



Regulatory Analysis Summary: Managing high pathogenicity avian influenza H5N1 in poultry

Decision sought	Cabinet policy decisions to create regulations for managing high pathogenicity avian influenza (HPAI) H5N1 in commercial poultry	
Agency responsible	Ministry for Primary Industries (MPI)	
Portfolio Minister(s)	Minister for Biosecurity	
Date finalised	15 July 2026	
Ministry for Regulation ID number	REG-1964	

NOTE: This Regulatory Analysis Summary was prepared before the detection of HPAI H5N1 in New Zealand on 15 July 2026.

Brief description of the Minister's regulatory proposal (preferred option)

The Minister for Biosecurity proposes to develop regulations under the Biosecurity Act 1993 as part of an industry-led, government-supported management approach to high pathogenicity avian influenza (HPAI) H5N1, clade 2.3.4.4b, in commercial poultry.

Proposed regulations would require commercial poultry operators to develop, implement and register an on-farm programme for managing the risks of HPAI H5N1. Where appropriate, these would be outcomes-based, where regulations would specify the risks to be managed but leave it up to individual operators to decide how to manage them.

Summary of the problem definition

Varying capability and capacity across the poultry and egg industries means that the current approach to HPAI H5N1 readiness would likely not be sufficient to effectively manage the virus if it arrives in New Zealand. This is because:

- HPAI H5N1 widespread in wild birds would present a constant infection risk for poultry;
- people who do the right thing would be put at risk by those who cannot or do not do the right thing; and
- a voluntary approach makes directing action challenging.

Summary of options considered for addressing the problem

The following options have been considered. Options three and four are mutually exclusive. All options would be in addition to the status quo rather than replacing the status quo.

- Option One (Status quo): Active management of HPAI H5N1;
- Option Two: Full-scale biosecurity response;
- Option Three: Develop a National Pest Management Plan or National Pathway Management Plan under the Biosecurity Act; and

Option Four: Develop regulations under section 165 of the Biosecurity Act (preferred option).
Is the Minister's preferred option in the Cabinet paper the same as the preferred option in the RAS? Yes.
Summary of the main benefits of the Minister's preferred option Benefits are challenging to model with confidence in advance. Benefits identified are: - reduced impact of the disease on poultry operators and the wider sector; - improved biosecurity practices improving outcomes for other avian pests and diseases; - reduced trade impacts (trade restrictions being in place for a shorter time), resulting in a faster return to trade; and - reduced food supply impact, especially for eggs – smaller supply shortages leading to smaller price rises. MPI has only attempted to quantify reduced price impact. We estimate this could be between \$4.5 – \$7.0 million. This estimate considers reduced impacts for egg prices only, as egg production has a longer production cycle (~18 months) compared with meat production (~6-8 weeks). Details of the price impact modelling are in Appendix One. Summary of the main costs of the Minister's preferred option There is not a lot of data readily available to identify costs. The main cost identified is the need for operators to make changes to their businesses, such as developing new, or improving existing, biosecurity practices and/or infrastructure. Businesses have choices regarding how they meet these biosecurity outcomes. For this analysis, we have assumed that if operators spend the equivalent of \$3,520 – \$10,560 per operator on programme development, the cost to the industry could be \$0.9 – \$2.6 million (for 248 registered poultry Risk Management Programmes (RMPs)). Note this is an opportunity cost reflecting the value of people's time, not an estimate of expenditure. Registration and audit costs would be recovered from industry, either through MPI recovering its costs or third-party auditors setting their own fees. We have estimated this cost at \$0.04 – \$0.08 million for registration and \$0.1 – \$0.2 million for audit. This assumes that registration takes one to two hours to process and an audit takes an average of two to four hours to complete, with all operators audited annually. If audits were conducted at the same time as RMP verification, this timeframe may be shorter, with a corresponding reduction in costs. We have not attempted to quantify response costs or compensation liability. Response costs are impossible to predict in advance of the disease arriving in New Zealand. Because of the high mortality caused by the disease, we assume that compensation liability would be minimal. Compensation liability is determined on a case-by-case basis. Does the RAS indicate that the benefits of the Minister's preferred option are likely to outweigh the costs? Benefits are likely to outweigh costs. In addition, there are multiple benefits that we have not attempted to quantify (see above). However, the benefits are widely distributed as the main benefit is reduced price rises, especially for eggs. The costs fall on commercial poultry operators and MPI. It is also worth noting that the direct benefits could only be realised after an HPAI H5N1 incursion, and some costs would be borne immediately following implementation of regulations. Have any potential inconsistencies with the principles of responsible regulation in the Regulatory Standards Act been identified in relation to the Minister's preferred option?

No.

Limitations and constraints on analysis

Condensed timeframes	No	Constrained option set	No
Legislative constraints	Yes	Data and evidence gaps	Yes
Ministerial direction	No	Other	No
Limited public consultation	Yes		

Summary of limitations and constraints on analysis

Legislative constraints

- Options are constrained by the regulatory environment. While poultry is regulated under the Animal Products Act 1999, HPAI H5N1 management cannot be integrated in existing tools because it is not a food safety risk and therefore outside the scope of the Animal Products Act.

Limited public consultation

- Public consultation only covered option four (creating regulations under the Biosecurity Act 1993). Submitters may have preferred a different option had a range of options been presented. However, MPI has engaged closely with poultry industry organisations and discussed the range of options presented in this paper with them. Industry organisations support the preferred option.

Data & evidence gaps

- The impact of HPAI H5N1 would depend on the size and scale of any outbreak. An outbreak in New Zealand's sub-Antarctic islands that does not spread further would have very different impacts and outcomes than repeated outbreaks in commercial poultry operations across mainland New Zealand. It is challenging to predict in advance what the impacts of an outbreak could be. This reduces the certainty of our analysis.

What are the implications of these limitations and constraints, and what has been done – or will be done – to mitigate and manage them?

These limitations on analysis mean that the analysis presented here is conservative. MPI has worked closely with industry partners to define and explore the options presented in this RAS. Industry supports the preferred approach.

I am satisfied that, given the available evidence, this RAS represents a reasonable view of the likely costs, benefits and impact of the preferred option.

Fiona Duncan
Director Regulatory Systems Policy
Ministry for Primary Industries
15 July 2026

Quality Assurance Statement	
Reviewing Agency: Ministry for Primary Industries	QA rating: Partially meets
Panel Comment: The MPI Regulatory Impact Analysis (RIA) Panel has assessed the RAS: Managing high pathogenicity avian influenza H5N1 in poultry. The Panel considers that it partially meets the quality assurance criteria. The RAS clearly identifies the policy problem and provides comprehensive analysis on a range of feasible options. However, uncertainties relating to actual costs to industry and the regulator has impacted the robustness of the cost/benefit analysis. The Ministry for Regulation waived the 20-page limit for this RAS as a template for cost recovery analysis is not yet available and in light of the transitional nature of the RAS.	

Section 1: Diagnosing the policy problem

What is the policy problem?

Context and background

Avian influenza (bird flu) is a serious disease mainly affecting birds

1. Avian influenza, also known as bird flu, is a highly contagious viral disease that mainly affects birds. It is caused by a variety of Type A influenza viruses (the same type of virus that causes influenza in humans). Avian influenza viruses are classified as high pathogenicity strains (HPAI) or low pathogenicity strains (LPAI).
2. The H5N1 subtype of avian influenza emerged in 1997. In 2020, a new strain of H5N1, clade 2.3.4.4b,¹ emerged in the northern hemisphere. This new form of the virus is well-adapted to spread directly as HPAI. In this RAS, “HPAI H5N1” means clade 2.3.4.4b. Since 2020, HPAI H5N1 has spread across much of the world, except New Zealand and the South Pacific. It was detected in Australia in June 2026.
3. HPAI H5N1 can infect a much wider range of wild birds and spread across a larger geographical area than previous strains. It can cause high mortality in poultry, waterfowl and seabirds. It has also spread to more than 90 species of mammals, including marine mammals, companion animals and livestock. Human infection with any strain of HPAI usually only occurs in people who have had significant close, unprotected contact with infected birds or other infected animals. No sustained human-to-human transmission of HPAI H5N1 has been reported.

