

Office of the Minister for the Environment

Chair

Cabinet Environment Energy and Climate Committee

Reclassifying Five Organisms as “Not New” under the Hazardous Substances and New Organisms Act 1996

Proposal

1. This paper seeks agreement to reclassify five organisms as “not new” by amending the Hazardous Substances and New Organisms (Organisms Prescribed as Not New Organisms) Regulations 2009 (the Regulations).

Executive summary

2. Under the Hazardous Substances and New Organisms Act 1996 (HSNO Act), certain organisms are classified as “new organisms” if they fall within specific statutory criteria,¹ including if the organism:
 - belongs to a species not present in New Zealand before 29 July 1998
 - is subject to certain types of approvals granted by the EPA, such as containment approvals, or conditional release approvals
 - is a genetically modified organism.
3. The HSNO Act contains a regulation-making power² to declare organisms “not new” and thus remove the need to apply for Environmental Protection Authority (EPA) approval for importing, developing, field testing, or releasing those organisms. The Regulations were made under this power in 2009, and were amended in 2011 and 2014, to reclassify specific organisms as “not new”.
4. I propose to reclassify five organisms as “not new”. Reclassifying these organisms will enable people to import, develop, field test or release them without needing to apply to the EPA for an approval.
5. The organisms I propose for reclassification are:
 - The beetle *Cybocephalus* sp – MPI voucher code T12_03094
 - The ladybird *Harmonia axyridis*
 - The parasitoid wasp *Aridelus rufotestaceus*

¹ Section 2A of the HSNO Act.

² Section 140(1)(c) of the HSNO Act.

- The bacterium *Komagataeibacter xylinus*
 - The bacteriophage (virus) *Listeria virus P100*.
6. When an organism has arrived by natural means or been inadvertently introduced into New Zealand since 29 July 1998, and has become established in the country, the HSNO Act risk management provisions for new organisms are not the most appropriate means of regulation. This is because they impose a regulatory burden on industry to work with organisms, which may be inappropriate where the organisms have a low risk to the environment and no-one is trying to manage, control or eradicate them.
 7. There is a risk that by making these organisms “not new”, the potential use of the three reclassified insects as biological control (biocontrol) agents for controlling pests could lead to these species becoming more widespread in New Zealand, and potentially having a negative impact on native species. However, the EPA advises that the impact of this risk is small, given that these insects are already well established in New Zealand. Further, no attempts are being made to manage, control or eradicate them, so they may become more widespread irrespective of whether they are reclassified under the HSNO Act.

Background

Introduction

8. The purpose of the HSNO Act is to “protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms.”³
9. Certain organisms are classified as “new organisms” under the HSNO Act, and a person must obtain approval from the EPA before importing, developing, field-testing or releasing a new organism.⁴
10. An organism is a “new organism” under the HSNO Act if it falls within one of the relevant statutory criteria.⁵ These criteria include organisms that belong to a species not present in New Zealand before 29 July 1998, and organisms with a containment or conditional release approval.⁶

Reclassifying organisms as “not new”

11. The HSNO Act contains a regulation-making power to declare organisms “not new” and thus remove the need to apply for EPA approval for those organisms.⁷ The Regulations were made under this power and subsequently amended in 2011 and 2014 to reclassify organisms as “not new”.
12. The EPA has recommended that five organisms should be reclassified as “not new”. These consist of three insect species, one bacterium and one virus (bacteriophage):
 - the beetle *Cybocephalus* sp – MPI voucher code T12_03094

³ Section 4 of the HSNO Act.

⁴ Section 25 of the HSNO Act.

⁵ These criteria are set out in section 2A (1) of the HSNO Act.

⁶ There are also other statutory definitions of “new organism” in the HSNO Act, but the five organisms currently proposed for reclassification as “not new” fall into one of these three categories.

⁷ Section 140(1)(c) of the HSNO Act.

- the ladybird *Harmonia axyridis*
- the parasitoid wasp *Aridelus rufotestaceus*
- the bacterium *Komagataeibacter xylinus*
- the bacteriophage (virus) *Listeria virus P100*.

Statutory prerequisites

13. Before making regulations to reclassify the five organisms as “not new”, I must first consider:

- whether the organisms in question have formed a self-sustaining population in New Zealand
- whether any person is attempting to manage, control or eradicate the organisms under any Act⁸.

14. I must also request the EPA to consult with affected persons and provide me with advice on submissions received and the proposed regulations, and the best international practices for the safe management of new organisms. I must have regard to the EPA’s advice.⁹

15. The proposal to reclassify the five organisms as “not new” must also be consistent with the purpose of the HSNO Act.¹⁰ I must ‘recognise and provide for’ the principles in section 5 of the HSNO Act and ‘take into account’ the matters in sections 6 to 8 of the Act. The table attached at Appendix 2 sets out the necessary considerations under these sections.

