



# Transcript

## Department of Agriculture, Fisheries and Forestry

### Webinar: Strengthening Australia's preparedness for high pathogenic avian influenza (HPAI)

Brant Smith:

Good morning, everybody. Thank you for joining. For those that don't know me, my name is Brant Smith and I'm the first assistant secretary of the Biosecurity Animal Division within the Department of Agriculture, Fisheries and Forestry (DAFF). And I'd like to welcome you all to this Exercise Volare webinar about how we are strengthening Australia's preparedness for high pathogenic avian influenza, H5N1. Before we begin, I'd like to acknowledge the country that we are meeting on here in Canberra. The traditional owners of this land and the Ngunnawal and Ngambri people. And I'd like to pay my respects to elders past, present and emerging. I'd also like to extend that to all of the lands on which we are meeting across the country today, and of course, extend my respect to any Aboriginal and Torres Strait Islander people attending today.

So during today's webinar, you'll hear about the simulation exercise known as Exercise Volare. The exercise focused around a hypothetical scenario of an outbreak of avian influenza, strain H5N1 in a South Australia. Australia is free from this particular strain, which is sweeping the globe and causing quite a lot of issues internationally. Exercises such as these help us better prepare for and be able to respond to potential outbreaks. So I'd like to highlight that we will be discussing mass mortalities of birds and other animals, as well as the potential for humans to contract avian influenza. So I also want to acknowledge you will see pictures of sick and dying birds, and this may be distressing for some people. So if this is the case, of course, there are a range of free mental health services available for you to access, including Beyond Blue, Lifeline and 13YARN, specifically for Aboriginal and Torres Strait Islander people.

I'd now like to properly kick off the webinar by handing over to Dr. Tiggy Grillo, Dr. Guy Weerasinghe, to provide an update on the global avian influenza situation. Tiggy is a vet, a national coordinator and chief operating officer at Wildlife Health Australia. Guy is a public health vet working with our department's Northern Australia Quarantine Strategy as a technical manager for animal health. Over to you, Tiggy.

Dr. Tiggy Grillo:

Grateful for having the opportunity to speak to this audience. I'm dialing in from Nipaluna Country in Tasmania and I'll be giving an overview today of the global situation in relation to this particular strain of avian influenza. High pathogenic avian influenza, HPAI 2.3.4.4b, is the current and dominant avian influenza virus strain circulating globally. I'll refer to it as this strain or HPAI. This strain is unlike previous avian influenza virus strains. Since 2021, there have been outbreaks in Asia, Europe, the Middle East, Africa, North America. And in 2022, for the first time in 20 years, South America experienced HPAI outbreaks. And then in 2024, the virus reached mainland Antarctica for the first time, impacting wildlife there. Australia remains one of the only continents free of HPAI 2.3.4.4b, and the closest known detection to Australia to date has been in Indonesia in March, 2022.



The ability of this virus to spread rapidly is illustrated by its spread down the South American coast, travelled 6,000 kilometres in just six months. This strain also appears to be better adapted to infecting a wide range of wildlife species compared to other strains and has been shown to remain persistent in some of those wild bird populations for extensive periods of time without the usual seasonality. Outbreaks overseas have led to extensive losses in both poultry and mass mortalities in wild birds and mammals, particularly marine mammals or mammals that prey or scavenge on birds. It has been recently reported also in cattle and goats in the USA, which again is unusual. Whilst a small number of human infections have been reported globally, most of these have been in people who have had close contact with infected birds or contaminated environments, and the World Health Organisation currently considers the public health risks to be low. Next slide please.

This strain has had significant impacts on wildlife and poultry in countries that have experienced these outbreaks, which is globally. The map shows red dots and represents dead birds, and that shows the impact just on the single Scottish island. It's huge. In South America, more than 6,000 Peruvian pelicans, almost 36% of the population, have perished in 2022 and '23. In Argentina, more than 17,000 southern elephant seals have died, with potent mortalities close to 100%. Globally, this virus has impacted 500 bird species and over 56 species of mammal. In the USA, impacts on poultry have included 100 million poultry that have been killed in the last two years. So what about entry pathways to Australia?

Well, there's no way to prevent new strains of avian influenza entering Australia via migrating birds, however, that most likely pathway is via these long distant migratory birds that arrive from North America or Asia each year between August and November. Some shorebirds stop along the top end of Australia, where some species fly directly to locations in Australia's South, bypassing the top end. Once they arrive, some species further disperse along coastlines or into inland wetlands if the conditions are suitable. It is estimated that 5 million individual shorebirds are arriving to Australia right now. A second possible entry route is through the pneumatic waterfowl movements between the countries to the north of Australia and Australia's northern coastline.

In contrast to the seasonal risk from long-distance migratory birds, these pneumatic species of waterfowl move frequently but irregularly with no apparent seasonal pattern. So that risk would be all year round. There are also other plausible pathways, for example, wildlife from the south in addition to avenues through illegal or accidental importation of bird or bird products. So what are the risks if it does arrive here? Well, if there was an incursion into Australia of this strain, threatened species of wild bird and marine mammal may be at significant risk. Birds that aggregate in high density have been shown to be particularly vulnerable overseas, for example, seabirds. And that could be the case here in Australia as well. There's likely to be risks to marine mammals that may come into contact with infected birds such as the Australian sea lion that are endangered.

There may also be risks to other bird mammal species, for example, that prey or scavenge on sick and dead birds that are infected, such as eagles or dingoes or quolls or even the Tasmanian devil. The impacts of H5 incursion into Australia are going to be far-reaching. They're going to be affecting the welfare of domestic poultry and potentially supply and cost of food. First Nations and remote communities who come into contact or hunt infected wildlife may also be particularly at risk. And it's fair to anticipate there's going to be a high degree of public distress, given that there will be dead wildlife on our coastlines and in communities.

So investigation of sick and dead wildlife, particularly those that are significant or unexplained, is going to be critical. And this requires everyone to play a part at being aware, recording and reporting. And so here you can see the animal disease hotline, which is who you can call if you do that. As part of Australia's preparation, and for many years, for over 15 years, there has been a targeted wild bird avian



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influenza program looking for avian influenza viruses. And I'm going to hand over to Guy Weerasinghe from the Northern Australia Quarantine Strategy, or NAQS, to present on their element of surveillance that forms part of Australia's national avian influenza wild bird surveillance program. So I'm handing over to Guy.

Dr. Guy Weerasinghe:

Thanks so much Tiggy. I'm dialing in to speak to you all from Gabi Gabi Country, and I guess I'm here to represent our team. We are the Northern Australia Quarantine Strategy. I guess we have the privilege of working with a very amazing multidisciplinary team. So we are a 30-year-old program that has been focused on the early detection of exotic diseases, pests and weeds that may enter into Northern Australia through unregulated means. So we conduct active and general surveillance activities to try and look for the presence of these pathogens that shouldn't be in our country. I have to admit that we are incredibly lucky as a team to get onto country and engage directly with many of our northern stakeholders, including our First Nations people. So I have to admit, we're really privileged to be able to do that.

NAQS has been conducting avian influenza surveillance for over 30 years, and I guess I just want to show this graph here to reflect that we have been bubbling away doing the surveillance, but once the emergence of this global H5 strain was identified through the literature as well as through reports, our team saw the need and quickly deployed our surveillance work. And as you can see here, we started increasing just how many sampling events we did, but also who we collaborated with to actually enhance that surveillance. So in the early days, we, I guess had a real focus on doing surveillance and sampling of water birds, but then we really saw that with what was being seen around the world, we needed to broaden that a little bit more broadly.