Poultry meat and eggs are popular foods in New Zealand

4. Poultry meat (chicken, turkey and duck) and eggs are popular foods in New Zealand, and a relatively economical source of protein. In 2024, poultry farms produced around 225,000 tonnes of poultry meat, equivalent to around 122 million birds. In 2022, the egg industry produced over 90 million dozen eggs (over one billion individual eggs).

¹ A clade is a way of classifying organisms based on genetic similarity.

5. There are around 180 broiler (meat) farms and around 160 layer (egg) farms in New Zealand. Four major companies supply around 92 percent of the broiler market. Twenty percent of layer farms produce around 80 percent of eggs.²
6. The industry is domestically focused, with an estimated \$2.2 billion per year in domestic revenue, and around \$250 million per year in export revenue. Main exports are day-old chicks and hatching eggs as well as associated products containing poultry, such as pet food
7. The broiler and layer industries have different production cycles. A broiler chicken is generally slaughtered between 28 and 60 days old. A production throughput of six or seven flocks per shed per year is typical. Layer flocks are generally in production until hens are between 12 and 18 months old. Chickens start producing eggs at about five months old.
8. The Poultry Industry Association of New Zealand (PIANZ) and the Egg Producers Federation of New Zealand (EPF) are the representative industry organisations for the meat and egg sectors. PIANZ and EPF are signatories to the Government Industry Agreement (GIA), which provides for MPI and industry to share decision-making, responsibilities and costs for biosecurity readiness and response activities. In August 2025, PIANZ and EPF signed an operational agreement with MPI for cost-sharing related to HPAI H5N1 and other poultry diseases.
9. The New Zealand poultry and egg industries have historically operated in a relatively low-risk disease environment. While there have been avian disease outbreaks, such as *Salmonella* enteritidis, New Zealand is currently free of major avian diseases, including HPAI, Newcastle disease and infectious bursal disease.

New Zealand is taking a One Health approach to HPAI H5N1

10. New Zealand is taking a One Health approach to preparing for and managing HPAI H5N1. A One Health approach recognises the interconnected elements of human, animal, plant and environmental health.
11. Central government agencies are working together with local and regional government agencies, iwi and hapū, industry and community groups. These groups would all have different roles in an HPAI H5N1 outbreak. MPI, the Department of Conservation (DOC), the Ministry of Health (MOH) and Health New Zealand | Te Whatu Ora (HNZ) coordinate the One Health approach to HPAI H5N1 in New Zealand.

Relevant Cabinet decisions

12. In September 2024, Cabinet noted the One Health actions that agencies are taking, and agreed in principle that, if there was an incursion of HPAI H5N1 in the near-term, MPI would initially lead a response using powers under the Biosecurity Act 1991,³ while in the long-term the response would be industry-led and government supported.
13. Cabinet also authorised a group of Ministers (the Ministers of Finance, Conservation, Health, Biosecurity and Agriculture) to make decisions on the level of intervention to control HPAI H5N1, and to change the direction of or scale back the degree of Crown direct involvement as appropriate [CAB-24-MIN-0381 refers].

² Fifi Zaefarian, "Poultry Production" in Natalia Martín and Nicholas Sneddon (eds), *Livestock Production in New Zealand*, Revised Edition, Auckland: Massey University Press, 2023, pp. 229, 243.

³ While MPI would be the lead agency, this response would be a One Health response with significant involvement from all One Health agencies.

Lessons learned and change in response approach

14. Lessons learned from the HPAI H7N6 outbreak in Otago in late 2024, and wider readiness work, have reinforced that a response approach that relied on using powers under the Biosecurity Act and/or aimed to eradicate the virus from New Zealand would not be feasible in an HPAI H5N1 scenario. If HPAI H5N1 arrived in New Zealand, it would likely become widespread in wild birds. There are limited tools for managing the virus in wild birds, and once widespread eradication would be impossible.
15. A response approach that relied on biosecurity powers and/or aimed to eradicate HPAI H5N1 from New Zealand would need to respond to every outbreak in commercial poultry (as well as responding to the presence of the virus in wild birds). This would be resource intensive for MPI and One Health agencies and could put MPI's other programmes at risk if resource was re-prioritised. Relying on biosecurity powers or attempting to eradicate the virus would present a potentially unlimited fiscal risk to the Crown and the poultry industry, as response costs can be shared under the GIA.
16. In August 2025, authorised Ministers agreed in principle that MPI would not rely on the full range of biosecurity powers or attempt to eradicate the disease in the event of an HPAI H5N1 outbreak in commercial poultry. This decision was taken as an interim decision before regulations were in place.
17. The Cabinet paper seeking policy approval for regulations, to which this RAS is attached, also seeks agreement to an updated response approach that will reflect the new regulatory landscape once regulations are made. The proposed response approach would involve agencies managing and minimising the impacts of the virus without attempting to eradicate it.

The Biosecurity Act 1993 sets the legislative framework for managing unwanted organisms in New Zealand

18. The Biosecurity Act 1993 (Biosecurity Act) is the most relevant primary legislation to the policy problem and options considered in this RAS. It provides for a range of actions, including (but not limited to):
 - preventing unwanted organisms from entering New Zealand. These provisions are not especially relevant to HPAI H5N1 as the virus is most likely to be brought to New Zealand by migratory birds;
 - responding to unwanted organisms in New Zealand – the Biosecurity Act provides a range of powers that can be used to respond to unwanted organisms that arrive here, whether to eradicate or manage them; and
 - secondary legislation for eradicating or managing unwanted organisms and managing risks – the Biosecurity Act empowers a range of secondary legislation, such as pest management plans, pathway management plans and regulations, for eradicating or managing unwanted organisms or managing biosecurity risks.
19. The Biosecurity Act is part of a wider regulatory system that aims to manage animals in New Zealand and supports domestic and international trade in animal products. Relevant legislation in the wider system includes the Animal Products Act 1999, which aims to minimise and manage risks to human or animal health that arise from producing and processing animal products, and the Animal Welfare Act 1999, which sets out how people must take care of and act towards animals.

Problem definition

20. There is varying biosecurity capability and capacity across the poultry and egg industries. While some businesses have a high level of biosecurity capability and capacity, others do not. This means that the current approach to HPAI H5N1 readiness, as described in this section and in the status quo section below, would likely not be sufficient to effectively manage the disease if it arrives in New Zealand.

HPAI H5N1 widespread in wild birds presents a constant (re-)infection risk

21. If HPAI H5N1 arrived in New Zealand and became widespread in wild birds, it would be impossible to eradicate through disease management tools like depopulating infected birds and decontaminating infected environments. Wild birds would provide a reservoir of the virus, presenting a constant infection risk for poultry. Poultry operators would need to make managing HPAI H5N1 part of everyday biosecurity behaviour on-farm. Sections 52 and 53 of the Biosecurity Act prohibit people from communicating or spreading an unwanted organism, and prohibit people who own animals (or other organisms) that may contain or harbour a pest or disease from selling that animal or acting in a way likely to encourage the pest or disease to spread.
22. The varying levels of biosecurity capability and capacity mean that some businesses would be more at risk of infection than others. In addition (though a somewhat separate issue), operations that are highly integrated could be at higher risk of spreading HPAI H5N1 throughout their production chain than operations that are not integrated.

Market failure issues

23. A market failure is a situation in which the allocation of goods and services by a free market is not Pareto efficient,⁴ often leading to a net loss of social welfare. There are two market failure issues relevant to the policy problem in this RAS: negative externalities and public goods.

Negative externalities – People who do the right thing would be put at risk by people who cannot or do not do the right thing

24. An externality is a cost or benefit arising from economic activity that falls on an uninvolved third party. Because these unintended effects are not accounted for in market prices, this leads to a misallocation of resources. HPAI H5N1 represents a negative externality. Disease management decisions made by one operator could spill over to affect other operators and consumers. In the context of HPAI H5N1, reasons for not changing behaviours could include (but not be limited to):
- considering the chances of HPAI H5N1 ever actually arriving in New Zealand so remote as to make any readiness work unnecessary;
 - considering the chances of HPAI H5N1 occurring on their property are remote;
 - considering existing on-farm biosecurity arrangements are sufficient; or
 - lack of capacity or resource to create or change on-farm biosecurity arrangements.
25. People who do not or cannot make changes to on-farm biosecurity arrangements present an additional infection risk to the rest of the poultry sector. They could unintentionally provide another pathway for spreading HPAI H5N1, for example through vehicle or equipment movements.

