Dr. Cookson said, if you notice sick or dead birds or other animals, you should not touch them. Instead, take photos or a video, record your location, and report it to the Emergency Animal Disease Hotline. Again, 1800 675 888.

Detecting disease outbreaks early helps us to respond quickly and put measures in place to help reduce the spread of the disease. A false alarm is far better than us not being notified of an outbreak. If in doubt, reach out. We encourage you to visit birdflu.gov.au. It's a central hub of up-to-date information, tools, resources that will help support bird flu awareness and planning. We're going to play a short video now that provides an overview of the signs of bird flu to look out for in backyard birds. It will also have practical tips on simple steps to keep your bird safe and to report any suspected cases.

**Backyard bird video**

- [Narrator] If you own or work with any type of poultry or birds, look for health changes in your birds. The signs of avian influenza are similar to other bird diseases, so always check with your vet if you notice something unusual.

Look out for single or several birds suddenly dying, diarrhoea, birds eating or drinking less, unusual reduction in egg production, birds sneezing or looking unwell. There are simple things you can do to help protect your birds.

Don't feed wild birds or encourage them to mix with your poultry or pet birds. Use netting to prevent contact between domestic and wild birds. Clean your bird's housing and equipment regularly and don't share it with other bird owners. If you bring in new birds, keep them separate and monitor them for at least 30 days before introducing them to your existing flock.

If your poultry are free range, monitor them daily for signs of disease. Be ready to house your birds separately if they show signs of illness. Avian influenza does not easily spread to people and it's a lower risk to the public, but it's still important to maintain good hygiene around poultry and pet birds.

Avoid touching sick or dead birds, or if you need to touch them, wear gloves and wash your hands afterwards. Always wash your hands after handling birds, eggs, and equipment.

Clothes and shoes should be washed after visiting a bird show, aviary, or chicken run. If you see sick or dead birds, contact your vet or the Emergency Animal Disease Hotline on 1800 675 888.

**Louise**

- I'm now pleased to present the next speaker, which is Dr. Fiona Fraser, Australia's Threatened Species Commissioner with the Department of Climate Change, Energy, the Environment and Water. Dr. Fraser plays a key role in protecting our native wildlife and will be speaking about the potential risks that bird flu poses to Australia's threatened species and biodiversity and the preparedness activities that are underway. Over to you, Fiona.

**Dr. Fiona Fraser**

- Thanks, Louise, for the introduction. As you've heard, everyone, I'm Dr. Fiona Fraser. I'm the Australian Government's Threatened Species Commissioner and I work in the Department of Climate Change, Energy, the Environment and Water, and I'll be speaking today about Australia's national approach to preparing for and reducing the impacts of H5 bird flu on our protected species and places.

In doing so, I would like to acknowledge the cultural and spiritual significance of many wildlife species to First Nations people.

So, Australia's animals are very unique. Many of our species are found nowhere else in the world, so the impacts of this strain of bird flu on some of our wildlife are quite difficult to predict with certainty. But the overseas experiences indicate that the precious biodiversity that makes our country so special is at risk, and this virus is a significant and a new threat to our wildlife.

From birds like the critically-endangered eastern curlew, the world's largest migratory shorebird; or the striking magpie goose, which is not only vital to our wetlands, but holds deep cultural significance to First Nations communities; to the iconic endangered Australian sea lion, which places like Kangaroo Island would certainly not be the same without.

We have seen overseas really high mortality rates in wild birds, leading to the greatest sudden drop in wild bird populations in decades. We are talking losses in the millions and mass mortality events in marine mammals.

So, what are we doing? We are taking this threat of H5 bird flu seriously to safeguard our most at-risk species and important places. Under our national environment law, the Environment Protection and Biodiversity Conservation Act, the Commonwealth has a responsibility for matters of national environmental significance.

So when considering H5 bird flu, these obligations mean that the Commonwealth environment department is focusing on birds and mammals, which are threatened with extinction, certain marine and migratory species, and places of national and international importance, such as Kakadu National Park and other Ramsar wetlands. We are also taking steps to identify birds and mammals that are not currently threatened, but which could become so in the event of a bird flu outbreak.

We are working really closely with conservation groups, with state and territory governments, with First Nations communities, and with other partners to prepare. We are, of course, extremely grateful that this disease hasn't reached our region. However, it is clear that we will not be able to prevent H5 bird flu arriving, and in many cases, we will not be able to prevent major mortality events in wildlife. We do know that the best way to prepare our native wildlife for H5 bird flu is to have strong, healthy populations across their range.