As you can see here, these probably represent the broad categories of how we sampled our birds or what species we targeted. Previously we used to really focus on those waterfowl, the ducks, the geese, et cetera and migratory shorebirds have certainly been front and centre in the minds of many people. But over the last couple of years we've then started including those seabirds, those gulls, those cormorants, those birds that I guess live along our seaside that could catch the virus. And that's certainly reflective of what was seen in other countries where the virus potentially has moved to other islands by the movement of not migratory shorebirds but seabirds. And I think that was seen in some of those islands to the south of the South American continent, which is why we're now expanding into that space.

So as you can see, Northern Australia, that coastline is quite big and quite vast. These orange squares represent where our team, NAQS, have been collecting samples on a frequent basis either monthly or every couple of months. And as you can see, it covers parts of Northern Australia, but there's still a large component of Northern Australia that is not covered. So we have a really close relationship with about 65 indigenous ranger groups across Northern Australia and we have a fee-for-service relationship with them. And we identified that this would be a really good opportunity to tap into that network. So in discussions with these ranger groups, we were able to train them up and teach them how to take these samples, and these stars represent where these different ranger groups are collecting samples on our behalf and helping us to improve that network across Northern Australia.

Furthermore, we are now also collaborating with our colleagues in Parks Australia, and they are helping us to collect samples from Kakadu National Park as well as the offshore external territories for Australia. So that includes the Indian Ocean Territories, Ashmore Reef, the Coral Sea, and we have a team that are



going out to work with Parks Australia in Norfolk Island to enable regular sampling in that space as well. And further to that, we are augmenting this surveillance work by every time we get onto country, we go out and talk to anyone who will listen to us, whether that's pastoralist, traditional owners or communities, bird enthusiasts like myself. We'll get out there and just say, "Hey guys, keep an eye out for anything that might look a bit strange, bird mortality events, sick birds. Tell us so that we can then deploy some sort of surveillance work."

So that was our aspirational plan. This is currently the snapshot of where we were at the end of August, 2024. So you can see that we have gotten out there and we are getting a wide breadth of sampling that's been happening. And massive props not only to my team for putting in the hard yards and getting sampling done, but also to the collaborators who have helped us enhance this network of surveillance. So in terms of our data that we're collecting, most of the samples that we're collecting are from waterfowl as we have done in the past. And so in terms of the species, we often do take samples from, we're talking about the whistling ducks, the magpie geese, the radjah shelducks, and we also work collaboratively with any groups that are doing shorebird work.

So I think the Australian Wader Shorebird Group is one that we have worked with quite tightly with and we take opportunistic samples at the same time when they're doing their banding work to then contribute to that broader data that's being collected. As I mentioned before, we are doing the external territory surveillance and we are doing seabird surveillance in that space. All that data goes into that national Avian influenza wild bird surveillance program that Tiggy mentioned. On top of that, in light of what has been seen with this H5 strain, we are piloting a study looking at feral pig surveillance in the NT. So we're taking blood samples from feral pigs and we are testing them for exposure events. Now, we definitely don't have this H5 strain here in Australia, but what we want to do is start testing out what are the laboratory processes that are needed?

If we were to see an incursion of this H5, what needs to be done for testing in mammal species? And we are going to want to explore how this looks in the molecular sense as well, so looking for the presence of virus. But at the moment we haven't found anything that's been scary at all. On top of that, as mentioned earlier, we do a lot of engagement and we talk with our indigenous rangers, we talk with all the other stakeholders, and we also develop public awareness material. So I've got a few QR codes there of an animation that we use and we put out into the public to make people aware of what we are concerned about. And it's spoken in common language, easily understood, I guess features of what to look for in this disease to then help people know who to report to so we can get a response as soon as possible to look for the presence of this virus. So that's me done. Thank you very much. Over to you, Brant.

Brant Smith:

Great, thank you very much Tiggy and Guy for your presentations. I'll now introduce Joe Buffone from the National Emergency Management Agency as the deputy coordinator general of the Emergency Management & Response Group. Joe will discuss national crisis arrangements. Over to you, Joe.

Joe Buffone:

Good morning everyone, and great to have you all on this important webinar. I'm just going to touch on what the national arrangements are and how they actually support the quite specific arrangements that look at animal health, biosecurity, human health, and the environment aspects. So how we make sure that we are coordinated and collaborating, in particular at the national level. So the first thing, I'm not



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going to read every line of this, but I just wanted to give you some indicators that we're working on world's best practice in relation to principles of complex and potentially catastrophic crises. And this is a generic thing, but it's very much around making sure that we are focused on nationwide a lot around collaboration and coordination, how we decentralise decision-making, but make sure that there is strategic coordination.

And also an important one, I think integration of civilian and emergent capability, and I think in this scenario, that's an important part of one of our principles. And then of course interoperability, which becomes really critical. So again, this just gives you an indication and this is quite new at the federal level. When I say new, it's just recently been reviewed. In actual fact, on the 16th of September it was launched where we have an Australian Government Crisis Management Framework and just to demonstrate that states and territories have primacy in leading the responses to pretty much most crises and then connect it up through the system at the national level. And then of course, the Australian government has specific arrangements in place and each one of these step up through the system into both state and territory political systems or cabinet and same at the federal level. And at the federal level, the primary committee for decision-making is the National Security Committee of Cabinet.

The other important part that I will touch on is the national coordination mechanism, and that brings together Australian government, states and territories, private sector, non-government organisations when we've got significant coordination at the national level and making sure that everybody gets shared situational awareness, the ability to define specific problems, the ability to then coordinate and support lines of effort both within the biosecurity arrangements and of course health and environment, but also states, territories and the community. One of the key changes is around the tiered level of coordination. And right now, fortunately we don't have the disease in the country, so there's a lot of effort that's going into preparedness and you'll hear about that shortly. And so we have a tiered approach.

In the model that we've got now, we're probably looking at the lower end of tier two in a preparedness context, making sure that we're all connected, that we understand the complexity. You've heard about the surveillance arrangements. Should we get an incursion, then it would definitely be into the two, and depending on how quickly that spreads, it could potentially step up into the three. So it just gives you an idea that there is a scalable arrangement in place and that we then make sure that we work together. Now, I spoke about the national coordination mechanism and it brings organisations together very, very quickly. In actual fact, some of you online may have actually participated on it.

But the other key thing in this environment is that we can leverage on other aspects of Australian government, and if required, even international support so that we can in fact come in and support the arrangements under AUSBIOAGPLAN, under the animal health disease agreement, under AUSVETPLAN, and even linking in with the health planning and linking in with environment. The other key thing that we can do, we run a 24/7 national situation room, making sure that we are monitoring what's happening globally, but with the impacts on domestically. Now, we are not specifically monitoring, as you've heard from Tiggy and Guy around the monitoring arrangements specific to wildlife, but if we pick up public open source information around mass mortalities, et cetera, we will pick that up and feed it into the system as another force, another form of intelligence.

We've got a range of capabilities including defence support, but defence being the last resort. But we have a range of connections into both volunteer organisations and across Australian government as well. I think a key aspect, and this came out in a lot of the exercises, and you'll hear from Brant about Exercise Volare and you've heard about the scenario, some of the key learnings, but in particular, collaboration, coordination, and communication are the three key themes that came up. So



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collaborating. So in some instances there is legislation so very, very clear around roles and responsibilities, but in a lot of other areas it's very much around how we collaborate, how we bring in a whole range of different players.

And this is quite novel for Australia. We haven't dealt with this specific type of disease whilst we've got experience in a whole range of others. So an important one that occurs. The coordination aspect I would suggest is a critical factor of our success, being able to bring everybody together. Then the other key thing is consistency in communication to make sure that everybody is very, very clear around roles and responsibilities. And one of the key things that we're learning is being very clear in particular with mass mortalities and wildlife. In the first instance, do not touch them, do not start to deal with them until we have a specific criteria around what the risk and what the impacts is because the consequences, even in an environmental aspect, could be quite significant.