⁴ Pareto efficiency means economic resources are allocated such that it is impossible to make any one person better off without making another person worse off.

Biosecurity as a public good limits incentives to invest in disease management

26. A public good is non-excludable, meaning that people cannot be prevented from using the good, and non-rivalrous, meaning that one person using the good does not conflict with or prevent someone else using the good. Because of these traits, there are limited incentives for private companies to invest in them, and considerable incentives for people to “free-ride” on the payments of others. Because people cannot be blocked from enjoying the good, there is no incentive to pay for it. Biosecurity can be a public good.
27. The current biosecurity approach to managing HPAI H5N1 in poultry is effectively voluntary. Given the (re)infection risk, potential for people who do not or cannot make changes to biosecurity practices (see below), and potential impact of HPAI H5N1 on food security, insufficient incentives could cause market failures.

What objectives are sought in relation to the policy problem?

28. The overarching policy objective is to maintain a high level of readiness for any incursion of HPAI H5N1, to reduce the risk and impact of the disease. This objective aligns with MPI’s Action Plan for 2025 – 2026.⁵
29. The key objective for the regulatory proposal in this RAS is to strengthen an industry-led, government-supported, management approach to HPAI H5N1 in commercial poultry. An appropriate regulatory framework should:
- support the poultry industry to strengthen its disease management capability and capacity;
 - protect, as much as practicable, domestic supply of poultry meat and eggs; and
 - support measures for continued export of poultry products.

What external consultation has been undertaken?

30. Public consultation on proposals for regulations under section 165 of the Biosecurity Act was undertaken between 17 September and 2 November 2025.⁶ Public consultation only covered option four in detail. This was at the Minister’s direction and to ensure that MPI received the most useful feedback. The consultation material also briefly described the status quo. We consulted on six proposals:
- Proposal 1: Commercial poultry operators must develop an avian biosecurity control programme;
 - Proposal 2: All poultry operators / owners must meet appropriate biosecurity standards;
 - Proposal 3: Commercial poultry operators must keep appropriate records and provide information when required;
 - Proposal 4: Avian biosecurity control programmes must be audited;
 - Proposal 5: Regulations provide for appropriate offences and penalties; and
 - Proposal 6: Costs of auditing are at least partially recovered from commercial poultry operators (this was not a detailed proposal).
31. MPI received 36 submissions. Submitters were broadly supportive of the proposals, and emphasised the need for regulations to be practical, proportionate, and tailored to different poultry operations. Submitters supported developing co-designed, flexible and

⁵ [MPI Action Plan 2025 – 2026 \(mpi.govt.nz\)](https://www.mpi.govt.nz/consultations-and-submissions/consultations/2025/mpi-action-plan-2025-2026/)

⁶ The consultation materials are available on MPI’s website. [Proposed regulations for managing high pathogenicity avian influenza H5N1 in poultry \(mpi.govt.nz\)](https://www.mpi.govt.nz/consultations-and-submissions/consultations/2025/proposed-regulations-for-managing-high-pathogenicity-avian-influenza-h5n1-in-poultry/)

evidence-based approaches, with clear guidance, minimal duplication and a focus on education and animal welfare.

32. Several submitters proposed that measures for managing HPAI H5N1 on-farm should be made part of a Risk Management Programme (RMP) under the Animal Products Act 1999 to reduce regulatory duplication and burden. HPAI H5N1 is not a food safety concern because it does not affect a product's fitness for purpose. It is therefore not possible to include HPAI H5N1 management in an RMP.
33. Following consultation, MPI made changes to policy proposals. Final proposals are outlined in the Cabinet paper to which this RAS is attached.
34. MPI has engaged closely with PIANZ and EPF. This has included discussions on the options in this paper. Industry organisations support the preferred option.

Section 2: Assessing options to address the policy problem

What criteria will be used to compare options with the status quo?

35. MPI used the following criteria to compare options. Criteria are not weighted.

Criterion	Explanation
Effectiveness	The extent to which the option manages the risk of persistent re-infection in commercial poultry.
Supporting food supply and trade	The extent to which the option: - manages the risk of food security impacts in New Zealand; and - enables or supports engagement with New Zealand's trading partners.
Efficiency	- How easily or quickly the option could be implemented. - The extent to which the option minimises unintended consequences.
Proportionality	The extent to which the costs are proportional to the benefits, and how those costs and benefits are distributed.

What scope will options be considered within?

36. The options in this RAS focus on commercial poultry operators, meaning operators who produce more than 100 poultry birds (chicken, duck and turkey) for sale or reward. Semi-commercial operators (who produce 100 or fewer poultry birds for sale or reward) and non-commercial poultry owners are out of scope for the options in this RAS.
37. The options in this RAS focus on secondary legislation. Amending or creating new primary legislation is not being considered. MPI considers that the relevant primary legislation – Biosecurity Act, Animal Products Act and Animal Welfare Act – sufficiently provides for managing HPAI H5N1 risks.

What options are being considered?

38. The following options are considered. Options three and four are mutually exclusive but any option chosen would be in addition to the status quo – the chosen option would enhance the status quo, not replace it. This reflects operational and Ministerial decisions in the wider context.

Option One – Status Quo

39. The status quo assumes that HPAI H5N1 arrives in New Zealand and that current readiness activities are in place. It also assumes that the response approach taken would not rely on the full range of biosecurity powers or attempt to eradicate the disease, consistent with decisions by authorised Ministers. Specifics of the response approach, such as whether it would aim to contain an incursion, slow the spread or move directly to long-term management would depend on the scale and scope of any disease outbreak.
40. Current readiness activities include, but are not limited to:
- developing an interactive, web-based tool and supporting resources to help poultry producers respond effectively to HPAI H5N1 outbreaks and prepare for other exotic disease incursions (note this web tool was launched in early 2026);⁷
 - engaging with and supporting small and medium-sized poultry producers to strengthen biosecurity capacity and capability for HPAI H5N1 prevention and response;
 - clarifying the role, coordination and deployment of containerised gassing units for New Zealand's HPAI H5N1 response;
 - defining roles and responsibilities between MPI, EPF and PIANZ for HPAI H5N1 outbreak response and long-term management;
 - regional councils and unitary authorities developing plans for H5N1 HPAI response and management in their area;
 - developing an industry communications plan, led by PIANZ and EPF and supported by MPI, aligned with the One Health strategic communications approach;
 - testing potential future methods for disease management on-farm, such as heating-based disinfection methods; and
 - developing a strategy to bolster supply chain resilience in the event of an HPAI H5N1 outbreak.

Option Two – Full-scale biosecurity response

41. Under Option Two, MPI would lead a full-scale biosecurity response that relied on the full range of powers under the Biosecurity Act and attempted to eradicate the disease. While challenging to predict in advance, a full-scale biosecurity would likely involve (but not be limited to):
- MPI leading a One Health response under the Coordinated Incident Management System (CIMS), New Zealand's framework for incident responses;
 - using Controlled Area Notices under section 131 of the Biosecurity Act to set movement controls in affected areas. Controlled Area Notices can restrict, regulate or prohibit the movement of goods into, within or from a controlled area;
 - placing Restricted Place notices on infected properties (under section 130 of the Biosecurity Act) to prohibit the movement of goods to and/or from the restricted place; and
 - directing and overseeing depopulation, disposal and decontamination of infected properties. Where needed, MPI would contract services providers to deliver relevant services.
42. For comparison, the H7N6 response in December 2024 had around 200 MPI staff working on the response at its peak. A full-scale biosecurity response to HPAI H5N1 would likely need to draw a larger number of MPI staff for longer, depending on the size

⁷ <https://birdflu.pianz.org.nz/>

and scale of any outbreak. If HPAI H5N1 was widespread in wild populations it would be impossible to eradicate the disease.

