

In Confidence

Office of the Minister of Health

Office of the Minister of Conservation

Office of the Minister for Biosecurity

Chair, Cabinet Economic Policy Committee

One Health Response Approach to Highly Pathogenic Avian Influenza

Proposal

1. This paper seeks Cabinet agreement to New Zealand's approach to managing an incursion of Highly Pathogenic Avian Influenza (HPAI, H5N1)¹, which could have conservation, primary sector and human health implications.

Relation to government priorities

2. This is in line with the government policy statement on health to strengthen prevention in the health system by ensuring there is appropriate capacity, capability and infrastructure in place to prevent and respond to future pandemics and other health security threats.

Executive Summary

3. A highly pathogenic strain of avian influenza (H5N1) has been spreading around the globe since 2020, impacting poultry and wildlife in many countries. It is uncertain when HPAI will reach New Zealand, but it has the potential to arrive in the next 12 months. H5N1 is likely to have severe impacts on some threatened wildlife species, and on the poultry industry. The public health risk to New Zealand is currently considered low.
4. One Health partners (Ministry for Primary Industries (MPI), Department of Conservation (DOC), Ministry of Health (MOH), and Health New Zealand (Health NZ)) are working together with industry and other stakeholders on plans to mitigate the impact of H5N1 if it arrives here.
5. Eradication of H5N1 from New Zealand is unlikely to be feasible once it has established in the wild bird population. Wild birds can infect commercial and domestic poultry unless poultry are isolated from all contact with wild birds.
6. There is likely to be public pressure for an eradication attempt, but experience in other countries indicates this would be highly unlikely to succeed. Our efforts should therefore focus on minimising the impacts of H5N1 on wildlife, poultry and human health.

¹The global strain of concern, A(H5N1) clade 2.3.4.4b, currently found across most of the globe, including western Antarctica.

7. Government actions in response to an outbreak in New Zealand wildlife will be focussed on native species. s 9(2)(g)(i)
[REDACTED]
[REDACTED] Ongoing management will also be required to enable some species to recover from outbreaks.
8. In other countries where HPAI H5N1 is present, human infection has been rare and generally only found in people who have had frequent contact with infected birds or animals. There has never been documented human-to-human spread of the current H5N1 strain. The World Health Organization therefore assesses the overall public health risk posed by H5N1 to be low.
9. s 9(2)(g)(i)
[REDACTED]
New Zealand poultry farming practices will need to adjust to achieve a sustainable domestic supply of poultry meat and eggs. Protecting commercial poultry from exposure to the virus via wildlife will be critical.
10. In the near-term MPI will likely need to be directly involved at the start of an incursion response with the poultry industry. The response objective would be to eliminate the disease from commercial poultry operations as it arises, while industry adopts new management practices to reduce infection risk. A response in the near-term will likely require the use of Biosecurity Act 1993 powers, with an associated cost to the Crown.
11. An industry-led, government supported response is the most appropriate approach to long-term management of H5N1 outbreaks in the commercial poultry sector. Once a long-term approach is in place, we propose that industry lead and fund any response from the moment of first detection in a commercial poultry operation.

Highly Pathogenic Avian Influenza

12. Avian influenza or 'bird flu' is caused by a variety of Type A influenza viruses. They are classified into two broad groups:
 - 12.1 HPAI (highly pathogenic avian influenza) strains, which cause mortality in poultry and wild birds. HPAI has never been detected in New Zealand.
 - 12.2 LPAI (low pathogenicity avian influenza) strains, which are present as a low-level background infection and rarely cause bird fatalities. LPAI has been detected in New Zealand waterfowl since 1975.

A new strain of HPAI is spreading globally

13. In 2020 a novel strain of HPAI, A(H5N1) clade 2.3.4.4b, emerged that is well-adapted to establish and be carried long distances in wild bird populations. It has spread across the northern hemisphere, Africa and the Americas via wild bird movement. In February 2024, it was confirmed that this strain has reached the Antarctic Peninsula south of Argentina.