The other key thing about this, this type of event will have other broader consequences within the community. There'll be questions around food safety. Picking up on Guy's point, the impact on indigenous communities, in particular in remote areas of Australia. There will potentially be supply chain issues. There'll be around workforce challenges that we need to make sure, so making sure that we are coordinating, collaborating and communicating becomes an absolute critical factor of our success. That's a very quick 101, and I think the key thing here is more about letting you know there are crisis management arrangements. We work in collaboration with our partners in all the departments that are presenting here today. There is a system that is well-versed in dealing with complex and even protracted crises, but it doesn't mean that the system won't necessarily be challenged or stressed in some way, but it's about how we work together and reinforcing the collaboration, coordination, and communication. Thanks, Brant. Back to you.

Brant Smith:

I'll now give a brief overview of Exercise Volare. Before I do, I just want to highlight that this is a high-level overview. It won't capture the extensive work that's occurring across the country in relation to broader preparedness for this virus. I also want to acknowledge the amazing work everyone is doing in this space across government, industry, and non-government organisations because only through our combined efforts can we be prepared for what is a significant threat. So Exercise Volare, as people know, was a simulation exercise held in August and September this year. Entailed a series of three scenario-based discussion exercises which explored Australia's response to a hypothetical inclusion of H5N1 HPAI in wildlife.

It was used to provide a realistic basis for discussions and it brought together environment, agriculture and health representatives from the Commonwealth, state and territory governments, and sector specific stakeholders to consider what an initial national response to this virus would look like should it be detected in wildlife populations in Australia. So the aim was to ensure national preparedness of all involved to manage future incursions and to inform management of the disease across wildlife, livestock industries, and health. Preparedness exercises such as this are a well-established part of our biosecurity system, and the outcomes from Exercise Volare will continue to inform governments and stakeholders on future opportunities to further enhance our national preparedness and response capability. So you'll hear more about the outcomes of the exercise at the conclusion of the webinar.

We did have some assumptions that were made in relation to the exercise. They were that we can't prevent entry of the virus into Australia via migratory birds as Tiggy has said, and it may not be detected immediately. If detected in wildlife populations, unlikely to be considered feasible to eradicate and our





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response will be coordinated nationally and delivered locally, as per Joe's outline. And our existing biosecurity arrangements will provide our response architecture as part of that broader crisis management approach. And finally, our immediate priorities will include national shared situational awareness and unified communications. That will be really important as we go forward.

So I'll now hand over to Dr. Bertie Henneke followed by Dr. Beth Cookson to delve further into the simulated scenario. Bertie is Australia's chief environmental biosecurity officer, and Beth is Australia's chief veterinary officer, both within the Department of Agriculture, Fisheries and Forestry. I'll hand over to you Bertie. Thank you.

Dr. Bertie Henneke:

Thank you Brant. In today's webinar, we will use the scenario used throughout the Exercise Volare series to walk through how an outbreak of H5 HPAI might unfold. And at the end of the webinar we will also share with you some of the key outcomes from the Volare series and work we have underway. The initial suspect detection occurs in early October in the Coorong National Park in South Australia, and the Coorong National Park is a key migratory bird pathways and also an internationally important Ramsar wetland site. At that time of the year, increased movement of birds and marine mammals in the area heightens the risk of H5 HPAI entering and spreading through the area via a range of pathways. The Volare scenario begins as a group of recreational fishes arrive at a marked point and they notice a group of around 30 dead silver gulls and other silver gulls that look unwell.

Many of the birds are lying down with ruffled feathers while others are moving lethargically and some appear to be underweight. They call the emergency animal disease hotline, and South Australia sends an official to collect samples from the gulls and these sample samples are sent for testing. And in the Volare's scenario, the gulls return positive test results for HPAI, H5N1 clade 2.3.4.4b, which we know is referenced to as H5 HPAI. In the days that follow, several other species of birds are found sick and dead and H5 HPAI is confirmed positive in several species in the Coorong National Park, including in terns, in curlews, in pelicans and black swans, as well as in sharp-tailed sandpipers. The virus has also been detected on Kangaroo Island with dead sea lions and penguins, and they have also been tested positive.

In the effort to try and assist sick wildlife, the public have been accessing the sites and interacting with those sick and dead wildlife such as the sea lions and penguins, and as you know, this would be leading to a concern around human contraction of the virus. As you would also realise, there is significant media coverage and public concern. So I hand over now to Beth, the Australian chief veterinary officer to discuss the initial response, how it would look like at the local and also at the national level. Over to you, Beth.

Dr. Beth Cookson:

Good morning everyone. I'm going to talk about the process that we undertake through alert and investigation through response under our established emergency management arrangements within biosecurity and how that would integrate with an environment and health response also. As the events commenced in South Australia, the response would be led by the Department of Primary Industries and Regions, South Australia or PIRSA. I just want to acknowledge that Dr. Elise Spark, the chief veterinary officer of South Australia was unavailable today, so I'm going to speak to the initial parts of the investigation on her behalf before moving on to my role in national coordination.

As Bertie outlined, sick and dead birds in the Coorong in South Australia in this hypothetical scenario were reported initially through the emergency animal disease hotline. This is an Australian-wide number



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monitored at all times, and in this instance in South Australia, it'll be answered by a biosecurity staff member. In a real situation, you should contact the hotline, your veterinarian or government animal health officer immediately if you suspect an emergency animal disease. Given the remote location of the Coorong National Park, PIRSA would request assistance from rangers at South Australia's Department for Environment and Water. Rangers would then visit the site and sample the sick or dead birds. If rangers were not in the locality, then a PIRSA vet or animal health officer would attend.

And it's most likely that taken from these animals would be driven directly to Gribbles Vet Lab in South Australia for initial screening, testing and results of that initial testing is possible in the same day. A confirmatory testing would occur at the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australian Centre for Disease Preparedness in Geelong, which is our national animal health reference laboratory, and results will be expected within about 24 hours. During this time, South Australia's chief veterinary officer would notify myself as the Australian chief veterinary officer of the suspicion of avian influenza pending those confirmatory results from Australian Centre for Disease Preparedness (ACDP). And we would also, at that point, make sure that there was a good awareness across other chief veterinary officers as well as the relevant colleagues across the Commonwealth through a cross-sectoral communications group, which we have established for H5 HPAI preparedness and includes agriculture, environment and health.

I will go on to talk more about how we actually confirm this and when it would be officially notified, but at this point we would make sure that there's good awareness that there is a disease investigation and a suspect case. As I've mentioned, from a government perspective, states and territories have primary responsibility for managing biosecurity incidents within their borders. However, diseases like high pathogenicity avian influenza have important national considerations and impacts that clearly require national collaboration and leadership and there are also significant international obligations when it comes to emergency animal diseases. So as Australian chief veterinary officer, my role involves providing national and international leadership on animal health matters. That includes reporting on and helping to protect Australia's animal health status.

And as part of this, making sure that we fulfil our international obligations to the World Organisation for Animal Health as Australia's appointed delegate. That, amongst other things, supports important trade and market access opportunities for Australia and our strong reputation as a trading partner and in transparency. If H5 HPAI in wildlife was confirmed in Australia, I would be obliged to report that to the World Organisation for Animal Health in accordance with the international reporting responsibilities. I'm also responsible for providing strategic technical leadership to influence our national animal health agenda and biosecurity system, and a crucial part of that is bringing together my state and territory counterparts as well as other experts on national animal health priorities. I'll speak a bit later about our consultative committee and technical arrangements that I can be.