43. A biosecurity response can be stood up rapidly. For example, in the H7N6 response, MPI was notified of sick and dying birds on 29 November 2024. Samples were sent to MPI's Animal Health Laboratory on Saturday 30 November 2024, with results received on 1 December 2024. The response was stood up on 2 December 2024.

Option Three – National Pest / Pathway Management Plan

44. Option Three would develop a National Pest Management Plan or a National Pathway Management Plan (management plan). A management plan is secondary legislation under Part 5 of the Biosecurity Act that provides for the management of specified pests or pathways (movement of goods). A management plan is implemented by a management agency and sets rules that regulated parties and the management agency must follow.
45. Developing a management plan requires following the process in sections 59 to 67 (for a pest management plan) or sections 79 to 87 (for a pathway management plan) in the Biosecurity Act. This process involves developing a detailed proposal for a plan, including cost-benefit and other analysis. Sufficient consultation must have occurred, and the Minister for Biosecurity must be satisfied of several matters before Cabinet can make policy decisions. Once these are made, the normal drafting process applies.
46. MPI estimates, based on experience of other management plans, that developing a new management plan would take around three years.
47. Some actions under option three or option four may require resource consent under the Resource Management Act 1991. Activities requiring consent would likely include disposal of depopulated birds or contaminated animal products, such as burying, or some preventative measures designed to reduce the risk of infection, such as fencing waterways to prevent access by wild birds.

Option Four – Biosecurity regulations (preferred option)

48. Option Four would develop regulations under section 165 of the Biosecurity Act. Regulations would require commercial poultry operators to develop an avian biosecurity control programme that specifies how they will identify and manage risks associated with HPAI H5N1.
49. A programme would be required to specify matters such as who will be accountable and responsible for delivering services as part of the programme, how the operator will ensure appropriate awareness, competency or training for staff, contractors and visitors, and how the operator will confirm the programme is working effectively.
50. A programme would be required to specify how the operator would control, manage, eliminate or minimise (as appropriate) the following risks:
- risk of introducing or spreading H5N1 through livestock, wild birds or other animals accessing production areas;
 - risk of introducing or spreading H5N1 through people movements into or from the property and/or within a production area;
 - risk of insufficient or late detection of H5N1; and
 - risk of introducing or spreading H5N1 through water or feed supplies.

51. Operators would be required to register their programme with MPI. Registration would be light-touch – not requiring MPI pre-approval of a programme – and would allow MPI to exercise oversight of biosecurity in the poultry sector, have assurance of how effective programmes are and provide support if needed.
52. Operators would also be required to have their avian biosecurity control programmes audited, including an initial audit following registration. The initial audit would likely be longer than subsequent audits, as it would determine if the programme was likely to be fit for purpose and meet regulatory requirements. If MPI carried out audits, we would at least partly recover costs from operators. Offences and penalties would be set for people who do not comply with the requirements.

How do the options compare with the status quo/counterfactual?

	Option One – Status Quo	Option Two – Full-scale biosecurity response	Option Three – National Pest / Pathway Management Plan	Option Four – Biosecurity regulations (preferred option)
Effectiveness*	0	0 Individual outbreaks of HPAI H5N1 in commercial poultry could be stamped out. If the disease was widespread in wild birds, repeated outbreaks may occur on the same property, requiring repeated responses.	+	+
Supporting food supply & trade	0	0 A biosecurity response that relies on powers under the Biosecurity Act supports engagement with trading partners to about the same extent as under the status quo. A rapid response, allowing return to normal operations as soon as practicable, would limit impacts on food supply. Multiple simultaneous responses could have greater food supply impacts.	+	+
Efficiency*	0	- While a full-scale biosecurity response can be implemented relatively easily, the possible scale of a response and the number of staff needed would likely have impacts on MPI's ability to manage other risks, especially if there were multiple responses occurring simultaneously.	--	-
Proportionality*	0	-- While costs could be shared with industry under the GIA, a full-scale, eradication-focused response would also have very high costs for the Crown, which would be funded by taxpayers.	+	+
Overall assessment	0	- A full-scale biosecurity response would be less efficient and significantly less proportional than the status quo. This approach would carry very high costs for the Crown and industry, and impact MPI's ability to manage other risks. A full-scale biosecurity response would be an ongoing, and potentially indefinite, commitment.	+	++

Key: ++ much better than the status quo + better than the status quo 0 about the same as the status quo - worse than the status quo -- much worse than the status quo

Section 3: Cost-benefit analysis

What are the additional costs and benefits of the preferred option in the Cabinet paper?

53. The cost-benefit analysis is based on the following assumptions.

- Operators would need to make changes to biosecurity practices in their operation. Some operators would likely need to make relatively little change to develop a programme. We have assumed that operators spend an average of 80 – 240 hours (that is, 2-6 working weeks) drafting and implementing their programme (including making changes to biosecurity practices), at an average cost of \$44 per hour.⁸ This could cost \$3,520 – \$10,560. Note this represents an opportunity cost, not a measure of expenditure.
- Some businesses may need to make additional capital investments, but we have not attempted to quantify these.
- MPI staff costs are absorbed within baseline (except for fully cost-recovered staff). These costs are therefore not included in the cost-benefit analysis.
- Response operational costs remain at zero until HPAI H5N1 arrives in New Zealand. Regulations could be in place for some time before HPAI H5N1 arrives.
- Administration costs relating to auditing operators (when MPI conducts audits – third-party auditors set their own fees) are at least partly cost-recovered. To estimate this cost, we used the hourly charge for auditing ruminant protein control programmes under the Biosecurity (Ruminant Protein) Regulations 1999 – \$216.84 per hour.⁹ It is assumed that audits take an average of 2 – 4 hours to complete.¹⁰ As MPI would not pre-approve avian biosecurity control programmes, it is likely that the first audit would take longer than subsequent audits. We have not attempted to account for this.
- This analysis assumes that audits take place every year, and that all operators are audited in the same year. The actual impact would be different – some operators would be audited less frequently (18-monthly following initial audit), and others would be audited more frequently, especially export-focused operators.¹¹

54. MPI's Stage One Cost Recovery Impact Statement (CRIS) provides further detail. It is in **Appendix Two**.

We have not attempted to quantify compensation liability

55. MPI has not attempted to quantify a potential compensation liability. Section 162A of the Biosecurity Act provides that a person may be eligible for compensation if they have suffered losses as the result of the exercise of powers under the Biosecurity Act as a result of damage or destruction of their property or due to certain restrictions being imposed on the movement or disposal of their goods.¹² The amount of compensation paid must put the person to whom it is paid in no better or worse position than a person whose property or goods were not directly affected by the exercise of biosecurity powers.

⁸ Average ordinary time hourly earnings, March 2026 quarter (rounded to nearest dollar). See [labour market statistics \(stats.govt.nz\)](https://stats.govt.nz/labour-market-statistics)

⁹ [Biosecurity \(Costs\) Regulations 2010 \(legislation.govt.nz\)](https://legislation.govt.nz/Biosecurity%20(Costs)%20Regulations%202010). The hourly rate is set in item 22 of the Schedule.

¹⁰ Based on estimates from industry groups.

¹¹ These are the average timeframes for verifying poultry RMPs.

¹² [Section 162A, Biosecurity Act 1993 \(legislation.govt.nz\)](https://legislation.govt.nz/Section%20162A,%20Biosecurity%20Act%201993)

56. Given the high mortality rate of HPAI H5N1, which can range from 75 to 100 percent of infected birds, MPI considers that a person who suffers losses from HPAI H5N1 would likely suffer the same losses, regardless of whether biosecurity powers were exercised. Losses caused by the presence of an unwanted organism are not compensable.
57. Compensation liability is determined on a case-by-case basis, dependent on the particular circumstances. It is not possible to determine in advance whether or not compensation would be paid.