This means continuing, and where possible, increasing efforts to support species recovery and to reduce the impacts of other existing threats. Okay, so as you've heard, the Australian Government has invested over 100 mil to boost preparations for this virus. And from this funding, 35.9 million is dedicated to boosting environmental measures and accelerating protective action for our most at-risk birds, be it birds, mammals, and important places. This slide shows these measures and the rollout of this funding is well underway.

It essentially includes two streams. The first stream of 28.8 million is enabling preparedness and response planning, as well as supporting practical actions for priority species in captivity and in nature. For example, species and site-specific planning to identify actions to directly mitigate the spread and potential impacts of bird flu for our most at-risk wildlife, enhancing biosecurity and management of threatened species in captivity, safeguarding and building resilience for our most at-risk species in nature by mitigating other threats, such as predation or invasive species, for example.

The second component is 7.1 million to develop decision support tools, such as modelling the potential impact on native species and increased surveillance. This includes identifying the species and the places most at risk and the practical actions to support them. Supporting increased surveillance across wetlands at the Murray-Darling Basin and our remote island parks, and preparedness efforts in Commonwealth National Parks and keeping our on-ground staff safe.

So as you can see, there's a heap of work going on at the moment. And on the next slide, I'll go into a bit more detail on what we are doing in the planning and preparedness stage, which is supported directly by this funding. So first up, we're doing an H5 species susceptibility analysis. We are working with experts to map and model the potential risks to our species and places to guide the preparedness and planning across the country.

A big focus has been on finding out what our most at-risk species and places are. So, our analysis for this considers H5 bird flu susceptibility factors, such as whether a species is a predator, a scavenger, or a kleptoparasite, which is an animal that steals food, such as fish, from another animal. And vulnerability factors, such as whether the species is already at risk of extinction. And we are doing this for every Australian bird and mammal species.

This work, integrated with other lines of evidence, is a really powerful piece for supporting planning and taking action now in the absence of certainty about how H5 bird flu could actually impact Australia and our native wildlife. We are also working with local and international experts to learn from their real world experiences in managing H5 bird flu, ensuring our approach is informed by lessons already learned overseas. Okay, sites and species plans.

We are supporting states and territories to undertake or accelerate species and site-specific planning. This includes identifying the priority species and natural sites, and undertaking critical planning to support the protection of the most at-risk species in and ahead of a potential outbreak. All states and territories have prepared or are really close to finalising this prioritisation. For example, Victoria has identified 14 sites and eight species.

This includes the East Gippsland coast and islands and the critically endangered regent honeyeater and swift parrot. The ACT, the Australian Capital Territory, where I am on Ngunnawal country, has identified seven sites, including the Jerrabomberra Wetlands and more than seven species, including, for example, aquatic mammals, such as the platypus, and the rakali or the water-rat, and raptor species.

The endangered Australian sea lion is a priority planning focus for both South Australia and Western Australia, and actions to boost the resilience of sea lions in these states have been identified, and in this case specifically, efforts to immunise sea lions against hookworms and erect shade shelters to reduce mortality from heat and exposure are likely the first cab off the rank here. Mitigating existing threats or more work to mitigate existing threats.

We are also identifying ways to build resilience and give species populations the best chance of recovering from any potential impacts. In some cases, this will be by addressing other threats, like habitat loss or invasive predators. So, as part of the island eradication measure, the department is working with our colleagues in Parks Australia and key state governments to identify priority islands for management of invasive species.

Our focus is prioritising the islands where there can be the greatest benefit to susceptible species, such as protecting important colonies of breeding seabirds from these threats. Arrangements between the department and Parks Australia are being progressed to support the eradication and control of invasive species on multiple islands right at the moment. And the first of these will be a project to control invasive bird species on Phillip Island, not Phillip Island in Victoria, but Phillip Island which is part of Norfolk Island National Park to boost the resilience of at-risk seabirds, which breed on that island.

The next component is collaboration. So we are working with a broad range of stakeholders and partners, including conservation groups, state and territory governments, First Nations peoples, and other partners to prepare. We're collaborating with Parks Australia, where there is a lot of interesting work rolling out in our national parks, such as Kakadu, Booderee, and others, and several of our island national parks. This includes ramping up our on-park scenario planning exercises to increase on ground awareness and response capability, including for communities neighbouring those parks.