And another important focus is adopting and championing One Health approaches which recognise the linkages between animal, human, and environmental health. And I'm sure from the scenario described already, that you can see why it's very important for us to be operating with that One Health approach in this scenario to make sure that across agriculture, across environment, and across health, we're working collectively towards the same objectives. The established biosecurity frameworks and mechanisms means that the responsibilities of myself and my state and territory chief veterinary officers and state and territory governments and the Australian government are well-defined and understood. South Australia's on-ground response to the suspected and then confirmed detection of H5 HPAI would be guided by their jurisdictional response arrangements as I've mentioned.





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And those are established through the Emergency Management Act and the State Emergency Management Plan, which sets out the control agency. In this situation, for a H5 HPAI outbreak, it would be PIRSA and PIRSA would be ported by other agencies including environment and health. And we've just heard from Joe about the Australian Government Crisis Management Framework, which designates the Department of Agriculture, Fisheries and Forestry as the Australian government lead agency for response to plant and animal biosecurity crises. I'll go on to talk a little bit about our biosecurity arrangements. And one of the important considerations of Exercise Volare was the use of the Emergency Animal Disease Response Agreement, which is a unique contractual arrangement signed in 2002 that brings together the Australian state and territory governments and livestock industry groups to collectively and significantly increase Australia's capacity to prepare for and respond to emergency animal disease incursions.

We consider that the Emergency Animal Disease Response Agreement (EADRA) would likely be used at least initially in the incident definition phase to confirm the presence of H5 HPAI and consider whether infection could be contained or eradicated in accordance with the deed arrangements. Many of you would also know about the National Environment Biosecurity Response Agreement, however, that will not be applicable for HPAI H5 outbreak scenarios because H5 HPAI is defined as an emergency animal disease in the EADRA and is out of scope, therefore, for the National Environmental Biosecurity Response Agreement (NEBRA). We've also, as part of our preparedness, been working through a joint working group of the Animal Health Committee, which I chair and the Environment and Basis Committee to consider the governance and coordination of H5 HPAI outbreaks, including in wildlife and what future arrangements will be, including the intersect of industry, wildlife and health considerations in such an outbreak as we recognise that the established agriculture arrangements will need to be adapted to respond effectively to this scenario.

I've mentioned a consultative committee, which is our technical advisory committee on emergency animal diseases, and it's a really significant part of our deed architecture, and I chair that as the Australian chief veterinary officer. It's a key technical national coordinating body for animal health emergencies and brings together the Australian government, state and territory chief veterinary officers, the CSIRO Australian Centre for Disease Preparedness, and members of relevant peak industry groups. We have representatives from Animal Health Australia, from Wildlife Health Australia as observers, and where necessary, we bring in relevant advisors and experts or other observers, and in this scenario, that would include from human health and environment agencies to make sure that we've got the right technical advisors in the room and are making the best decisions possible.

Under the EADRA responses, the consultative committee provides advice to the National Management Group to confirm the diagnosis of an emergency animal disease and to consider whether the disease can be contained or eradicated. And if it can be contained or eradicated, the consultative committee also considers a response plan from the effective jurisdictions and advises the National Management Group. So obviously that architecture provides us a good framework, but we are working to make sure that we can adapt that appropriate to this circumstance. The potential maintenance of the virus in wildlife will pose a persistent threat to wildlife, livestock industries and potentially to public health. And as I've mentioned, the response deeds were not set up to deal with repeated or sustained outbreaks over a long period of time.

The exercise has helped us further focus on and define some particular approaches we may need to apply or adjust. And we're also basing many of those considerations on lessons learnt from overseas experiences about the unique nature and challenges that may be involved in a H5 HPAI outbreak involving wildlife. As I've mentioned, although we'll use the biosecurity architecture, we'll be working



closely with environment and human health agencies to consider those risks that represents what we call a One Health approach that recognises the linkages between animal, environment and human health. Here we talk about a range of considerations, given that we know that the EADRA would be difficult to apply if the disease cannot be contained or eradicated in the wildlife population. And we have been finalising advice to the National Biosecurity Committee on what those response arrangements might look like.

Part of that has included clarification of possible response objectives for outbreaks in scenarios ranging from detections in wildlife populations, to poultry, to detections in external territories or other Commonwealth places, which also have a range of individual considerations. Although response objectives will differ according to the individual circumstances of the outbreak, this work is important for identifying objectives, the types of possible control or mitigation measures, the funding arrangements, lead sectors and governance committees. In the scenario presented through Exercise Volare where H5 has been detected in wildlife population, the response objectives and possible control measures may include identifying the source of infection where possible and describing the extent of infection through control measures and surveillance.

Mitigating risks arising from infected wildlife to limit impacts on human health, animal health and welfare, biodiversity and social amenity. Protecting biodiversity such as through risk-based safe collection and appropriate disposal of wildlife carcasses, and site-specific and species-specific planning is a very important element of that, eliminating or minimising work health and safety risks as far as reasonably practical and raising public awareness and understanding of the outbreak and response measures. One of the other considerations will also be how we transition to management of H5 in wildlife populations. As we've seen from overseas experience, the impacts can continue for quite some time, and our response arrangements are designed to get us through the first part of responding and then need to consider how we manage that into the longer term.

We do have very well-established emergency animal disease response frameworks that integrate with whole of government emergency management mechanisms. We have strong international connections, which puts us in a good place to learn from overseas experiences, and have linkages and strong interests between the sectors sector to sector embed the One Health approaches. And I really thank everyone for their interest in this important topic. As Tiggy mentioned, it does require effort from everyone to understand what to look for, how to report, and what our coordination and response would look like. Back to you, thanks, Brant.

Brant Smith:

I'll now like to introduce Dr. Fiona Fraser, followed by Dr. Sophie Bass to discuss planning, response and management approaches for threatened species and wildlife. Fiona is the threatened species commissioner at the Department of Climate Change, Energy, the Environment and Water and Sophie is a Wildlife Ecologist at South Australia's Department of Environment and Water.

Dr. Fiona Fraser:

Welcome everyone here today, this really important webinar. I'm speaking to you from Ngunnawal country, so the Canberra region. And thank you for presenters who've gone ahead of me. So we've heard already that this strain of bird flu, H5 has killed millions of wild birds and many tens of thousands of wild mammals across the globe. It is clearly a threat to our country's ecosystems, to our wildlife, but also to our threatened species. And of course, Australia has very unique wildlife. Many of our species are



found nowhere else in the world, meaning that the impacts of H5 are more difficult to predict. However, we are anticipating that they will be significant and that vulnerable species may face long-term population setbacks and heightened risk of extinction.

Already threatened species like Australian sea lions and species that use single breeding or roosting locations like the Christmas Island frigatebird or Abbott's booby are at high risk of species level impacts. The nature of this disease and the overseas experience is that we will not be able to avoid mass mortality events in the wild, and Simone Vitali from Wildlife Health Australia might touch on this when she speaks shortly. So the focus of me and my team as threatened species commissioner is on working with governments, with key biodiversity stakeholders to ensure we've got a clear and shared understanding of and effective plans for protected species and important places, particularly those already threatened with extinction. So what are we doing about these nationally?

We are working with experts to compile a susceptibility analysis for native bird and mammal species. This importantly is going to allow us to map and model risks to species and places, and more importantly, to guide the prioritisation of actions at these levels. There are also opportunities to increase species' resilience and ability to recover from population decreases as a result of H5. So these can include mitigating existing threats, such as predation by feral cats or rodents, the pressure posed by other wildlife diseases, or actions to restore habitat, so that wildlife has a better chance of withstanding and recovering from an H5 outbreak. So these actions will complement actions being considered to directly mitigate the impacts of H5 by reducing disease spread such as restricting access to important sites to limit bird disturbance, the considered early removal of carcasses at some sites, the installation of barriers and management of water flows to allow bird dispersal.