We have not attempted to quantify response costs

58. While not at the scale of the full-scale biosecurity response described in option two, some response action would be part of the preferred option as part of a One Health response. While the response would not aim to eradicate the virus from New Zealand, it would aim to reduce the impacts on wild birds and ensure risks to human health were managed appropriately. MPI has not attempted to quantify response costs. Exactly what action MPI would take depends on the situation.

Costs and benefits are not evenly distributed

59. Costs and benefits are distributed unevenly. There are significant costs for regulated groups to develop a programme and make infrastructure changes to their operation. However, these are time-bound – likely to take up to 12 months to implement. Ongoing costs to regulated groups would be registration and auditing costs.
60. However, benefits are not time-bound. Improved biosecurity practices across the commercial poultry industry would have benefits for the industry and New Zealand more widely. These benefits are not time-bound as they last indefinitely.

Table 1: Cost-Benefit Analysis

Nature of the benefit/cost to New Zealand	Dollar value of impact (or quantified impact)	Scale of unquantifiable impact	Nature of impact – one-off or ongoing	Source of evidence
Additional benefits of the preferred option compared with taking no action				
Reduced disease impact		Large	Ongoing	
Improved biosecurity practices		Medium	Ongoing	
Reduced trade impact		Large	Ongoing	
Reduced price impact	\$4.5m – \$7.0m		Ongoing	MPI modelling – see Appendix 1
Total annual benefits	\$4.5m – \$7.0m			
Total one-off benefits	–			
Additional costs of the preferred option compared with taking no action				
Programme development – including changes to biosecurity practices	\$0.9m – \$2.6m		One-off	Estimate of possible time required
Registration	\$0.04m – \$0.08m		One-off	Assumes 1-2 hours at \$155.50 per hour
Auditing	\$0.1m – \$0.2m		Ongoing	Assumes audits take 2-4 hours
Biosecurity response costs			Ongoing	
Total annual costs	\$0.1m – \$0.2m			
Total one-off costs	\$0.94m – \$2.68m			
Net impacts compared with taking no action				
Total annual benefits minus costs	\$4.4m – \$6.8m			
Total one-off benefits minus costs	-\$0.94m – -\$2.68m			

Are the benefits of the preferred option in the Cabinet paper expected to exceed the costs?

61. Benefits are likely to exceed the costs. There are initial costs as operators develop and implement their plans. MPI is anecdotally aware that some businesses are making large investments to buildings and other infrastructure. We have not attempted to capture these costs in this analysis.
62. Once plans are implemented, the cost of operating them becomes part of baseline. The key benefit is the reduced supply impact – and associated reduced price impact – for consumers as a result of better disease control.

What are the impacts on different groups of the preferred option compared with taking no action?

63. To explain the distributional impacts, we consider the worst-case scenario, where HPAI H5N1 arrives in New Zealand and no action is taken to manage it. This is different to the status quo, where action would be taken. In this scenario, the following impacts :
 - wild birds and wild mammals;
 - commercial poultry sector, including possible impacts on food security;
 - the wider primary sector;
 - human health; and
 - export trade.

Wildlife impacts are uncertain – but likely to be significant

64. It is difficult to predict the long-term impacts of HPAI H5N1 on New Zealand's native bird species. High losses would increase extinction risk and represent a major setback in ongoing species recovery efforts. Some species could take many years to recover from any outbreak and some species could suffer a loss of genetic diversity, with long-term implications for future viability.
65. Native bird species that are regularly harvested for food (such as tītī / muttonbirds) would likely be affected. This could significantly reduce their populations and increase risks to human health.
66. HPAI H5N1 could also spread to wild mammals. In New Zealand these are likely to be fur seals and sea lions. In Argentina, an outbreak of HPAI H5N1 killed 96 percent of the elephant seal pups born in 2023. New Zealand's fur seal population is increasing, but sea lions are classified as nationally endangered. The sea lion population is about 10,000.

Supply issues for poultry meat and eggs cannot be ruled out

67. New Zealand's poultry and egg industries are domestically focused, and we do not import fresh poultry meat or eggs. This means that medium-term supply issues cannot be ruled out, particularly if several large-scale producers were impacted at the same time. Other countries have generally not experienced long-term significant supply disruptions.¹³

¹³ There is no single factor that explains how other countries' food supply recovered from HPAI H5N1 outbreaks. Some countries, like Canada, have a high proportion of indoor-raised poultry due to their climate, meaning there were fewer pathways for wild birds to infect farmed birds. Others, like the United States, imported eggs following outbreaks to strengthen market resilience.

The risk to the wider primary sector is low

68. Risks to other primary sector producers (such as dairy or beef production) are low. While HPAI H5N1 has been detected in dairy cattle in the United States, the risk of this occurring in New Zealand is considered low. This is due to our pastoral-based farming systems. In addition, HPAI H5N1 has been detected overseas in raw milk from infected cows. However, the virus is susceptible to heat treatment, meaning pasteurised milk and dairy products remain safe to consume.

The human health risk is low

69. The risk of humans catching HPAI H5N1 is currently low. To date, nearly all human infections have been in people closely interacting for prolonged periods of time with infected animals. Avian influenza viruses do not spread easily from animals to humans. So far, there has been no evidence of sustained human-to-human transmission of HPAI H5N1.

Trade impacts could be significant

70. In the event of an HPAI H5N1 outbreak in New Zealand, trading partners may put restrictions on exports of poultry, associated products, and genetics (day-old chicks and hatching eggs).

71. If New Zealand was able to demonstrate that we can manage HPAI H5N1 appropriately for poultry exports, the impact on trade could be reduced. We would need to negotiate conditions for returning to trade with each trading partner.

Table 2: Distributional Analysis

Affected groups	How they are affected	Description of level of impact(s)	Source of evidence
Poultry operators and exporters	Impact on businesses from the disease. Exporters would be impacted by any trade restrictions.	Likely significant. Operators would need to depopulate, dispose and decontaminate their operation. The disease arriving in New Zealand or in commercial poultry could cause some operators to exit the industry.	MPI analysis
Consumers	Impact on cost of living from potential supply shortages, especially for eggs.	Price rises for poultry products – more likely for eggs.	MPI analysis

Conclusion

Which option is the most effective, efficient, and proportionate response to the problem?

72. MPI considers that option four (biosecurity regulations) is the most effective, efficient and proportionate response to the policy problem identified in this RAS.
73. Either option three or option four would be effective. Both of these options would be more effective than the status quo or a full-scale biosecurity response.
74. Biosecurity regulations would likely be less costly than other options. For example, a management plan must be implemented by a management agency (which could be a department, such as MPI). Regulations, however, can be designed to align closely with existing systems, reducing duplication and costs.
75. Regulations are more proportionate than other options identified. Regulations can be implemented faster than a management plan, improving New Zealand's readiness for HPAI H5N1.

Section 4: Delivering an option

What are the next steps for implementing the legislation?

76. Implementing proposed regulations would require action from:

- commercial poultry operators;
- industry groups (PIANZ and EPF);
- councils; and
- MPI.

Group	Action(s) required
Commercial poultry operators	• Develop and implement avian biosecurity control programme. • Make any changes to biosecurity practices in the operation, including any investments – this may involve contracting service providers.
Industry groups	Provide support, including guidance and templates, for industry.
Councils	Develop plans for HPAI H5N1 response and management (regardless of option chosen). For regulations, ensuring resources to provide appropriate support relating to resource consents, especially for disposal of potentially contaminated materials.
MPI	• Develop protocols for registration and auditing of avian biosecurity control programmes. • Provide appropriate support, including guidance and templates, in partnership with industry groups.

77. Given the scale of changes currently facing regional councils and unitary authorities (including, but not limited to, resource management reform, proposals to simplify local government and legislative changes to introduce rates caps), there is a potential risk to the effective implementation of these regulations if councils do not have sufficient capacity available. However, resource management reforms to simplify planning and consenting processes may mitigate this risk.