14. H5N1 has affected over 500 species of birds worldwide including seabirds, waterfowl, raptors, parrots and managed poultry. Seabirds that breed in colonies such as terns, gulls and gannets are particularly prone to infection. Farmed poultry are similarly vulnerable due to the high density of birds within a confined location.
15. In countries where H5N1 has been detected, it has become established in the wild bird population. This forms a reservoir of disease that can infect the commercial poultry sector unless rigorous biosecurity measures are introduced to prevent poultry having direct or indirect contact with wild birds.
16. H5N1 and other strains of HPAI can spill over from birds to mammals, with cases recorded in over 60 mammalian species. These mammals typically either live near infected bird colonies or consume dead or dying birds, however outbreaks also occur in farmed mammals including dairy cows, goats, pigs and others.

Current HPAI outbreak in Australia

17. Historically, HPAI emerged when poultry flocks were infected with LPAI from wild birds, and the virus mutated into a more pathogenic strain. These strains typically did not persist in the wild bird population or spread via wild birds, and can therefore be 'stamped out'² by controlling infection in managed poultry.
18. Australia is currently experiencing three separate outbreaks of this nature, involving three different strains (H7N3, H7N9 and H7N8) which evolved locally into highly pathogenic strains. The likelihood of these Australian strains reaching New Zealand is extremely low, given they are unlikely to spread via wild birds. If a non-H5N1 strain was detected in New Zealand we would strongly consider the feasibility of eliminating it by a 'stamping out' response, as Australia is doing.

Implications of H5N1 arrival in New Zealand

19. H5N1 is expected to spread around the Antarctic coastline towards New Zealand. The timing of this progression is uncertain, but arrival via wild birds could occur during the next 12 months. Once H5N1 spreads into Australia, the Pacific Islands or the Ross Sea region of Antarctica, the likelihood of it reaching New Zealand increases.
20. A 'One Health'³ approach is being adopted to H5N1 response planning as it has potentially significant impacts on wildlife, the poultry sector, and public health. This involves One Health partners MPI, DOC, MOH and Health NZ working together (see **Appendix One**) to develop appropriate response options. **Appendices Two, Three and Four** provide more information on wildlife, health and primary sector preparedness and responses respectively.

² Stamping out involves the depopulation of all birds in flocks where infection is found, secure disposal of carcasses and infected material, and disinfection of premises to prevent spread of disease.

³ One Health is "a collaborative, multisectoral, and transdisciplinary approach ... to tackle complex health challenges at the human-animal-environmental interface".

21. The objectives for a H5N1 response across One Health partners are to:
 - 21.1 reduce the impact on native species;
 - 21.2 reduce the impact on the commercial poultry sector;
 - 21.3 maintain supply of poultry meat and eggs to the domestic market and maintain access to overseas markets where possible; and
 - 21.4 protect human health.
22. One Health partners are coordinating surveillance efforts across human and wildlife populations in New Zealand to ensure early detection of any cases of HPAI H5N1. This includes surveillance at migratory bird sites, wildlife hospitals, poultry farms and human influenza testing.

Wildlife impacts are uncertain, but likely to be significant

23. H5N1 may affect both native and non-native wild birds. We propose that government actions for wildlife focus on mitigating impacts on native species.
24. New Zealand has 86 species of colony-nesting seabirds that are likely to be vulnerable to mortality from H5N1, as well as many other threatened species that could be impacted. Overseas, outbreaks have killed up to 70 percent of seabirds in the worst-affected colonies.
25. H5N1 can also be transmitted to wild mammals. In New Zealand these are most likely to be fur seals and sea lions. In Argentina, an outbreak of H5N1 killed 96 percent of the elephant seal pups born in 2023.
26. It is difficult to predict the long-term impacts of H5N1 on New Zealand's native species. Because many of New Zealand's birds occur nowhere else in the world, the loss of high numbers would increase extinction risk and represent a major setback in ongoing species recovery efforts. Some species populations will take many years to recover from any outbreak, requiring ongoing management, and some may suffer a loss of genetic diversity with long-reaching implications for their future viability.
27. Some ongoing conservation management interventions may need to be paused during H5N1 outbreaks. It may not be possible to undertake research on affected species, due to the need to reduce disturbance.
28. Some species that are regularly harvested for food are likely to be affected, with the potential for significant reductions in their populations and risks to human health. These include muttonbirds/tītī and game birds. In other countries, waterfowl have been a major vector for the spread of H5N1.
29. Impacts on Māori from H5N1 may arise, such as increased risk of exposure through cultural harvesting practices and reduced access to bones and feathers for use in ngā toi Māori (creation of art and craft objects). Many of the potentially impacted species are also taonga for mana whenua, with any losses likely to have material impact for iwi, hapū and whānau Māori as kaitiaki of taonga species.