Other actions include preventing exposure to H5 to enhance biosecurity and management of imperilled species which are managed in captivity. We are working with our colleagues in the Commonwealth agriculture department and liaising with our overseas colleagues on options for vaccination of particularly important threatened species in captivity. What's ruled out, and I think Simone will touch on this a bit as well, or not recommended in response to an H5 outbreak, is the preemptive destruction of healthy wild birds, habitat destruction, or other measures such as disinfection of the environment because these activities, they're ineffective, they're impractical, and they may actually be counterproductive.

So just to expand a little on some of the national preparedness efforts, we are also working closely with our Zoo and Aquarium Association colleagues who were undertaking a stocktake of valuable threatened species in captivity nationally. So where they're housed, what's the susceptibility? And to integrate this into our national susceptibility analysis and modelling. And almost all the zoo and aquarium facilities housing valuable threatened species are actively engaged in response planning, including enhanced biosecurity practices. Of course, the Australian government manages our Antarctic territories and also our Commonwealth protected areas. So this includes parks managed jointly with traditional owners such as Kakadu, remote island parks such as Norfolk Island, and the major seabird rookies on the islands of the Coral Sea.

So planning for an H5 outbreak is underway for all Commonwealth parks, including specific consideration of values and measures to mitigate impacts for biodiversity. The inputs at each park to inform these plans vary enormously and include not only the natural assets to be protected, but also First Nations cultural values, social, economic and geographic considerations. And this work is being complemented by preparedness work getting underway across states and territories to protect important species and places. So on this note, I'll now pass across to my colleague, Dr. Sophie Bass in the South Australian Government Department of Environment and Water to discuss preparations for an H5



outbreak in the exercise focus area, so the Coorong and Kangaroo Island. Over to you, thank you, Sophie.

Dr. Sophie Bass:

Hi everyone, and thank you so much for all that great information, Fiona. I'd now like to talk to you a bit more specifically about actions the Australia's Department of Environment and Water are undertaking in preparation for an outbreak and how we may respond if and when one does occur. So one of our actions in preparing for an incursion is identifying any sites that are a particular risk and concern due to they're attractive to migratory birds or mammals or both, or the close interaction between people and wildlife that may carry or be impacted by HPIA. So in total, we've got nine DEW managed sites or activities that meet these criteria with likely more to come. Some of these might be parks that we manage and also key stakeholder groups which we regulate such as wildlife carers and research permit holders.

So we're currently supporting the managers of these sites and activities to undertake preparedness planning and detailed risk assessments. We're using the Wildlife Health Australia HPAI toolkit to do this. We are also equipping these sites with response and testing kits, which we've developed in collaboration with PIRSA, which our rangers can use to test sick or dead animals in situ. This is just a quicker way than carrying whole dead carcasses to the lab that we were talking about earlier. We're just aiming to minimise that time between that initial call to the AD hotline and to a positive or negative test result. They also include basic PPEs to make sure our staff are kept safe while they're testing. We're also working on threatened species-specific risk assessments and contingency planning and prioritising species based on their known or assumed susceptibility to HPAI based on overseas data and their conservation status.

So the two sites that were introduced earlier, I'll start off by talking about the Coorong, which formed the basis for the scenario for Exercise Volare. This is an iconic national park, which you might recognise from the movie Storm Boy. It's around two hours drive from Adelaide and nearby to Goolwa and Meningie townships. It's important to the First Nations Ngarrindjeri people as well as with much of the Coorong being recognised under their native title. It's also a Ramsar wetland and one of the icon sites of the Living Murray program. Hosts commercial fisheries and it is important for tourism recreation. Has about 100 international, national, and/or state level conservationist species. It's also important for migratory waders, waterfowl and other water birds. It serves as a drought refuge for many bird species. It's also used by long-nosed fur seals from a marine level perspective and adjacent to marine parks.

The second site that I'll be talking about is Seal Bay Conservation Park, which is located on the southern coast of Kangaroo Island, about 45 minutes from Kingscote, which is the main town on Kangaroo Island. Also adjacent to marine protected areas. And again, it's important, due to conservation, it actually has a breeding colony, which is the third-largest colony for the endangered sea lion, which Fiona mentioned earlier. It's also an important research site for these species. Another key site for tourism. We have lots of tourists travelling here to do the Seal Bay sea lion tours where you have the opportunity to get fairly close to a sea lion. Again, nearby colonies of other marine mammals, particularly the long-nosed fur seals. And also visited by a range of seabirds and other fauna such as tammar wallabies. So in summary, these are two iconic sites with lots of different people and stakeholders interested in both of them.

So in response to an HPI incursion as was outlined previously by Bertie, DW would work with PIRSA and take advice from them as they're the lead control agency for a biosecurity response in Australia and DW would be the supporting agency. So as Fiona mentioned, Australia has unique animals which are not



found elsewhere, so the impacts of H5 and bird flu are more difficult to predict. DW would therefore likely undertake monitoring and surveillance through our range of network. So we can just observe how the disease is behaving and these species is affecting and how severely. Another thing we consider doing is reducing public access. So for the Coorong, this is adjacent to the Princes Highway and you can also get to it by boat from near the Murray Mouth near Goolwa. So there's actually a few hundred kilometres of coastline between the Coorong itself and the beach on the Yonge Hudson Peninsula, so it's not a straightforward place to close off access to.

Seal Bay, on the other hand has much more limited public access and it is more straightforward to close access to. So at the moment we're working to make a plan for access restriction with PIRSA and their legislative powers under the Livestock Act and our own legislative powers under the National Parks and Wildlife Act so we can be ready to do this should it be deemed appropriate. Again, that careful and early collection of carcasses is something that we are considering. We do know this is generally not a recommended strategy in Wildlife Health Australia's toolkit. It can make the situation worse by encouraging infected birds to disperse, which increases and hastens the spread of the disease.

Time of year is something else that we'd also consider. For example, in breeding season, collecting carcasses may scare off nesting birds and cause them to abandon their eggs and chicks. Also in the case of Seal Bay, we need to consider if there are sea lion pups present at that time of year. Having said that, we do know that the carcasses of infected animals can act as a source of infection to other animals that they may be in close proximity to or who may be scavenging on the carcasses, which we're particularly concerned about for the sea lion at Seal Bay. So we are linked into the Sea Lion Recovery Team to ensure that we have a really well-thought-out plan for carcass collection. Infected carcasses may also present a risk to human health, which is a particular concern in publicly accessible areas such as beaches.

So we need to weigh all this up when we're making a decision and we need to be careful not to make this even worse, so it's just about balancing that risk with reward. If we do deem carcass removal necessary, we're working with PIRSA now so we've got several options for carcass selection ready to go. We're also doing a stop take of DW's equipment and machinery that we have on site that will be able to assist with carcass disposal. The last option I'll speak about is euthanasia of animals. So as Fiona mentioned earlier, there won't be any destruction or culling of free-range healthy wildlife because it's not practical or environmentally sound. However, we may consider euthanasia of sick and wild birds on a case-by-case basis based on considerations of individual animal welfare and will act consistent with animal welfare legislation, so in South Australia's cases, the Animal Welfare Act.

We realise there may be negative consequences to having staff on site assisting with euthanasia. However, we also understand that seeing animals suffer is very hard to witness for the public and for anyone else. So again, we need to really carefully balance that risk and reward. If euthanasia is deemed necessary, we want to be ready to go. So at the moment, we're investigating availability and numbers of our trained staff who have the skills to assist with this, and we're also collaborating with other agencies to see who else could assist us. During both euthanasia and carcass collection, we also want to be really mindful of responders and the public's physical health, just the risk of being in close proximity and handling sick animals and wildlife, so emphasis on PPE being really important. And also, the mental health aspects of witnessing sick wildlife and being involved in euthanasia and carcass collection can be really tough for people.