78. MPI is working closely with regional councils and unitary authorities to provide appropriate guidance and support. Some councils have already developed extensive plans and protocols for managing the effects of HPAI H5N1 in their region.
79. To give operators time to develop and implement their programmes, it is proposed that the following requirements have a delayed commencement date of around 12 months:
- requirement to develop, implement and register an avian biosecurity control programme;
 - offence for not having an avian biosecurity control programme when required; and
 - cost recovery provisions (subject to further policy decisions).
80. Creating regulations that require programmes to be audited will create a market for auditors. While MPI would provide audit services, we would provide these services as a last resort, similar to how we provide verification services for RMPs.¹⁴
81. Auditors would be appointed by the Director-General under section 105B of the Biosecurity Act. That section requires the Director-General to appoint only those persons who have appropriate experience, technical competence, and qualifications relevant to the audits, and to set terms of reference for audits. Section 105E of the Biosecurity Act provides the powers that auditors have, including a limited power of entry (at a reasonable time and after giving written notice).
82. MPI will use the transition period before auditing requirements come into force to develop the terms of reference for auditors and ensure sufficiently experienced and qualified auditors are available.
83. There is a potential conflict of interest between MPI's role to support industry organisations and operators and MPI's role in auditing and enforcing regulations. This conflict of interest will be managed in part by ensuring support functions and compliance functions are carried out by separate parts of MPI.
84. MPI will work with industry groups to ensure operators are aware of their obligations under the regulations. Auditing organisations would also allow for a communication pathway.
85. MPI uses the VADE model (Voluntary, Assisted, Directed, Enforced) as an approach to administering regulation. This is a graduated model that allows compliance staff to exercise discretion and ensures that any compliance intervention level is based on the level of non-compliance.
86. Subject to operational decisions, auditors (whether from MPI or a third party) would be the first point of contact at the voluntary and assisted levels of the VADE model. These levels of the model would also include guidance and support from industry organisations (PIANZ and EPF) and from MPI (such as On Farm Support). Cases of more serious non-compliance could be referred to MPI to provide for directed or enforced approaches. A flow chart indicating what this process could look like is in **Appendix Three**.
87. We are proposing to create new offences for failing to have an avian biosecurity control programme in place, or failing to register one, when required to do so. We consider it is appropriate for these to be strict liability offences (that is, the prosecution would not need to prove that the defendant *intended* to commit the offence, only that they did commit the

¹⁴ Despite this last-resort status, MPI is the verification agency for nearly half of registered poultry RMPs.

offence). Regulations would specify defences against this offence, based on existing defences against strict liability offences in section 154N of the Biosecurity Act.

88. The intent of providing a defence against this new offence is to ensure that operators who are showing best endeavours to comply with regulatory requirements are not unfairly penalised. Defences recognise that there are times when non-compliant behaviour is due to circumstances beyond a person's control.
89. The Biosecurity Act specifies the maximum penalty for breaching regulations, which is a fine on conviction of \$5,000 for an individual or \$15,000 for a corporation. It is proposed that this offence come into force 12 months after the regulations are made. This would allow time for regulated parties to become compliant with the regulatory requirements and any guidance or support needed to be delivered.

How will the proposal be monitored, evaluated, and reviewed?

90. As GIA partners, MPI regularly engages with PIANZ and EPF. Engagement offers an opportunity for any concerns to be raised and addressed. Regulated parties can raise concerns at any time with industry organisations, MPI or the Minister for Biosecurity.
91. MPI will gather information from industry through engagement with regional staff and On-Farm Support teams and industry bodies to understand how the regulations are working in practice. This provides an additional pathway for information-gathering, in addition to the bodies identified as having roles in implementation above. While not a directed programme, this offers a useful opportunity for issues to be identified.
92. Depending on policy and operational work programme priorities, MPI will review regulations on a suitable timeframe, such as three years after implementation or after HPAI H5N1 arrives in New Zealand.

Appendix One: Copilot model – Impact of HPAI H5N1 outbreak on poultry supply and prices in New Zealand

This appendix was developed with the assistance of artificial intelligence (Microsoft 365 Copilot) and has been verified for correctness and completeness by MPI.

Impact on Poultry Meat and Egg Supply in New Zealand

- An incursion of HPAI H5N1 in New Zealand would likely have significant and multifaceted impacts on the domestic supply of poultry meat and eggs. This would likely include:

Immediate Disruption to Supply	• If H5N1 were detected in commercial poultry farms, large-scale culling of infected and exposed birds would likely be required to contain the outbreak. • New Zealand's poultry industry is domestically focused, with no fresh poultry or egg imports, meaning supply shortages could occur quickly if multiple large producers are affected simultaneously.
Medium-Term Supply Challenges	• Once H5N1 becomes established in wild birds (as expected), recurrent outbreaks in poultry farms would be likely. • This persistent threat could lead to ongoing production disruptions, especially for free-range operations, which may need to move birds indoors for biosecurity reasons.
Price Volatility and Consumer Impact	• Internationally, outbreaks have led to egg price surges of over 150% and meat shortages, as seen in the U.S. and other countries. • In New Zealand, similar dynamics could emerge, with higher prices, reduced availability, and consumer shifts toward alternatives like other meats or plant-based products.

Response and mitigation plans

New Zealand is actively preparing for a potential H5N1 incursion:

- Regulatory proposals include mandatory biosecurity programmes for poultry operators, auditing, and penalties for non-compliance.
- The preferred approach is industry-led but government-supported, aiming to:
 - Protect domestic food supply
 - Maintain trade access
 - Incentivise early reporting and good biosecurity
- However, the costs of compliance may be significant, especially for small operators, potentially leading to industry consolidation or exits.

Predicted Outcomes for NZ (if H5N1 arrives)

Timeframe	Predicted Impact
Short-term	Culling of flocks, immediate supply shortages, panic buying
Medium-term	Price increases, reduced availability, biosecurity-driven production changes
Long-term	Increased biosecurity costs, consumer shift to alternatives

Modelling Potential Price Impacts

Using the three H5N1 outbreak scenarios described below, MPI modelled potential price impacts. This model focuses only on eggs. While HPAI H5N1 outbreaks have occurred across all farm types overseas, the largest impacts have been to egg production. For example, in the year to June 2025 the United States lost around 30 percent of its commercial egg flock, and 0.01 percent of its commercial meat production flock. In addition, it takes much longer for egg production to return to normal.

Base price

MPI estimates that the average cost for a dozen eggs is \$9.38.¹⁵

Price elasticity

Price elasticity is a measure of how sensitive the demand for a product is to changes in its price. The more elastic the demand, the more demand is likely to change as the price of a product changes. Copilot estimated the price elasticity for eggs and poultry meat. Price elasticity is expressed as a negative number, due to the inverse relationship between price and demand (that is, as price increases, demand generally decreases).

Product	Elasticity	Supporting evidence
Eggs	-0.1 to -0.3 (highly inelastic) Taking the midpoint: -0.2	Eggs are considered a dietary staple with few substitutes, making demand relatively insensitive to price; ¹⁶ Even during significant price increases (such as a 76.5 percent rise in 2023), consumption remained relatively stable; ¹⁷ and International studies consistently use eggs as a textbook example of inelastic demand. ¹⁸

Outbreak scenarios

We modelled three H5N1 outbreak scenarios. Copilot's modelled response measures may not match how MPI would respond to each scope or scale of outbreak. MPI estimated supply reduction based on separate modelling from overseas examples. Supply reductions are estimated with an 80 percent confidence interval.¹⁹

1. Small Outbreak

- **Supply Reduction:** 0% – 5%
- **Scope:** Localised detection in a small number of commercial farms.

¹⁵ Using the weighted average price of a dozen eggs in the Food Price Index. The weighted average price for free-range eggs (6-pack) in \$7.32. To reduce complexity, we have used only the average price for a dozen eggs.

¹⁶ <https://econlife.com/2024/05/egg-demand/>

¹⁷ <https://www.rnz.co.nz/news/national/492153/here-s-why-egg-prices-are-still-climbing-according-to-the-industry>

¹⁸ <https://www.feedstrategy.com/business-markets/feed-production-by-region/article/15436047/how-price-elastic-is-demand-for-eggs>

¹⁹ This term is not being used in the formal sense of statistical theory, but loosely in the sense that we are subjectively 80% confident that the 'true' estimate is somewhere within the range specified, given uncertainties about both data and assumptions. See [Guide to Social Cost Benefit Analysis \(treasury.govt.nz\)](#), page 27.