And developing triggered action response plans for each Commonwealth National Park and relevant islands in the Coral Sea and at Ashmore Reef Commonwealth Marine Reserve. Our Commonwealth Chief Environmental Water Holder is developing a decision framework and long-term decision-making capability to support environmental water delivery in the event of an H5 bird flu incursion.

So this will help us to prepare for and manage Commonwealth environmental water flows for any future bird flu outbreak in the Murray-Darling Basin area. The next component is captive threatened species. So for some threatened bird and mammal species, captive breeding programs are a vital component of the species recovery efforts.

They are essentially insurance for imperilled wild bird populations. They can help to maintain genetic diversity and conserve to boost numbers in the wild. And these captive populations obviously need to be kept as safe as possible. Supported by the $5 million Captive Protected Species Preparedness grant, our department is working closely with the Zoo and Aquarium Association to identify key threatened species and key captive breeding facilities.

These facilities will be supported with grants to strengthen their biosecurity preparedness and response capabilities to protect the captive populations. So examples of species in scope include the Tassie devil, the orange-bellied parrot, the plains-wanderer, and there are several others, where breeding and release are important for the persistence and the recovery of those species in the wild. So our team and our ZAA colleagues are working through these proposals right now and we hope to be able to share more information on the species and the facilities to be supported under this measure pretty soon.

Our next component is keeping watch. So the final key aspect to our planning and preparedness is monitoring and surveillance, complementing the existing national wild bird disease surveillance programs that we've heard about from previous speakers. Use of artificial intelligence for surveillance of remote offshore islands. So places that are challenging to get to or to access safely to both identify species, and in the event of an outbreak, the extent of mortality events by forming a baseline understanding of species populations and current behaviours.

The Commonwealth Environmental Water Holder has worked underway to design a waterbird surveillance program that expands upon the existing national wild bird disease surveillance programs managed by Wildlife Health Australia. This new program will include partnerships with First Nations peoples, on ground field work and laboratory analysis, and it will also look into how water flow affects bird movements and health.

Our Australian Antarctic Division has been monitoring for H5 bird flu in seabirds and seals around Australia's Antarctic stations, including deploying to Mawson and Davis Research Stations and near Cape Denison in the eastern sector of the Australian Antarctic Territory. As you're aware, no signs or symptoms of H5 bird flu have been reported to date in Australian Antarctic Territory. However, as Dr. Cookson mentioned earlier, in late 2024, it was detected on the Kerguelen Islands just a few hundred kilometres from Australia's sub-Antarctic Heard and McDonald Islands. So this continued spread into new regions reinforces that need for preparedness.

Okay, so what can you do to help? We are certainly really fortunate that H5 bird flu has not yet arrived in Australia.

But preparing for the strain of bird flu is not something that governments can do alone. So while we're asking everyone to avoid, record, and report, there are a bunch of other simple ways that you can help to prepare. So these include keeping your pets, like your cats and your dogs, away from wildlife.

This is good practise 101, but it is now more important than ever. So whether this is keeping dogs on leads and cats inside, reducing disturbance to wildlife, or keeping your pet's food and drink bowls out of reach of wildlife to avoid the spread of disease. Volunteer by joining your local conservation initiatives, removing rubbish from local reserves, planting natives in your garden. These activities are all small steps, but they can all help improve habitat for local native wildlife, which helps and contributes to building their resilience.

Participate in bird surveys. It's fun and it's also, you know, doing good. So by joining local birdwatching groups or programs, such as the Aussie Backyard Bird Count, which is run by BirdLife Australia, it helps to monitor bird species across the country. Keep your footwear, your clothing, and your equipment clean when visiting national parks, nature reserves, and farms.

So this helps to minimise the spread of existing diseases, including species and other invasive species such as weeds. And finally, maintain a distance between yourself and wildlife, including not feeding wildlife or disturbing them. Okay, last slide. Thank you.

So everyone, thank you very much for your time today and for your interest, and for many of you online, your work in preparing Australia for the potential arrival of H5 bird flu. It's very much a collective exercise preparing for the threat of this disease, including the protection of imperilled and susceptible Australian wildlife species. I invite you, if you don't already, to follow the species recovery work of the Threatened Species Commissioner on Facebook or Instagram, and of course there is much more information available on birdflu.gov.au. And that's it for me. Thank you, Louise.

**Louise**

- Thank you, Fiona, for that excellent update and lots of practical tips for people as well. The next speaker I have to introduce you to is Dr. Stephanie Williams. She's the Assistant Secretary of the Disease Control Strategy Branch at the Interim Australian Centre for Disease Control. So it's over to you now, Steph.