So in summary, in considering response, we're going to be taking into account social, economic and cultural implications as well as what could be done to reduce the impact of HPIA on threatened species found at the site as Fiona mentioned earlier. This may include mitigating other threats to the species of



concern. Here I've discussed four possible response actions, but we will need to be really flexible in our approach rather than rigid as it just depends on how the incursion manifests and how the situation develops. Simone will talk about this more in a minute, but despite us putting every possible preparedness measure in place, there will be unfortunately no way to prevent mass mortalities. We're not using this as a reason not to do anything, but just rather to be sure that we need to be really careful about focusing our efforts on sites and activities where we can make an impact. I'll hand over to Simone Vitali now from Wildlife Health Australia to talk more about that.

Simone Vitali:

So there's a lot of questions about what we anticipate for Australian wildlife in terms of HPAI 2.3.4.4b. In terms of the species that can be affected, we need to assume that any bird species can be affected. Among the commonly affected species we see are waterfowl, shorebirds, seabirds, and predatory and scavenging species that are likely to feed on those affected species. But over 500 wild bird species have now been infected with 2.3.4.4b H5 worldwide, and over half of those have been newly reported since 2.3.4.4b emerged in 2021. The commonly affected species, as I said, are the ones that you can see in the top of this slide, the top half images. The bottom half of the slide shows some images of Australian species that sit within those commonly affected taxa, but of course, Australia's a big island and has been for millennia. We have many unique species where it's going to be harder to determine the impact. So we go with a precautionary principle.

In terms of mammals, the same thing applies. We've had over 60 mammal species worldwide now affected with H5 2.3.4.4b, and over half of those are newly reported since 2.3.4.4b emerged in 2021. Overwhelmingly, mammal cases are related to predation or scavenging of infected birds or their carcasses. Or in the case of pinnipeds, so seals and sea lions, is associated with very close colonisation in areas where those types of birds congregate, and particularly seabirds. So based on the pattern overseas, we will see birds affected before we see mammals affected because their disease originates with birds before being passed onto mammals. So we're not likely to see a mass mortality of sea lions, for example, as our first clue that H5 2.3.4.4b has arrived in Australia. And as with birds, the Australian species that share ecological or genetic similarities with affected species overseas will be the ones to watch.

It's harder to know what's going to happen with marsupials because of course we don't have a lot of analogues overseas. We would expect by extrapolation that carnivorous and scavenging marsupials will be at higher risk than, say, kangaroos. There are no reports of captive kangaroos overseas being affected. There have been a few reports of 2.3.4.4b infections in the Virginia opossum, which is an overseas marsupial, but they have a strong adaptation to an urban environment and they're omnivorous. And so that's a very different ecological niche from many of our Australian marsupials. There's a lot of information out there about how H5 2.3.4.4b will manifest in birds and mammals. But as you can see, the signs can be pretty nonspecific. Sudden death is very common, but we can see neurological signs, respiratory signs, gastrointestinal signs and so on.

So it's going to be very difficult in the first instance to differentiate a generic sick bird from one that actually is infected with 2.3.4.4b, but neurological signs do seem to be quite prominent in wild mammals. The initial presentation could be one sick animal or many. What we do know is that for most individuals, this is not going to be a nice way to die, and the prognosis for recovery is extremely poor. Most animals die within days of showing signs of illness. We've been grappling with 2.3.4.4b now since 2021 and that message has not changed. So I think that we can expect to see high mortality rates and not be looking at something where we can rescue and recover animals.





So there's nothing we can do to stop H5 2.3.4.4b from entering Australia. And once it's here, the prognosis for infected individuals is grave. So what are we doing here? How can we promote a softer landing for Australian wildlife? Well, as you've heard, there's a lot of preparedness activities going on, and these are fundamental to understanding how HPAI H5 would play out in Australia. We're testing assumptions, we're looking at our resourcing and developing decision-making strategies, we're getting our act together with communicating about early reporting. Certainly from all of this preparedness activity, there will emerge some species or population specific response strategies, which I'll touch on shortly. But I want to over emphasise that the important thing here is going to be promoting general wildlife resilience because that's something that we can do across the board.

We can continue our current efforts and increase our current efforts to protect habitat and resources for wildlife. We can reduce their crowding and stress and do everything we're currently doing across the nation to promote good general health of wildlife. Because wildlife resilience is going to be the key when you've got a very poor prognosis to making sure that nothing else affecting these wildlife is going to impact their ability to bounce back. Unified communications will be vital, as many people have already commented in today's webinar, and I want to emphasise that as well. It's no use us working in silos. We have to keep redoubling our efforts to communicate, to let people know what we're thinking and what we're doing so that that can be incorporated into the overall picture.

And I do want to reiterate again that for wildlife itself, there's not a lot in here about rescue. So this is a very different set of scenario from, for example, what we saw in the bushfires where triage and rescue efforts were paramount in our wildlife response. When we talk about species-specific and population strategies for wildlife here in terms of animal welfare, we're talking about how we promote wildlife welfare through early and effective euthanasia, not through early and effective rescue. Now, that doesn't mean we're not addressing rescue and we're not engaging with wildlife rehabilitators, but we need to be very clear that there are not going to be a lot of survivors from this.

So what might the wildlife response look like in Australia? So I spoke briefly about the fact that we are working from our pre-agreed response arrangements in terms of AUSVETPLAN. We're having ongoing discussions about how that applies to HPAI and wildlife. We're really encouraging risk evaluation of wildlife populations and Wildlife Health Australia has developed some risk mitigation toolboxes to help wildlife managers and wildlife care providers to assess their specific situation. It's becoming clear that the extent to which specific HPAI response strategies can or should be implemented is going to be very situational. Not all strategies can or should be implemented in every situation with wildlife, and what we do or what we should do will change even for a single wildlife population depending on the specific circumstances, as Sophie's presentation demonstrated.

We hope that, and we are encouraging everyone to use the WHA risk mitigation toolboxes to evaluate their own circumstances in a systematic way and develop their own decision trees. And the risk mitigation toolboxes also highlight the importance of communicating what won't be done, as Fiona mentioned earlier, in the context of environmental modification, wildlife dispersal, culling of healthy wild animals and so on. So what can you do now regardless of who you are? Well, I think these four points are the most important. You need to stay informed, stay updated on new developments from reliable resources, and there's a QR code there to our information area for your reference. If you're a wildlife manager or wildlife care provider, be familiar with the current national biosecurity plans. Do your own training in emergency animal disease biosecurity response. There are foundational courses on the DAFF website.

Use our toolboxes to do your planning and continue to promote all aspects of wildlife population resilience because there's a lot we can do there that will be more cost-effective and more impactful



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across the board than the specific HPAI toolkit. Know the clinical signs and report to the Emergency Animal Disease (EAD) hotline and once again, communicate, understand what's going on in your jurisdiction, align the communications in your jurisdiction and develop those interagency and intersectional relationships within your jurisdiction that will enable us all to have an impact that's unified and coordinated.

Brant Smith:

I'll now hand over to Carmel Curran, the assistant secretary of the Communication and Media branch here at DAFF, who will discuss the coordination of government communications. Thank you, Carmel.