30. Impacts on some species may be significant and access to some areas of s 9(2)(g)(i)

Preparedness and response to impacts on wildlife

31. DOC's primary focus will be actions on public conservation land and protecting threatened native species⁴ where this is possible.
32. DOC is developing response plans and information for its operational teams around the country in preparation for the arrival of H5N1. In the event of an outbreak in wildlife, the general approach will be to:

32.1 s 9(2)(g)(i)

32.2 consider whether other stressors on endangered populations can be relieved, for example, through improved predator control; and

32.3 vaccinate threatened species where this is feasible – this will only be where two doses of vaccine can be administered which is not possible for most wild native birds.

33. DOC will establish a central H5N1 DOC response team to ensure consistency across operational teams and provide support. If a vaccination programme is rolled out, it will require DOC to redeploy specialist staff, which will reduce the ability to carry out other high priority conservation work. As there are few tools (aside from area closure) to mitigate the impacts of H5N1 outbreaks in wild birds and marine mammals, DOC's interventions elsewhere will be focused on managing dead and dying wildlife on public conservation land where necessary.
34. DOC will use its regional networks and relationships to advise regional councils⁵, iwi/hapu, and other significant landowners (for example, Fish and Game New Zealand, Land Information New Zealand, and local authorities) in their management of wetlands, beaches, and riparian zones where dead and dying wild birds and mammals are likely to be found. Although removing dead birds could be desirable in some cases (for example, for the protection of human or animal health), in other situations it will be more important to minimise disturbance to surviving wildlife.
35. DOC's longer-term management will include targeting populations through species recovery programmes and activities to improve the health and resilience of these populations as well as ongoing vaccination in a limited number of species.

⁴Many of the species that would be most seriously impacted by H5N1 due to low populations are already being managed intensively.

36. DOC's proposed approach is to work closely with iwi and hapū at place to increase preparedness including through joint planning at key sites and involving particular iwi in respect of taonga species, consistent with Treaty settlements. MPI is developing wider engagement plans for the response, including engagement with tangata whenua.
37. **Appendix Two** provides more detailed information on the implications of H5N1 for wildlife, including preparedness, response and long-term management.

The public health risk to humans is expected to be low

38. The World Health Organization assesses the overall public health risk posed by H5N1 to be low. Those with exposure to infected birds, animals or contaminated environments are considered low-to-moderate risk of infection. The Institute of Environmental Science and Research has rated the public health risk to New Zealand as low.
39. Human infection with any strain of HPAI is rare, with very few cases reported worldwide since 2020 despite millions of bird and animal infections. There has never been documented human-to-human spread of the current H5N1 strain. This year, 14 United States (US) farm workers were infected via contact with infected animals. In some cases, personal protective equipment was not appropriately used resulting in increased risk of infection. Affected workers typically experienced mild eye or respiratory infections, and recovered within a matter of weeks.
40. The Highly Pathogenic Avian Influenza Incursion Health Sector Framework (the Framework) is a strategy for how the health sector prepares and responds to the event of an incursion of HPAI in animals in New Zealand.
41. The Framework also identifies the set of activities that are associated with some degree of risk to humans. These include occupational and recreational groups in contact with potentially infected birds and other animals, their products and contaminated materials, or their environments and habitats.
42. The proper use of personal protective equipment and other infection prevention measures is expected to mitigate nearly all risk to people who work with infected animals.
43. In the event that further protective measures are recommended, Health NZ maintains a stockpile of human vaccines that are likely to have some protective effect against the currently circulating H5N1 strain. There is also a stockpile of antiviral medicines that are expected to have an effect on reducing disease severity and mortality.
44. Should the virus mutate to be capable of sustained human-to-human transmission and is a significant threat to health, the New Zealand Health Emergency Plan and the New Zealand Pandemic Plan will be implemented.
45. **Appendix Three** provides more detailed information for the management of public health in an H5N1 incursion.