**Dr. Stephanie Williams**

- Thanks, Louise. So my role today is to provide the human health perspective and a health portfolio update. I'm going to touch on the points you can see on this overview slide, including how bird flu infects people, what we know about human infections, why it's important, actions we're taking in preparing for influenza pandemics, and the things that we can do now.

Dr. Cookson outlined the current global situation and the pattern of spread in birds, wildlife, and animals outside Australia of H5N1 earlier in this presentation. And the only point to make on this slide is why we're interested is on the risk of human infection and the zoonotic spillover into humans. And to flag here that it still remains a rare infection in humans.

The commonest question we actually get asked is, "How does bird flu infect people?" And there have been bits in earlier videos and updates that have described this already today. But this slide gives a pictorial demonstration of some of the routes of transmission.

From left to right, touching infected animals without adequate protective equipment; touching something with the avian influenza virus on it and then your nose, hands, or mouth; breathing in dust that contains droplets or droplets that contain the virus; and if liquid with the virus in it would splash into your eyes, nose, or mouth. Effectively, an avian influenza virus has to hit your respiratory tract through some route.

This summarises what we know so far about human infections with the Clade 2.3.4.4b. There have been a small number. The CVO outlined hundreds of millions of cases of H5 in birds in the US and the number of 70 human cases in the US. These have been mostly mild, involving close contact with infected animals or contaminated environments, responsive to influenza antiviral treatment. And the candidate human H5 vaccines are likely to be effective against this strain.

And importantly, in the middle there, there is no evidence observed in the features of H5 avian influenza virus that makes it more easily transmitted between humans. So, why do we care? Well, influenza viruses are constantly changing or evolving, and there are small changes that happen continually and that's best demonstrated in the top right-hand of this diagram.

Antigenic drift, which you can see, there are small changes in the shapes of those purple dots becoming triangles on the top right-hand picture, and that's like the seasonal flu. That's a slightly different strain every year, which is why the vaccine needs to be slightly different every year. The thing we are looking for constantly and more concerned about is what's in the bottom right, the infrequent major change. So, if those are influenza viruses, you are a blue, and orange, and a green.

And what happens if they are co-infecting? Say for example, if someone has an infection with seasonal flu and avian flu at the same time, there is a possibility that those viruses combine to make a new virus. That's a concern because that is a significantly different virus. We are unlike to have immunity to it, and it represents a virus with human pandemic potential.

It's important, at this point again, to stress we have not seen changes in the H5 viruses that suggest it could spread more easily between humans at this stage. Nevertheless, we are always preparing because we know that unmitigated spread of H5N1 across animal species does increase human pandemic risk. It effectively allows the virus to constantly come into contact with other viruses. At the same time, the Interim CDC assesses the overall risk to Australians from this virus as low.

And this is partly due to the absence of H5 in our own animals and birds in Australia, and based on what we observe from human infections and the epidemiology of this virus globally. But nevertheless, as a human health preparedness agency, we are actively working, like Louise said at the beginning, our biosecurity system is always on, as is our infectious disease and preparedness system.

So we are implementing lessons from COVID, conducting surveillance, updating public health guidelines, and securing pharmaceutical measures. You'll recall early on a reference to $22.1 million for human pandemic vaccines that was announced in the October package of H5 preparedness. That is something that we are leading on here in the health department. And of course, we work constantly, usually daily, with our state and territory counterparts in our collective effort to address health risk.

My last two slides serve to highlight some of the key messages that we would stress now for organisations in terms of preparation and preparedness. And it really comes down to knowing the risks, identifying higher-risk jobs and activities, and planning ahead. And the hyperlink to the extended resource where this advice is nested is on... It's a CDNA National Guidelines for Avian Influenza, protecting people who work with birds and wildlife.

And my next slide is key messages for individuals to do, again, including a link to the resources, which is recognising that the risk at individual level is not the same everywhere and for whatever you're doing. And that it's important to speak to your employer and colleagues, and at the same time, familiarise yourself with practical guidelines to manage risk.

And again, subscribe to alerts on relevant websites. I'll finish by reiterating that the human health risk from H5 bird flu remains low. We are actively preparing. And the Interim CDC, in particular, works day in day out with our colleagues in the Bird Flu Taskforce at DAFF and DCCEEW, and are a big supporter and demonstration of taking a One Health approach to this issue. Back to you, Louise.