- **Response:** Targeted culling, temporary movement restrictions, and heightened biosecurity.
- **Impact:**
 - Minor disruptions to supply chains.
 - Public concern but no widespread panic.

2. Medium Outbreak

- **Supply Reduction:** 10% – 15%
- **Scope:** Multiple regions affected; possibly includes wild bird transmission.
- **Response:** Broader culling, regional lockdowns for poultry movement, and mandatory biosecurity audits.
- **Impact:**
 - Noticeable shortages in supermarkets.
 - Potential for consumer substitution (e.g., plant-based alternatives).

3. Large Outbreak

- **Supply Reduction:** 20% – 25%
- **Scope:** Widespread transmission across commercial and free-range operations; persistent wild bird reservoir.
- **Response:** National emergency measures, mass culling, long-term production changes (e.g., indoor-only farming).
- **Impact:**
 - Severe supply shortages.

Price Impact Formula

We have used the following formula for calculating price increases: $P_1 = P_0 \times \frac{1}{1-S}^E$

Where:

P_1 = New price after supply reduction

P_0 = Base price

E = Price elasticity of demand

S = Supply reduction (expressed as a decimal)

Estimated Price Outcomes

Using the formula, we estimate the following price changes for each scenario. Note that the changes in price are not linear.

Scenario	Base price – Eggs (dozen)	Supply reduction	New price – Eggs (dozen)	Change in price
Small Outbreak	\$9.38	0% – 5%	\$9.38 – \$9.47	0% – 1%
Medium Outbreak		10% – 15%	\$9.58 – \$9.69	2% – 3%
Large Outbreak		20% – 25%	\$9.81 – \$9.94	4% – 6%

How price changes could look on a national scale

To estimate the overall national price impacts as follows:

$$(\text{New price} \times \text{consumption volume}) - (\text{base price} \times \text{consumption volume})$$

Using an estimated consumption volume of 98.3 million dozen eggs annually.

Scenario	New price	Additional cost (\$m)
Current – estimated spending on eggs	Base price: \$9.38	922.1
Small	\$9.38 – \$9.47	0.00 – 9.5
Medium	\$9.58 – \$9.69	19.6 – 30.5
Large	\$9.81 – \$9.94	42.1 – 54.6

Consumer behaviour shifts could influence prices

Changing consumer behaviours could impact prices for eggs and poultry meat. We have not attempted to quantify the impacts of changing consumer behaviours.

Substitution Effects (more likely for poultry meat than eggs)

- Consumers may switch to alternatives like:
 - red meat or seafood;
 - plant-based proteins; or
 - powdered or processed egg products.
- This could reduce demand, softening price increases — especially for more elastic products like poultry meat.

Panic Buying or Stockpiling

- If consumers fear shortages, they may buy in bulk, temporarily increasing demand and driving prices up. In addition, some other countries have seen producers artificially inflate prices to maximise profit.
- This is more likely for eggs, which are seen as a staple.

Reduced Consumption

- If prices rise sharply, some consumers may cut back on consumption, especially for non-essential poultry products.
- This can moderate price increases, particularly for meat.

Shift to Free-Range or Ethical Products

- Some consumers may avoid products from intensive systems if outbreaks are linked (or perceived to be linked) to poor biosecurity.
- This could increase demand (and prices) for free-range eggs, even if supply is constrained. Some supermarkets in New Zealand only stock cage-free eggs,²⁰ limiting the applicability of this approach.

Net Effect on Prices

Behaviour change	Potential impact on prices
Substitution	↓ (especially for poultry meat)

²⁰ Barn-raised or free-range eggs, not produced in colony cages. Battery cages were banned from 1 January 2023, after a ten-year transition period.

Stockpiling	↑ (especially for eggs)
Reduced consumption	↓ (more for meat than eggs)
Ethical preference shift	↑ (for free-range eggs)

Estimating the benefit: How regulations could impact supply

We estimate that improved biosecurity controls—such as those proposed for commercial poultry operators in New Zealand—can **significantly reduce supply impacts** during an H5N1 outbreak. Here's a synthesis of what the evidence and proposals suggest:

How Biosecurity Reduces Supply Impacts

Prevention of Initial Infection

- **Strict access controls**, disinfection protocols, and wildlife exclusion measures can **prevent H5N1 from entering poultry farms**, especially from wild birds
- Farms with strong biosecurity are **less likely to be affected**, reducing the need for culling and production shutdowns.

Containment and Rapid Response

- **Monitoring and record-keeping** allow for **early detection**, enabling targeted containment rather than widespread depopulation
- **Audited biosecurity programmes** ensure farms are prepared to act quickly, limiting the spread and reducing downtime

Faster Recovery

- Farms with robust biosecurity can **repopulate flocks sooner**, as they meet standards for restocking and disease clearance

Estimated Reduction in Supply Losses

While exact figures vary, international and industry studies suggest:

- **Up to 90% reduction in outbreak-related losses** is possible with comprehensive biosecurity protocols
- In the U.S., improved biosecurity contributed to a **50% drop in egg prices** within weeks of implementation, indicating restored supply

New Zealand's Proposed Measures

MPI is proposing:

- Mandatory biosecurity programmes for commercial operators
- Auditing and compliance enforcement
- Standards for cleaning, disposal, and depopulation
- Penalties for non-compliance

These measures aim to:

- Reduce the scale of outbreaks
- Protect food supply
- Minimise economic disruption

Modelling implications

Copilot estimated that strong biosecurity controls could significantly reduce supply reductions.

These estimates assume:

- **High compliance** with biosecurity standards
- **Effective containment** of outbreaks
- **Faster recovery** due to better preparedness

Scenario	Original supply reduction	Revised supply reduction
Small	0% – 5%	0% – 4%
Medium	10% – 15%	8% – 12%
Large	20% – 25%	16% – 20%

This change in supply shortages would have revised additional costs:

Scenario	Revised additional cost – Eggs (\$m)
Small	0.00 – 7.6
Medium	15.5 – 23.9
Large	32.7 – 42.1

Comparing these with the original additional costs, we find a difference of between \$4m - \$16.7m. However, this analysis does not account for changing consumer behaviours. Changes in demand could also affect egg prices.

Scenario	Additional cost (\$m)	Revised additional cost (\$m)	Difference (\$m)
Small	0.00 – 9.5	0.00 – 7.6	0 – 1.9
Medium	19.6 – 30.5	15.5 – 23.9	4.1 – 6.6
Large	42.1 – 54.6	32.7 – 42.1	9.4 – 12.5

The average difference between additional cost and revised additional cost is \$4.5m – \$7m.

Appendix Two: Stage One Cost Recovery Impact Statement

This appendix sets out the elements of a Stage One Cost Recovery Impact Statement (CRIS). Further policy work is required on cost recovery.

Policy outcomes

Auditing avian biosecurity control programmes supports policy outcomes of:

- supporting the poultry industry to strengthen its disease management capability and capacity;
- protecting, as much as practicable, domestic supply of poultry meat and eggs; and
- supporting measures for continued export of poultry products.

Rationale for government intervention

93. Chicken producers – eggs and meat – and other egg producers (such as duck eggs) must have a risk management programme (RMP) under the Animal Products Act 1999. These must be verified by a recognised verifier on an average timeframe of three-monthly for export businesses and 18-monthly for domestic businesses. Verification can be undertaken by third-party businesses or MPI. MPI provides verification services as a last resort if businesses consider commercial incentives to provide services are insufficient. This ensures that people are not punished for being unable to meet regulatory requirements.
94. For the 248 registered poultry RMPs, the following five organisations currently provide verification services:
 - Quality Consultants New Zealand Limited (QCONZ) – 100 RMPs;
 - MPI²¹ – 100 RMPs;
 - VeritAg Limited – 41 RMPs;
 - ASUREQuality Limited – 4 RMPs; and
 - Food Safety Quality Solutions New Zealand Limited (FSQSNZ) – 3 RMPs.
95. To minimise regulatory burden, it is proposed that an avian biosecurity control programme be audited by the same organisation – and, if possible, at the same time, that verifies the RMP. Further policy work is required to ensure this is appropriate. The Biosecurity Act requires that auditors have the appropriate experience, technical competence, and relevant qualifications.