Commercial implications for the primary sector

s 9(2)(g)(i)



Dairy sector implications

49. H5N1 was recently detected in dairy cattle in the US. The risk of this occurring in the New Zealand context is considered low due to our farming systems. There appears to have been a single spill-over event from wild birds to dairy cattle in an arid region of Texas, where large numbers of birds congregate around cattle troughs to obtain water. Spread to other States was caused by the movement of infected cattle. Transmission within herds appears to be either via milk or contaminated milking equipment. To date, no beef cattle have been affected. Infected cattle generally recover within two to three weeks.
50. The virus can be found in raw milk from infected cows. The US Food and Drug Administration is confident that commercial pasteurisation renders milk and other dairy products safe for consumption. A New Zealand Food Safety Risk Assessment confirms that the standard commercial pasteurisation process has been shown to inactivate the HPAI viruses.

Managing the impact of a detection of H5N1 on primary sector trade

51. New Zealand's poultry industry is domestically focused, with limited exports.
s 9(2)(g)(i), s 6(a)

52. s 9(2)(j)

53. MPI is working with industry to develop biosecurity 'compartments' for hatching egg and day-old chick export certificates. Compartments are defined by the World Organisation for Animal Health as sub-populations with a distinct biosecurity status maintained by management practices. This is intended to allow some continuation of exports without requiring New Zealand to achieve country HPAI freedom as defined by the World Organisation for Animal Health, subject to agreement from the importing countries.

Domestic market implications of H5N1 for commercial poultry

54. The commercially concentrated nature of the New Zealand industry (particularly for chicken meat) and the absence of fresh poultry/egg imports mean medium-term supply issues cannot be ruled out, particularly if several large-scale poultry producers are impacted simultaneously.
55. New Zealand does not import fresh eggs or uncooked poultry meat due to the risk of other poultry diseases being introduced. To quickly expand our imports, we would need to develop new risk analyses, new import health standards, and newly agreed veterinary certificates. s 9(2)(g)(i)
56. Internationally, countries with H5N1 have not generally experienced significant long-term disruptions to poultry supply and pricing.
57. To minimise disruption to the domestic supply of poultry and eggs, poultry farmers will need to adjust their biosecurity practices. Some farms may need to upgrade infrastructure or change their on-farm processes to maintain biosecurity between sheds on farms.

⁶ s 6(a), s 9(2)(g)(i)

58. Some producers in New Zealand appear to be capable of handling the biosecurity risk posed by H5N1, including housing of poultry, protocols to reduce contamination within and between sheds, and health and safety protocols for workers. Modern poultry sheds can be designed to facilitate good biosecurity, featuring shower in/shower out facilities for staff, one-way workflows and filtration of water and ventilation. It can be challenging to bring older facilities up to the same standard.
59. Parts of the sector have production systems that are vulnerable to an H5N1 incursion. For example, free-range farms, which are estimated at 40 percent of egg production in 2024, will face significant challenge in preventing infection if H5N1 is established in wildlife.
60. A study tour of MPI and poultry industry personnel visited Australia and the United Kingdom (UK) to get first-hand information of HPAI management methods that can be used in a New Zealand context.
61. In the UK, mandatory housing orders were an effective measure to reduce infection of free-range poultry. These orders directed producers to house birds indoors for several months, to reduce exposure to wild birds. This required changes to animal welfare and labelling requirements of “free-range” to mitigate financial impacts for producers. MPI is working with industry organisations to understand how housing orders might be carried out in New Zealand, and to increase awareness of other measures to protect commercial flocks from HPAI.

Return to business in the event of an outbreak at a commercial poultry facility

62. A return-to-trade for infected commercial poultry businesses will take time and will be dependent on the type of production. From the point of initial detection, depopulation, disposal and disinfection will be required, followed by a stand-down period. Testing is then required to ensure sheds are free from the virus before repopulation can occur.
63. In the UK, there was an initial mandatory 12-month stand-down period before infected sheds could be restocked. This has now been reduced to three months and 21 days, with options for restocking as soon as 21 days after completion of a rigorous ‘double decontamination’ under some circumstances.

An industry-led approach to biosecurity preparedness and response to H5N1

64. An industry led government supported response is the most appropriate approach to long-term management of H5N1 outbreaks in poultry. Poultry businesses should have the commercial incentives and real-time information to be able to effectively manage the risks of H5N1 outbreaks in their facilities.