**Louise**

- Oh, thank you, Steph. As you can all see, we have been making a whole lot of progress with all these preparedness activities. And of course, this focus on One Health, the One Health approach taken to this issue.

As we've been speaking today, people have been putting in a bunch of questions into the Q&A function. Some of them we've been able to cover from our speakers as they've been talking, but I do have a range I'm going to ask to our experts, but I might start off one that I'm going to answer first.

So someone has asked, "What is the impact on the supply of eggs and chicken meat, or what would be the impact in the event of a H5 bird flu outbreak?"

Well, I guess the first thing to say was that in the recent outbreak of H7 bird flu that we've been discussing about earlier, which has been contained, we had up to 2.4 million birds affected by the 2024 and the 2025 outbreaks in Australia. So the result of this was some supply changes, and the replenishing of flocks do to take time. To put it in context, for Australian egg production, our layer flock size is about 22 million chickens, and those chickens produce about 18 million eggs per day. And eggs and chicken meat are important source of protein, very nutritious, very important food source, but there's a range of factors that contribute to the egg market conditions.

So the H7 outbreaks that occurred previously did have an impact, but there's also other factors, too. There's input cost changes, seasonal variation, and there's a lot of changes to consumer demand. So, as the demand for eggs rise, it places additional pressure onto the market. So the Australian government works really carefully and closely with industry and our retailers to understand the supply issues. If there was a H5 outbreak, as you would've heard, there could be a large impact on our poultry industry, and that would impact on the supply of eggs and potentially chicken meat if that's where the outbreak occurred, if there was an outbreak in Australia. The nature of that impact would really be felt when we'd see the range of the impact and how widespread it was. In some countries, it has been significant, but we have really strong biosecurity controls, which is why we push these messages about the surveillance and detection early because that lets us undertake our measures to mitigate, I guess, the impact on industry and for consumers.

The next question that's come through, I'm going to ask Dr. Cookson. It's asked, "Why are Australian birds and animals not being vaccinated against bird flu right now?"

**Beth**

- Thanks very much for the question. As Dr. Smith mentioned, we are currently reviewing our policies around vaccination. We have updated the policy around protected, rare and valuable avian species, and we're currently updating with industry, and government, and other parties the policy around vaccination in poultry. And that's going to consider both vaccination in emergency use, which is if we do have a detection within a poultry facility, as well as potentially preventative vaccine use.

There are a range of really complex considerations associated with vaccines and vaccination programs. Like human flu, the virus changes over time and vaccines need to be closely monitored to make sure that they're effective against the strain. We also know, with flu vaccines, that whilst they can help to reduce the amount of clinical disease seen, they are not 100% protective.

So you can still get some virus spread in some population. So that means that to implement a vaccination program, we would have to have a very thorough monitoring and surveillance program implemented to detect subclinical strains of the virus potentially in populations. And that can be a problem because it can pose a risk to other populations and potentially also have some human health implications as well. And some of the other things that we are considering are the types of populations that might be vaccinated, and as I've mentioned, that's to protect rare, protected and valuable avian species, but also working with the poultry industries to think about, you know, what types of poultry populations we might potentially have a vaccination program for.

And also to consider the trade implications. As we heard before, the situation has evolved really rapidly over the last couple of years, and there are a number of countries around the world that are now starting to look at how vaccination can be used to protect poultry. That has had implications for the trade of poultry and poultry products, and that's certainly something that we're also working closely through.

So as I mentioned, we're not doing it now because it is quite complex, but we are certainly taking the question very seriously and making sure that we have got good guidance and good policies if we do need to apply vaccines in the future.

**Louise**

- Oh, thanks, Beth. Appreciate that answer. The next question, I'm going to ask to Dr. Smith, and it's about cows in America getting bird flu. It's been found in cow milk. What are we doing here in Australia to prepare, just in case it happened in Australia as well?

**Brant**

- Great, thanks, and really good question. We're certainly watching really carefully. And Dr. Cookson mentioned the spread of disease through dairy cattle in America. It is quite unusual, we haven't seen it in any other places across the world. So there is certainly some specific factors that are in play in the United States. It could be the proximity of dairy farms to wild bird species, the movements in between those, the structural setup of those establishments.

But what we are looking to do is working really closely and learning from our counterparts over there. So the United States Department of Agriculture, referred to as the USDA, is investing a lot of time and effort into this work, and they've put in a range of, I guess, control strategies for dairy cattle and for bird flu.