Statutory authority and existing fees framework

96. Section 165(12) of the Act empowers the Governor-General to make regulations prescribing the following matters relating to costs:
 - the matters for which they are recoverable under:
 - the Act;
 - regulations;
 - pest management plans; and/or
 - pathway management plans;
 - their amounts;
 - the method by which they must be assessed;

²¹ Verification is undertaken by MPI Verification Services, part of New Zealand Food Safety.

- the persons liable for their payment; and
 - the circumstances in which their recovery may be wholly or partly waived or remitted.
97. In addition, section 135 of the Act empowers the Director-General of MPI to recover costs of administering the Act that are not provided for by money appropriated by Parliament. Costs must be recovered in accordance with the principles of equity and efficacy. While section 135 is intended to allow for short-term recovery of costs, the principles are important to consider.
98. The Biosecurity (Costs) Regulations 2010 (the Costs Regulations) set charges for a range of biosecurity services that MPI delivers. The Costs Regulations also provide for hourly rates, travel costs and other matters.

Policy Rationale: Why a user charge? And what type is most appropriate?

99. MPI considers that auditing avian biosecurity control programmes is a club good. A club good is one where people can be excluded from its benefits at low cost (it is excludable), but use by one person does not conflict with use by another (it is not rivalrous). One individual receiving benefits does not prevent another from also receiving benefits. An audit of an avian biosecurity control programme is excludable, as the owner of the avian biosecurity control programme cannot let another person use their audit results. It is not rivalrous, as one person having their programme audited does not exclude another person from having theirs audited.
100. Effective avian biosecurity control programmes generate positive externalities. Ineffective avian biosecurity control programmes generate negative externalities. Externalities, positive or negative, are the consequences or effects generated by something. A common example of a negative externality is pollution generated by a factory or power plant.
101. Effective avian biosecurity control programmes generate positive externalities. More effective avian biosecurity control programmes means that HPAI H5N1 is more likely to be managed more effectively, so a healthy poultry flock exists, with adequate food supply and trade advantages. This has wider implications beyond HPAI H5N1, improving outcomes for other pests and diseases that affect poultry.
102. However, *ineffective* avian biosecurity control programmes generate negative externalities. If the programmes are not sufficient to manage the disease, there could be food security issues for New Zealand and Pacific Island countries that rely on New Zealand poultry products.
103. Auditing avian biosecurity control programmes confers a private benefit. The audit only benefits the owner of the avian biosecurity control programme. It is therefore appropriate that owners of programmes should bear the costs of auditing.

Cumulative impact on poultry sector

104. Poultry operators are currently affected by two cost recovery or levy regimes. These are:
- Commodity levy (for eggs only); and
 - Risk Management Programme verification fees

105. The Commodity Levies (Eggs) Order 2022 imposes a levy on chicken eggs produced in New Zealand for sale, payable to the Egg Producers' Federation. Producers pay the levy when they purchase chicks from hatcheries. Hatcheries pass the levy on to the EPF. The maximum levy rate is set at \$0.50 per chick.²²
106. As noted above, chicken and egg producers must have an RMP and this must be verified. When MPI conducts verification, the base hourly charge is \$206.70. This can be modified if a veterinary verifier is required, for after-hours call-outs and for other reasons.²³
107. It is worth noting that turkey and duck meat producers, of whatever size, are not required to have an RMP. There are a small number of producers in New Zealand – there are three major turkey producers and four major duck producers in New Zealand.

Analysis against cost recovery principles

108. MPI takes a principles-based approach to cost recovery.²⁴ The principles we use to assess cost recovery policy are:

- equity;
- efficiency;
- transparency; and
- justifiability.

Equity

109. Equity is about the fair distribution of resources in the economy. Whether or not it is appropriate to recover the costs of a certain service will often come down to whether this is fairer than taxpayer funding.
110. MPI considers that, as auditing avian biosecurity control programmes benefit operators, it is more equitable to charge a fee for auditing than for auditing to be taxpayer-funded. This is consistent with MPI's general approach to providing services that directly benefit the recipient of those services.

Efficiency

111. This principle is about value for money. There are different types of efficiency that can be relevant, such as productive efficiency (maximising outputs at minimum costs) or administrative efficiency (minimising transaction costs for all parties).
112. We consider that the proposal to have audits of avian biosecurity control programmes undertaken by the same organisation (and, if practicable, at the same time) that verifies the operator's RMP is administratively efficient.

Transparency and justifiability

113. Transparency is about ensuring that recovered costs can be clearly linked to the service provision (including the time period in which they are incurred). However, transparency also means that adequate information is available to ensure that those

²² [Commodity Levies \(Eggs\) Order 2022 \(legislation.govt.nz\)](https://legislation.govt.nz/Commodity-Levies-(Eggs)-Order-2022)

²³ [Table to Part 7: Ministry verification charges, Animal Products \(Fees, Charges, and Levies\) Regulations 2007 \(legislation.govt.nz\)](https://legislation.govt.nz/Regulations-2007)

²⁴ [MPI Cost Recovery Policy Guidance \(mpi.govt.nz\)](https://mpi.govt.nz/MPI-Cost-Recovery-Policy-Guidance)

impacted by charges can understand and have an opportunity to comment on the basis on which charges are calculated and imposed.

114. Justifiability is about making sure the costs which are being recovered are appropriate – that they relate to the service being provided and that they are not unreasonable.
115. Charging an hourly fee is transparent and justifiable. The cost is directly linked to the service provision, and based on actual time spent providing the service. MPI conducts an annual review of our cost recovery provisions to ensure we are not over-recovering or under-recovering our costs.
116. We have an obligation to consult on proposed regulations or changes to regulations. MPI has consulted with industry organisations and other audit service providers. See the consultation section below for more detail.

Proposed charge

117. It is proposed that costs for auditing avian biosecurity control programmes (when MPI conducts audits) be fully recovered through fees. These would be calculated as an hourly charge.
118. It is proposed that the existing fee for investigation and compliance auditing of a ruminant protein control programme under regulation 7A of the Biosecurity (Ruminant Protein) Regulations 1999 be used for initial comparison and calculation. This fee is set at \$216.84 per hour for each inspector or authorised person conducting the audit. This is similar to the charge for auditing RMPs (\$206.70 an hour).

High level cost recovery model

119. The high-level cost recovery model is audits that MPI conducts. Third-party auditors would set their own fees.
120. The direct and indirect costs that MPI would incur when auditing avian biosecurity control programmes are set out in the table below.

Direct costs	Indirect costs
• Staff salaries (including leave, superannuation and recruitment) • Travel costs (such as fuel, wear and tear on vehicles) • Laboratory costs (for testing samples) – may not be required in all cases	• Information technology costs • Supporting systems (such as corporate costs) – some supporting systems are funded from MPI's baseline and not cost-recovered

121. Using existing fees, MPI has calculated the total cost impact on affected parties. Because this is a new service, it is not possible at this stage to accurately determine how long audits take, or how frequent they will be. To inform our analysis, we have made the following assumptions:
 - auditing an avian biosecurity control programme charges the same hourly rate as for ruminant protein control programmes - \$216.84 per hour;

- audits take an average of 2.5 hours to complete;²⁵
- auditing incurs costs for on-site verification, travel and laboratory testing;
- travel costs are an average of \$138.38 per audit (taking the average of travel costs specified in regulation 8(2) of the Costs Regulations); and
- costs do not include goods and services tax (GST), under regulation 5 of the Costs Regulations.

122. Based on these assumptions, the estimated cost of an audit per operator is \$680.48. If MPI audited 100 properties per year (the same number as RMPs we verify), the total cost to be recovered would be \$68,048.00.

²⁵ This assumes an audit is conducted separately. If an audit is conducted at the same time as an RMP verification, there may be considerable overlap such that audit requirements are met within a shorter timeframe. This would lessen the cost to affected parties.