16. The EPA has advised me that all five of these organisms have self-sustaining populations in New Zealand and that no one is attempting to manage, control or eradicate them under any Act.

17. The EPA also advised that there is nothing in international best practice suggesting that these organisms should not be reclassified as “not new”.

EPA consultation

18. In August 2016, the EPA sought public proposals for organisms to reclassify as “not new”. It received requests from a number of different sources, which it assessed and narrowed down to five organisms. The EPA undertook public consultation on reclassifying these five organisms in March and April 2018. The EPA received eight submissions, evaluated the proposals in light of these, and reported back in June 2018 (the EPA’s report is attached at Appendix 1 to this paper).

19. The EPA contacted iwi and other Māori representatives to notify them of the opportunity to submit their views during the public consultation. The EPA received a submission on the proposals from Ngāi Tahu, which supported the reclassification of all five organisms as “not new”. Ngāi Tahu noted that the ladybird proposed for reclassification may have some negative effects on native species, but the ladybird is already quite widespread and “research will allow the positive and negative impacts of this species to be evaluated”.

⁸ Section 140(2) of the HSNO Act.

⁹ Section 141(1) of the HSNO Act.

¹⁰ Section 4 of the HSNO Act.

Comment

Whether to reclassify the organisms as “not new” under the HSNO Act

20. Based on advice from officials at the EPA and the Ministry for the Environment (MfE), I recommend reclassifying the five organisms.

Issues regarding reclassification of the three insect species

21. The five organisms, including the three insect species, are established in New Zealand. The EPA advises that the ladybird is already well spread in the North Island and is present in the north of the South Island.¹¹ The other two insects do not appear to have such a wide range across the country, but they have both established self-sustaining populations in the north of the North Island, and they may have a range beyond what is currently known.

22. One of the submitters, Scion, considered that there was a potential risk of harm to native species from the three insects (beetle, ladybird and parasitoid wasp), if they are reclassified as “not new”. This view is based on the possibility of someone deciding to breed the insects for use as biocontrol agents and then release them. Subsequent to this submission, Scion (and, independently, Plant & Food Research and AgResearch) indicated to the EPA that they wished to conduct research on the ladybird for its suitability as a biocontrol agent.

23. The EPA advises that, whilst the risks outlined in Scion’s submission theoretically exist, they are outweighed by the potential benefits of reclassification of the three insect species. The EPA considers the potential benefits to be:

- further research into the three insects, including research to enable better control or management of the negative effects of these organisms
- facilitating the potential use of the three insect species as biocontrol agents (because an approval from the EPA would not be needed prior to such use), which would potentially decrease the use of pesticides and lead to more options for integrated pest management strategies.

24. The EPA considers that the impact of the above risk is small, given that the insects are already well established in New Zealand. The Ministry of Primary Industries (MPI) is not attempting to manage, control or eradicate the five organisms, including the three insects, under the Biosecurity Act 1993 (Biosecurity Act), nor is any other person attempting to do so under any other Act. Therefore, the insects are likely to become more widespread regardless of whether or not they are reclassified as “not new”.

25. The Department of Conservation (DOC) is not opposed to the reclassification of any of the organisms, although it considers that it has not been provided with sufficient information to judge whether further spread of the insects as biological control agents might carry risks to native biodiversity.

Potential risks and benefits of reclassifying each organism as “not new”

*The beetle *Cybocephalus* sp*

¹¹ This is based on information from the [iNaturalistNZ](https://www.naturalist.nz/) website.

26. Bioforce Limited proposed that this beetle be reclassified as “not new”. It was first detected in Auckland in December 2011. It preys on insects such as whiteflies, mealybugs and mites.

27. The EPA advises that the benefits of reclassifying this organism are:

- the ability to conduct further research without an approval from the EPA
- potential use as a biocontrol agent for pests such as whitefly which would lead to economic benefits if it is used as a biocontrol agent for commercial crops
- potential environmental benefits from using biocontrols rather than pesticides.

The ladybird Harmonia axyridis

28. Bioforce Limited proposed that this ladybird be reclassified as “not new”. It was first detected in the Greater Auckland area in 2016 and has been spreading rapidly since then. The organism is used in other countries to control aphid pests and to reduce the need for pesticides.

29. Reclassifying this organism as “not new” would remove the need for scientists to apply for HSNO Act approval from the EPA before working with the organism, which would facilitate the study of its potential use as a biocontrol agent in New Zealand for pests such as aphids.