Carmel Curran:

Thanks very much Brant, and thank you to everyone online. I'm joining you today from Ngunnawal Country here in Canberra. As Joe and a few other people have pointed out throughout this webinar, the importance of coordination and targeted communication and the need for accessible and simple information in times of uncertainty really can't be underestimated. So how are we going to do this? We're taking a national approach to the coordination and development of communications. We're working with a group called the National Biosecurity Communication and Engagement Network. This network includes representation from communication and media areas in all of our states and territories. Membership also includes representation from Animal Health Australia, Plant Health Australia, CSIRO, and because of the nature of H5, that membership has been extended to the federal departments of health and environment.

Together we're working to identify sector specific information and ensure the development of national talking points. National talking points are absolutely critical to ensure that we've got consistent information that we use those to base all of our communication on. The sectors that we're looking at are many, we're a very big country. But we're looking at groups such as wildlife carers, poultry workers, First Nations people, park rangers, and of course all of the other sectors that make up Australia. Together we're building the ability to scale, so we're working together so that we can scale where we need to and we're building a suite of communication products and leveraging behaviour change research, which is really important research that's been conducted overseas, research that's been conducted in Queensland with other states and territories that explore the impact of a biosecurity incident.

So that we need to have a good understanding of potential barriers and opportunities for partnering as well, because maybe not surprisingly, not everyone wants to hear their information from government and we need to know where people go for their information, who they trust, and what channels they use. So to recap, we're taking a joined up approach. We're building a holistic national communication strategy. We're working with the states and territories and the departments of health and environment to understand our stakeholder needs, and build and share both preparedness and response communications. To help ensure that information is easy to find, a couple of people have mentioned, we've got a central repository, a website, [www.birdflu.gov.au](http://www.birdflu.gov.au) and a national animal disease 1-800 hotline for reporting sick or dead birds.

In the case of a response, we will deploy the entire range of mainstream communication channels, things like print, radio, television, social media, and research will inform how we leverage those channels to reach all the diverse sectors. Before wrapping up, I just want to stress the importance of using trusted and reliable information sources. In times of uncertainty, there is no doubt going to be an



increase in mis and disinformation, and so using trusted sources will help reduce that and hopefully also help us manage community concern. So thank you for your time. Thanks, Brant.

Brant Smith:

Thank you Carmel for your presentation. I'll now hand over to Dr. Sarah Britton in place of Professor Paul Kelly to discuss human health issues. Sarah works for the interim Australian Centre for Disease Control at the Australian Government Department of Health and Aged Care. Over to you, Sarah.

Dr. Sarah Britton:

Thank you for the opportunity. I think this disease really highlights the real need for One Health approach. And as the director of the One Health Unit in the interim Centre for Disease Control (CDC), this has really allowed us to focus about how we can actually approach the preparedness and response to this disease. I think this series of exercises has highlighted that immense interest in One Health and the approach to manage this with the number of participants that we have had over the series of three exercises in today. So I think a true One Health response really requires us to be working together and I think the impacts of any decisions or hazard in one sector flows into another sector and can have negative consequences and really needs to be all worked together. And I think we've heard through the other speakers here just how important that approach is that we are all linked up together and we've got this opportunity to be able to try to get ahead of the curve as much as we can.

One of the key things, and I know for Paul Kelly and the interim CDC, we are committed to adopting a One Health approach and the actual fact that the interim CDC has developed a One Health unit as a foundational component for it really sends a signal for what we want to do going forward in the future work and be able to work together. The One Health approach is not only important in the response aspect that we've heard about from Joe and the coordination and the communication, the collaboration. They're all underpinning the One Health, but it's also really important in that early detection phase and it's been to be able to communicate and be able to get on the front foot as this disease potentially enters Australia. I think a couple of the key things that we are concerned about and flows on from the aspects that have been discussed before is really the risk.

Could this disease become a human-to-human transmission disease? We've seen it impact and infect humans overseas. And whilst it's only been a mild disease, certainly those people that have been working closely with poultry or dairy cattle or other, it's still a significant enough disease and as many of us know about influenza viruses, they can change and they can re-assort and do things, which is a potential risk going forward. There's also, as mentioned earlier, some of the First Nation and mental health impacts that it likely to occur if this disease occurs in Australia. And I think that's a key area that we're keen from a One Health approach to look at, is how do we actually manage that and how do we actually manage the food security side of the aspects of what may occur as a result of this disease as well?

So key role that the interim CDC and through the Department of Health are playing is working across with the colleagues in both environment and agricultural sectors and looking at that, how can we actually unite the surveillance that's underway? It's certainly through the CDNA, which is the group that's pulling together the human surveillance plan. We're looking at adopting also One Health approach because there's many areas that we need to be able to trigger and be able to join up how we are doing surveillance in both the environmental areas in wildlife and also agriculture and the human health side. We were fortunate in Australia that we do have Wildlife Health Australia that has such an expansive



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ability to be able to manage the surveillance in the wildlife sector, and that certainly enables us to be able to have a good idea about what's happening in that area and as we heard from Guy, just about what's also happening in the wild birds.

So all that information together helps us go through for a One Health approach. And I think one of the other key factors is about providing guidelines for those people that might be at risk, either from handling carcasses or handling dead birds or actually working the poultry and dairy industries and working collaboratively across the industries and with the agricultural sector in providing guidelines about how to protect yourself and what to do. The other key parts just on the health component is just those things that we need to do. And you've heard from when COVID was present a few years ago, and having that stockpile of vaccines, ensuring we've got the correct vaccines, learning from what's happening overseas and being able to include what that looks like.

And also just then having joined up communication materials that we've heard from Carmel, being able to actually have that joint message is a really, really important component and I think through the One Health approach, this is really, really coming to light. So I commend the HPAI task force for bringing this together and actually enabling us to have a true One Health approach. And I think addressing some of those issues that we've seen with other One Health responses like Japanese encephalitis and the challenges that we encountered there, it gives us an opportunity to be able to address some of those issues and the unique challenges of avian influenza and be able to move forward jointly together. Thank you.

Brant Smith:

I'd now like to introduce Justine Saunders, deputy secretary at the Department of Ag, Fisheries and Forestry to provide a summary of exercise for our themes, work currently underway, and next steps. Over to you, Justine.

Justine Saunders:

We've had a good overview of what the nature of the response to a detection of H5N1 would look like in Australia. You've heard about the One Health approach that we would take across the human health environment, agriculture portfolios. And I've certainly recognised the fact that a lot of work's been done to ensure that the inclusive nature of activity and the discussions that we've had have been informative and incredibly rich to get to the point where we are now. The exercise that we undertook has clarified roles, initial governance arrangements and communication mechanisms, which have all been critically important to ensure timely national action. If I can just quickly reflect on some of the key themes from Exercise Volare, which we have explored today, firstly is the continued recognition that H5N1 will have a more significant impact and require more complex cross-sectoral response arrangements than previous HPI outbreaks in Australia.

Agriculture departments are well-positioned as the primary response agency for H5N1 in both agriculture and wildlife across jurisdictions and provide for an initial response through established biosecurity arrangements. Having said that, the partnerships that you've seen through a One Health lens are critically important, and through these exercises and activities we've undertaken, those relationships are well-entrenched. We've certainly recognised the need for improved coordination and collaboration across the spectrum to ensure national, Commonwealth and jurisdictional levels and in doing so, improve alignment of concurrent emergency management mechanisms, which you've heard Joe talk about earlier. We've been focused on strengthening communication, stakeholder engagement, a strong



emphasis on the need for increased environmental preparedness, including site and species-specific response plans, vaccination and clear guidance on handling testing and disposal from mass mortality events and the need to build on existing surveillance and diagnostic arrangements, ensuring that necessary capacity and capability to respond to human health and biosecurity risks from mortality events in wildlife and production include humane depopulation methods.