65. While incursion response operations will be driven by the situation on the ground, MPI planning anticipates that:
- 65.1 MPI will not attempt use Biosecurity Act 1993 powers to control wild bird populations to limit H5N1 spread;
 - 65.2 MPI will provide advice in support of non-commercial bird keeping and handling activities, but will not seek to intervene or apply controls;
 - 65.3 s 9(2)(g)(i), s 9(2)(j) [REDACTED]
 - 65.4 movement controls may be imposed in the short-term on infected properties using powers under the Biosecurity Act 1993.

Outbreak of H5N1 in commercial poultry

66. In the near-term MPI will likely need to be directly involved at the start of an incursion response with the poultry industry. Management of the response, including decision-making on interventions, will transfer to industry as soon as possible.
67. MPI will initially lead the response, using powers available under the Biosecurity Act 1993. There will likely be compensation costs (see **Appendix Five**) and other fiscal impacts. Decisions on the use of these powers will need to balance supporting businesses to eradicate the disease from their operation with managing expectations of ongoing Crown leadership and financial support.
68. MPI is working with the poultry industry, including industry representative bodies, to develop a long-term approach for H5N1 preparedness and response for the industry. This includes an ongoing programme of preparedness activities, a governance and decision-making framework, and intervention tools by which industry will manage a response.
69. s 9(2)(f)(iv) [REDACTED]
70. **Appendix Four** provides more detailed information on the implications of an H5N1 incursion for the primary sector including the proposed approach to management of the disease over time.

Operational Agreement for poultry diseases, including HPAI, under the Government Industry Agreement

71. MPI is engaging with the Government Industry Agreement (GIA) signatories⁷ to develop a suitable arrangement between the Crown and commercial poultry industry for responding to an HPAI incursion. The GIA provides for the sharing of readiness and response costs between the Crown and affected industry parties, including compensation.
72. The arrangement between Crown and industry bodies is likely to be in the form of an Operational Agreement with industry parties which covers a range of poultry diseases and is expected to cover the initial stages of an HPAI response before longer term arrangements are made. A mandate will be sought from relevant Ministers to progress discussions on an Operational Agreement following Cabinet agreement to the approach outlined in this paper.
73. After Cabinet's decision on an overall strategic approach to an HPAI incursion, and as previously directed by Cabinet Committee [EGI(13) 29/13 refers], The Minister for Biosecurity will work with the Minister of Agriculture and the Minister of Finance (the delegated Ministers) to finalise the detailed negotiating brief to enable negotiations to begin as soon as possible.

Guard rails for the negotiating brief

74. The Agreement will be based on the provisions set out in section 100Z(4) of the Act for government/industry agreement for readiness or response.
75. The Crown/industry cost-sharing for readiness and response activities will be critical elements of the negotiation. The cost-shares for these activities will be based on an assessment of the relative public-to-industry impacts of the diseases. The expectation is that industry should materially contribute to the costs of readiness and response activities, s 9(2)(g)(i)
[REDACTED]
76. Given the nature of HPAI and the strategic response objectives, industry partners will set an expenditure cap which will serve as a trigger point for reviewing industry response objectives. In the event that the expenditure cap is reached, the Parties to the Operational Agreement will convene and decide on next steps for the industry response.
77. s 9(2)(f)(iv), s 9(2)(b)(ii)
[REDACTED]

⁷The Poultry Industry Association of New Zealand (PIANZ) is already a signatory. The Egg Producers Federation (EPF) has been accepted as a signatory to the GIA and will shortly formalise this process by signing the Deed. This agreement would cover more than 90 percent of poultry industry.

Cost-of-living Implications

78. s 9(2)(g)(i) [REDACTED] The recent experiences in Australia suggest there could be localised shortages, and a rise in egg and chicken prices in the short term. Prices are likely to return to normal levels in the longer term. Internationally, countries with H5N1 have not generally experienced significant long-term disruptions to poultry supply and pricing.