So there's a national milk testing strategy that they're undertaking, enhanced biosecurity measures on farm, and particularly looking at the movement controls between and across borders at state level.

And then they're also looking at: What are the potential options on vaccines? Noting that that's a very complex space as well. So the other thing to keep in mind for people, too, and a related question is: How safe is, you know, imported milk from those countries with those diseases?

So we have very strict measures in place for that to maintain those risks to be managed. The approaches we take around pasteurisation and the requirements there do inactivate avian influenza in those milk products. But, we are not resting just on that.

We're undertaking our own risk assessments internally around what are the risks to our dairy cattle here in Australia. And we're doing some work, as I mentioned before, with Dairy Australia around: What are factors that could be similar or different to the United States? What do we need to think about here so that we can prepare ourselves as best we can?

It is quite different in the way our dairy industry works in Australia versus the US. They're quite large and intensive systems, ours sort of less so, but also trying to understand and work really closely with our US colleagues to learn from their experience as they're managing this case. But it is certainly an evolving situation and we are making sure we very carefully monitor it.

**Louise**

- Thank you very much Brant, Dr. Smith. Next question is for Dr. Fiona Fraser, and so it's asked, "Why are preparation efforts being focused on threatened species, and why can't we protect all native wildlife?" Fiona.

**Fiona**

- Thanks, Louise, and thanks for the question. It would be great if we could protect all native wildlife from this disease. But just to reiterate the experience overseas, and we expect it will be the same in Australia, is that we will not be able to prevent mass mortality events in wildlife.

So, we are certainly focusing on threatened species, but we are absolutely focusing also on all birds and mammals, which are likely to be susceptible to and impacted by this disease. We talk quite a bit about threatened species because these are the birds and mammals which are already threatened with extinction. So, if there's an additional threat from bird flu, it could push those species closer to extinction or cause a local or a complete extinction event, hence the focus on species which are already threatened with extinction.

Our susceptibility analysis includes all mammals and all birds, and so that's not just those which are threatened with extinction. And certainly, the preparedness planning that the states and territories are leading on, supported with our bird flu funds are also focusing on important natural sites, which could accrue benefits to many birds and mammal species, not just those threatened with extinction already.

I noticed in the chat, Louise, there's a question around black swans and what we will do for black swans, which sort of relates to the question that you just shared. So black swans aren't currently threatened with extinction. We know that they're susceptible to the disease, both genetically, but also in their behaviour and their habitat being water birds. They're quite widespread across Australia.

So we expect that with some of the site-based management plans that states and territories will be working on, including identifying actions to mitigate other threats to black swans, particularly when they're nesting, will assist with building the resilience of local populations of that particular species to an outbreak of bird flu. Thanks, Louise, and thanks for the question.

**Louise**

- Oh, that's no trouble. Another question here. This one would be for Dr. Williams. So it's about health. It is, "What are the ways in which bird flu, avian influenza viruses spread to humans?"

**Stephanie**

- Thanks, Louise. And I mean, this is a good chance to reinforce the mechanisms of transmission that I outlined in the presentation, which included, you know, physically coming into contact with an avian influenza virus through touching of infected animals without protection or without the ability to implement hand washing or post-exposure, you know, what is word I'm looking for, hand rub, sanitizer, or touching something with a virus on it, and that reaching your hand, nose, and mouth; exposure to dust that contains a virus; and then in some settings, liquid with the virus that could splash onto part of your respiratory tract. I think it's those basic mechanisms of transmission that are important.

And as we touched on in the latter part of the portfolio update, that organisations and individuals recognise that their exposure to those routes of transmissions can be specific and not uniform. And so in places where you might have a higher likelihood of coming into contact with infected materials, then the personal protective equipment is very relevant for daily work in that context.

An earlier good example about the backyard fatality of practical guidance for individuals to be able to safely dispose of, say for example, a dead bird and wash their hands. So knowing the routes of transmissions, coupled with the appropriate and practical advice, which I think the links to those resources have been throughout this presentation, is really important.

**Louise**

- Thank you so much, Steph. That's really helpful. Next question's probably for me. Can we provide more details on how we're engaging with First Nations communities on bird flu preparedness?

Yeah, basically, at the moment, what we've been doing for actually quite a while is working on different strategies and communication products, which will help facilitate those conversations. So we have our biosecurity rangers and First Nations people on the ground working with NAQS, the Northern Australian Quarantine Strategy.