And finally, the need for integrated resourcing and partnership approaches as an effective way to optimise existing capacity and capability by leveraging established networks. So what does it mean? So what's next steps in regards to the work that's underway? So firstly, you've heard about boosting HPAI H5N1 surveillance, critically important. We're delivering a range of preparedness exercises in addition to Exercise Volare, including Australian Antarctic Division and through other jurisdictions. We've established interim and sustainable governance coordination response mechanisms. You heard earlier from Beth in regards to the leveraging off the EADRA, but we're also looking at a future model, a sustainable model for a national response to multi-sector events or incidents. And we also are considering what potential cost sharing arrangements might look like into the future.

We're supporting the development of site and species-specific planning and updating management guides. Included in this is our consideration of specific planning for external territories and collaboratively developing carcass management disposal protocols. I can reassure you that the planning is being informed by the science, collection of data, mapping and modelling, including performing a wildlife susceptibility analysis. We're exploring the role of vaccinations as you've heard, both in poultry and priority threatened species and considering the roles of volunteers and non-government organisations in our response. We're incorporating indigenous knowledge and ensuring we understand the cultural values, considering those cultural values in the process of informing and prioritising our actions. And we're focusing on ensuring there are common understood trigger points to help determine how activities and resources should be deployed.

And you've heard about communication, I might leave it there other than to say we've got some good communication tools that are already established, great artefacts around the country. We'll make sure that those get out in a timely way, but we are building a more sophisticated communication strategy ensuring that we've got all the tools we need, that we're ensuring that awareness is being raised and there's education and training with an emphasis on tailored approaches targeting key stakeholders. And we are, of course, publicising the guidelines for public health units to provide nationally consistent guidance on how to respond to avian influenza in humans. So a lot is either complete or very close to conclusion, but I think the key in terms of going forward is ensuring that one, that we bring this together in what be a national response plan that we can all rely upon.

And what's going to be critically important is that we continue to work with you in improving our preparedness and early detection and critically important, our speed to action capabilities. We will continue to have workshops over coming months to address particular discrete issues as they arise. And of course, we'll maintain open lines of communication with all of you. So please stay tuned for future communications from us. Thanks.

Brant Smith:

I'd like to now welcome back all of our presenters and we'll commence answering some of the written questions during the webinar. So the first question I'll provide is, how large a network of vet labs do we have in Australia and how prepared are they for a potential large influx of testing? I'll refer that question to Dr. Beth Cookson.



Dr. Beth Cookson:

We have a network of veterinary laboratories across Australia. Many of our state and territories have animal health laboratories and we coordinate the effectiveness of those laboratories through our subcommittee on Australian Animal Health Laboratories, which is chaired by the CSIRO Australian Centre for Disease Preparedness. So that ensures that they're all networked together. We've also tested their capacity through Exercise Waterhole, which was completed late last year. And of course, that reflected that we do have a strong network of laboratories. However, there are some areas for us to improve and we are currently working through those actions. I guess the only other thing to say before I finish is that we also would be considering, after the initial detection in Australia, how to triage and prioritise testing based on lessons learnt from colleagues overseas to make the most use of those laboratory facilities. Thanks.

Brant Smith:

The next question I will take, that is, has emergency registration been sought for vaccine use? So as Fiona touched on, the Department of Ag is looking into the use of vaccines for particular purposes, particularly in wildlife, in captive populations. The process is requiring assessment and use permits through the APBMA and our department to make sure that it's safe, to make sure that they can be used effectively. And we're looking at how some of these vaccines have been used overseas, such as in the United States through [inaudible 01:19:45] and others. So that yes, that is a priority for us and we will be working with our environment colleagues closely as we take that issue forward.

The next question I have is, has the federal bird and bat banding office been engaged to explore the potential for bird banders to contribute to monitoring? And I'm going to get Tiggy to answer that. Thank you.

Dr. Tiggy Grillo:

Just to note, as already highlighted by others, there's communication and coordination continuing across a range of key stakeholder groups, including bird banders. Flightlines is a newsletter that comes out from the Department of Environment and they have been periodically continuing to provide links to key resources including those on the Wildlife Health Australia website. And that also includes specific guidance for bird banders and researchers and so forth that may be in contact through their work activities with wild birds that potentially might be infected in future. So thanks, Brant. I'll leave it at that. Keep it short.

Brant Smith:

The next question is how are environment and wildlife related decisions and actions being incorporated into the framework? And are agencies being provided authority or support in the event of an HPAI incursion? Or versions of that question, and I'll provide that answer to Fiona from the Department of Environment. Thank you, Fiona.

Dr. Fiona Fraser:

Thanks, Brant. And hopefully I've understood that question properly. So if we're talking about the susceptibility analysis that we're undertaking for threatened species and potentially threatened species, we're systematically considering Australian birds and mammals through that process. Which species are likely to be exposed to H5? Do they have traits and behaviours that make them particularly susceptible?





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Do they aggregate? Is there just one or two breeding colonies so that they would be at high risk if they encountered this disease? Are they already threatened so this disease will put them at greater risk of extinction? And then what are the feasible actions that we could take for those? And all of that gets considered in then undertaking planning, either at a species level or at a place based or at a site level depending on what the focus is.

And to the empowerment part of that question, Brant, I would say in short, yes, that's the whole idea of doing this planning so that we're well positioned for agencies at different levels depending on where the outbreak occurs, to be able to take those actions and take them very quickly in response to an outbreak. But knowledge is very important for informing whether those activities take place or not.

Brant Smith:

The next question we've got is, is H5 exposure to persons mostly direct contact rather than airborne? And I'll provide that to Sarah from Health.

Dr. Sarah Britton:

There's a number of ways that people could get infected from the H5N1 and it's potentially touching infected animals without PPE or touching something that's actually got the virus on it and then touching your nose, your mouth or your eyes. Also, the aerosol, breathing in dust or droplets that contain the virus. And the other way is liquid that might have the virus in it splashing in your eyes or your nose or your mouth. And the CDC will be publishing some guidelines and some infographics pretty soon about that that will help a lot of people understand about the risks of exposure and what they need to do.

Brant Smith:

Thank you for all the questions that people have provided. So we will undertake to answer those questions both by key themes on our Exercise Volare web page at a later date. So don't be concerned. I thought it was useful to go through some of the key ones today. The final question we've got for Joe [inaudible 01:23:15], considering that the states and territories are still undergoing truth telling and inquiry processes, how does the Australian government's crisis framework can ensure that First Nations people are meaningfully included in state level frameworks, particularly given the absence of a national peak body?

Joe Buffone:

Thanks for the question. The first thing is we are a federation, so we can't actually direct states or territories, but in the spirit of collaboration, there are a number of actions. Number one, we work through the National Indigenous Australian Agency to make sure that we use their linkages and processes and programs. The second thing is in our plans and also in the framework, it specifically calls out First Nations people to make sure, regardless of what the vector is or what the risk is, that we are engaging with them directly. We also are connected with Monash University, Bhiemie Williamson on a lot of the programs, including national and indigenous Australia, resilience programs, making sure, and then of course directly connecting in with networks including ranger programs. So there are multiple layers to ensure that indigenous Australians, First Nations people are actually meaningfully included. Thanks, Brant.

Brant Smith:



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Thank you everyone for those fantastic questions. Unfortunately, we'll have to wind up now, but just in closing, I'd like to thank you for participating in today's webinar. I saw on our peak we had over 1,000 people, which is fantastic. And thank you to all our wonderful presenters for your insightful presentations today. We would like to invite your feedback and comments about today's webinar. Please use the QR code present on the screen to complete a short survey. We've also provided a link in the Q&A. If you'd like to get in touch with us, please use our Exercise Volare email, and that address will be provided as well. And just lastly, thank you very much for your attendance today and we'll close our webinar there. Thank you, everyone.