Financial Implications

79. This paper is not seeking additional funding. MPI, DOC, MOH and Health NZ are carrying out preparedness and engagement activities with stakeholders using baseline funding. In the event of an incursion there will be additional costs, some of the which may carry scale options depending on the nature of the incursion and the degree of response sought by the Government.

s 9(2)(f)(iv)

[REDACTED]

Legislative Implications

81. There are no legislative implications arising from the proposal in this paper.

Impact Analysis

82. There are no regulatory proposals in this paper, and therefore Cabinet's impact analysis requirements do not apply.

Population Implications

83. The proposals in this paper will affect poultry producers and associated employees across New Zealand, as well as those involved with poultry supply chains. Some industry exits are likely, particularly of small and poorly capitalised businesses, with consequent loss of employment for staff and contractors. ^{s 9(2)(g)(i)}
84. The impact of H5N1 in wildlife may also have impacts across many populations within New Zealand, including researchers, hunters, wildlife groups, animal welfare organisations, fishers, bird breeders, wildlife parks, zoos, wildlife tourism operators and the wider public. The potential impact on taonga species may be widely felt by the New Zealand population.
85. Impacts on Māori from H5N1 may also arise, such as increased risk of exposure through cultural harvesting practices (for example, tītī / muttonbird harvest), reduced access to bones and feathers for use in ngā toi Māori (creation of art and craft objects), and through the loss of taonga species.

Human Rights

86. The proposal in this paper has no human rights implications under the Human Rights Act 1993 or the New Zealand Bill of Rights Act 1990.

Use of External Resources

87. No external resources were used to develop this Cabinet paper.

Consultation

88. In preparing this paper, One Health agencies (MPI, DOC, MOH, Health NZ) have consulted with the Department of the Prime Minister and Cabinet, the Treasury, Ministry of Business, Innovation and Employment, Te Puni Kōkiri, Ministry of Foreign Affairs and Trade, Ministry for the Environment, Land Information New Zealand, Ministry of Justice, National Emergency Management Agency, Department of Internal Affairs, Ministry for Social Development.

Communications

89. One Health agencies are aligning messaging to the public and impacted stakeholders. A communication strategy has been developed between agencies, including a phased approach to communications. As the virus moves closer to New Zealand, communications will ramp up, including a public awareness campaign. All agencies' websites have been updated with up-to-date information on H5N1.
90. Agencies will work with their respective Minister's offices to develop appropriate communications as required.

Proactive Release

91. We intend to proactively release this Cabinet paper with redactions where appropriate under the Official Information Act 1982 within 30 days of Cabinet's decision.

Proactive Release

Recommendations

We recommend that the Committee:

- 1 **Note** that Highly Pathogenic Avian Influenza (H5N1) is spreading worldwide, and is likely to arrive in New Zealand through wild bird migration;
- 2 **Note** that in the event H5N1 reaches New Zealand, it is likely to become established in the wild bird population, and will not be eradicable;
- 3 **Note** that H5N1 poses a threat to indigenous native species, including birds, fur seals and sea lions that is hard to quantify but international experience suggests could be severe for some species;
- 4 **Note** that Department of Conservation will monitor impacts on native and taonga species and focus the management of risks on some threatened species, noting that there are few effective tools to mitigate impacts, and that mitigation will require both initial and ongoing activity;
- 5 **Note** that human cases of H5N1 are rare, and that the Ministry of Health is monitoring international developments;
- 6 **Note** that impacts on the poultry sector (egg production, meat production, rearing of high-health eggs and chicks for export) are potentially severe although contained at enterprise level;
- 7 **Note** that the Ministry for Primary Industries is working with the poultry sector to improve sector preparedness and response capability and is in the process of formalising this through an Operational Agreement under the Government Industry Agreement;
- 8 **Note** that a near-term response may give rise to compensation costs and other fiscal impacts, and decisions on the use of Biosecurity Act 1993 powers will need to balance supporting businesses to eradicate the disease with managing expectations of ongoing Crown leadership and financial support;
- 9 **Agree in principle** that if there is a H5N1 incursion in the near-term, MPI will initially lead a response using powers under the Biosecurity Act 1993, while in the long-term the response will be industry led and government supported;
- 10 s 9(2)(f)(iv) 

- 11 **Authorise** a group of the relevant Ministers, namely the Minister of Finance, Minister of Conservation, Minister of Health, Minister for Biosecurity, and Minister of Agriculture to make decisions on the level of intervention to control H5N1, and to change the direction of or scale back the degree of Crown direct involvement as appropriate.

Authorised for lodgement

Hon Dr Shane Reti

Minister of Health

Hon Tama Potaka

Minister of Conservation

Hon Andrew Hoggard

Minister for Biosecurity