And you saw the video from it earlier from one of our staff members on the beach taking samples. In terms of talking to communities, we've been producing lots of communication products and testing those with First Nations people to make sure they're hitting the mark and working with those who are on the ground, having local conversations about the potential outbreak of H5 bird flu. Last week, I was on the line with 100 stakeholders testing some of those products and getting feedback about the sort of the best ways to communicate and engage on ground. And those sort of local conversations are really, really important.

So my state and territory colleagues from several agencies do have the lead on that. And we have many other non-governmental organisations who are also working with First Nations communities providing a safe place to have a conversation. And we are helping produce resources to assist with that as well. We've also got some focus groups that are running at the moment and making sure that we can well understand the concerns of First Nations people because, of course, there are many communities across Australia.

And species of birds are really important to some of those communities, and there's often also some very special places that we need to consider when there's response planning done, particularly, for example, if there was an outbreak in an area and it was not safe to go into it because of a large mortality event, for example.

So we're working with communities on ground with the right people who are planning activities on how practical steps would be taken in these outbreak situations. So hopefully, that's a little bit more information for you about what we're doing on ground.

I'm going to throw now to Dr. Smith. So this next question is about wildlife carers. How would a H5 bird flu outbreak in Australia impact on wildlife carers? Can I go to you, Brant?

**Brant**

- Great, thanks very much, Louise. And it's a really good question. And as a veterinarian who's worked out in the country, the importance of wildlife carers are so vital, and I've worked with many over many years. So just to shout out to all of our wildlife carers potentially online.

So obviously, wildlife carers will have a really important role, particularly around what they currently do around rescuing, rehabilitating sick and injured wildlife. And of course, they're looking to try to get goodwill for outcomes and helping members of the community that may not know about how to handle diseased or injured animals. So, that will be really important in the event of an outbreak to make sure that we are providing that guidance and assistance to carers and to the community more broadly.

Of course, with every group that's involved, our biosecurity measures and requirements must still be considered because movements between areas is one way that disease can spread, particularly those that will potentially be taking animals from one area to another can cause those issues. So they'll need to look at following the guidance that's provided from government, and going to our website is one key way to do that.

And also, of course, within the state and territories that they operate in. I also want to give a big shout out to Wildlife Health Australia. They've got some really great resources on their website around assisting in this space, but also about those that have got facilities that might have injured or diseased wildlife. And that's really important that they understand what's required of them and having clear biosecurity plans as well.

So, my message is make sure you're informed, make sure you work really closely with your authorities in the areas that you're working within, and reach out and ask for help when and as required. Thanks.

**Louise**

- Okay, thank you very much, Brant. The next question is for Dr. Cookson, and it's about the response that would be undertaken to an outbreak. And so of course, we've had our H7 outbreaks, two, one in 2024, one this year. The question is: Why do you need to kill all the birds on a farm when only a small number of birds may have been first identified of having bird flu? Can you take us through that?

**Beth**

- Yeah, thanks very much, Louise. And it's another really great question. I know there's a lot of interest always in this. I would start by saying high pathogenicity avian influenza in poultry is highly infectious. And when you've got a population of birds in very close proximity, that means that the virus can spread really rapidly.

The other important factor to consider is that this disease causes very high mortality. So that means that it can kill. The disease itself can kill up to 100% of the chickens that it infects. So this means that it not only spreads very rapidly, but it also causes high levels of disease and death due to the disease itself. So the reason that we take the approach of depopulating farms is to prevent that spread from moving through into other bird populations and also to reduce the amount of virus in the environment.

So the virus can be quite sticky, if you like. It can contaminate clothing, and shoes, and other materials in the farm. And that also is another risk of spreading it to other areas. So the idea of the rapid response is to very quickly contain the amount of virus that's present. And unfortunately, that does mean depopulating all of the chickens on the farm to prevent that spread and to prevent others being impacted as well.

**Louise**

- Oh, thank you, Dr. Cookson, that's really helpful. The next question's on environmental measures. So I'm going to ask Dr. Fraser this one. Why is the government focusing a lot of time and effort on islands, and why not Australian mainland? Is the question.

**Fiona**

- Oh, yeah. Thanks, Louise. I certainly did talk a bit about islands today, but we are not just focusing on islands. Our focus is also on important locations where species are found on the Australian mainland. I guess part of the conversation has been about islands because we have important populations, in particular of bird species, which important breeding locations on some islands.

So if we take an island, like Christmas Island for example, it is the only breeding location for two important species of seabirds. So, we are focused on islands where there are these important populations, but also where we can take feasible measures to deal with some of the other threats that those breeding populations might face on those islands, whether that be improving habitat through weed management, removing rodents, or other invasive species.

But for Mainland Australia, the site and species preparedness planning that I talked about is identifying what would be many dozens of sites around Australia which are really important for focused management attention, and where we would expect to also apply some of that 35.9 million in Australian government funding to mitigate existing threats to those important populations.

So, a lot of chat about islands, partly because there's really important populations there, and the island work is for us going ahead of some of the focus on the mainland areas, but certainly we are focusing our efforts, whether they be on the mainland, or on Tasmania, or on small islands, where there's important species and where we can take feasible management responses. Thanks, Louise.

**Louise**

- Well, thank you, Fiona. My next question is on public health. So that one's for you, Steph. And the question is noting that the case fatality rate has been quite high historically for avian influenza in humans, what's the thinking as to why only mild infections have been identified in the outbreak in the US where there was reported to be 70 cases? Could you explain that one?

**Steph**

- Yes, I can. Thanks, Louise. So on the statistics reported to WHO, the overall case fatality rate since 1997 has been categorised in around 50%. And that is on the basis of approximately 1,000 cases reported to WHO. But it's very likely to be, over the last almost 20 years, an overestimation, due to likely underreporting of mild cases.

And the other important consideration there, it's a very infrequent event. However, the virus does evolve, and as the questioner has pointed out, very mild cases reported recently in the US.

And it's likely that there's the kind of combination of a low chance of spillover and lower case fatality rate, as well as the ability to detect and respond to cases of infection is one of the explanations about why we could be seeing mild illness. In fact, and the Clade itself is different from some of, when I say Clade, the 2.3.4.4b that we're seeing in the US, is different to some of the infections reported earlier in other countries of the world.

We are constantly watching this virus for how it behaves in humans, and one of the things that we're watching for is a change in the severity, such that it wouldn't be mild cases, like conjunctivitis that was reported, but more significant illness.

And the last thing I would note is that severity is also a product of individual health factors, health system factors, the ability to seek access, care, and treatment, and is also a product of the quality of surveillance systems globally. So we have to take all of those factors into account, and we are reassured by our current observations of the clades circulating globally that we're preparing for that it remains a largely mild disease in humans.

**Louise**

- Dr. Williams, that is actually super helpful how you've described that for everybody. I think we've just got time for one more question, and I'm going to ask Dr. Smith this one, it's about poultry producers. What support is provided to poultry producers as they get ready for a possible outbreak?

**Brant**

- Thanks, Louise, a really good question. And we know the poultry industry is really at the front line of this risk. So we've seen some of the cases that Dr. Cookson mentioned around H7, particularly in layer flocks, but there's also the broilers and other meat chicken industries that are important, of course, as well. So we work very closely with the peak industry bodies that represent the different parts of their industry.

So we talk to them quite a lot about planning, and a lot of the government focus around funding has been about practical support that would really help with industry and states and territories towards that preparedness approach. One of the things we found really important in our exercises was the importance of communication and engagement. So we've worked really closely, particularly with Egg Farmers of Australia, to improve that awareness and communication, and just to make sure that there are multiple places that people can come into to get that information.

And of course, we've got our birdflu.gov.au website. The funding that we provided to the states and territories that I mentioned before, that $12 million, was really around trying to get them to be able to get out and about quickly to respond to outbreaks, which would often occur on farm, and particularly for our industry and for farmers is they will likely be the first point upon which they will see some of these diseases.

So they are, as we've said, our eyes and ears on the ground, so they can provide that information. As I said, a false alarm is better than not reporting, and then we can quickly get some people to evaluate and see what the situation is.

But we've also been talking, as I mentioned, about discussing topics, vaccination, and humane methods of depopulation, really trying to make sure we can get across this situation as quickly as we can. Noting there's a lot of complexity in the system, but supporting the producers and people on the ground will be really important.

**Louise**

- Aw, thank you very much, Brant. I think that's probably all we have time for today. Thank you so much for joining us for this information event. Can I thank the experts that have joined us today.

Dr. Beth Cookson and Dr. Brant Smith from the Department of Agriculture, Fisheries, and Forestry. Also Dr. Fiona Fraser, our Threatened Species Commissioner, and Dr. Stephanie Williams, speaking to us from the Interim Australian Centre for Disease Control.

Thank you for everyone who has attended for your time and your engagement, and we'll see you next time. Thank you.