The parasitoid wasp Aridelus rufotestaceus

30. The New Zealand Macadamia Society Inc proposed that this organism be reclassified as “not new”. It was first detected in 2010 in Auckland. This organism could potentially be used as a biological control agent for the pest the green vegetable bug (*Nezara viridula*), thus reducing insecticide use in vegetable, fruit and nut crops.

31. Scion expressed concern that the wasp has been shown to parasitise a non-target native species, *Glaucias amyoti* (the Australian green shield bug).

32. The EPA advises that this potential risk is outweighed by the potential benefits of further research arising from reclassification as “not new”, as discussed above.

33. Reclassifying this organism would also allow research on its potential use as a biocontrol agent in New Zealand.

The bacterium Komagataeibacter xylinus

34. Scion proposed that this organism be reclassified as “not new”. This bacterium has not been isolated from New Zealand samples, but can be found in various sources and environments worldwide (vinegar, fruit, vegetables and soil). It is also commonly found in products such as kombucha tea.

35. The EPA considers that due to the recognised ubiquitous worldwide distribution of this bacterium, it is likely that it was present in New Zealand prior to 1998. Normally this would mean that it is not a “new organism” under the HSNO Act, however, the bacterium is already the subject of a HSNO Act containment approval (which was granted prior to the EPA becoming aware of the worldwide ubiquity of the bacterium). Under the statutory definitions in the Act, any organism for which a containment approval has been given is a new organism.¹² The only

¹² Section 2A(1)(c) of the HSNO Act.

way to override this is by reclassifying the organism as “not new” by Order in Council, as this paper proposes.

36. Reclassifying the bacterium as “not new” would remove the need for scientists to apply for HSNO Act approval from the EPA before working with the organism. The EPA considers that this would facilitate the study of its potential use, for example, as an alternative source of cellulose, which could have benefit in the production of many products, including building materials, biofuels and food additives. “Not new” status for *Komagataeibacter xylinus* would also alleviate the risk of MPI needing to block imports of kombucha tea to New Zealand.

The virus Listeria virus P100

37. The EPA proposed that this virus be reclassified as “not new”. This organism is a bacteriophage: a virus that attacks bacteria. *Listeria virus P100* only attacks bacteria in the *Listeria* group. It is used to limit *Listeria monocytogenes* outbreaks, a pathogen that thrives in food processing facilities.
38. *Listeria virus P100* currently has a conditional release HSNO Act approval. Evidence that New Zealand *Listeria* phage isolates are more than 99 per cent identical to *Listeria virus P100* demonstrates that the organism was never a new organism in New Zealand. This evidence was not available at the time that the EPA determined that *Listeria virus P100* was a new organism and issued a conditional release (“release with controls”) approval. An organism under a conditional release approval is one of the definitions of a “new organism” in New Zealand.¹³ Under the HSNO Act, a conditional release approval can only be overridden by reclassifying an organism as “not new” by way of Order in Council, as this paper proposes.
39. Reclassifying *Listeria virus P100* would remove the need for scientists to apply for HSNO Act approval before working with the organism. This would facilitate research to identify ways of controlling *Listeria* in food processing facilities.

Summary advice on reclassifying organisms as “not new”

40. The EPA advises that there is merit in reclassifying all five of the organisms as “not new”. Doing so would make it easier to work with the organisms by removing the requirement to obtain HSNO Act approvals for these organisms, which are present in self-sustaining populations in New Zealand.
41. The EPA has considered the potential negative impact that reclassifying the three insects may have on native species. It considers that the potential risk is outweighed by other benefits, including enabling further research, greater ease of using organisms as biocontrol agents, and a potential reduction in the use of chemical pesticides.
42. No-one is attempting to manage, control or eradicate any of these organisms under any Act. None of these organisms appear on MPI’s Unwanted Organism Register held under the Biosecurity Act.

¹³ Section 2A(1)(ca) of the HSNO Act.

Consultation

43. The EPA undertook a public consultation from 14 March to 27 April 2018 and reported the results to me.¹⁴
44. MfE has consulted with the EPA, MPI, DOC, Te Puni Kōkiri, the Treasury and the Ministry of Business, Innovation and Employment in the preparation of this paper.
45. The New Zealand First Party and the Green Party have been consulted during the development of the paper.

Financial implications

46. There are no direct fiscal implications to the Crown from the proposals in this paper.
47. Reclassifying the organisms as “not new” under the HSNO Act would mean that people would no longer have to apply to the EPA for approval, and pay the application fees to work with the organisms. However, the EPA has advised that it does not consider it likely that it would receive applications for these organisms.

Human rights

48. There are no inconsistencies between the proposal and the New Zealand Bill of Rights Act 1990 or the Human Rights Act 1993.

Legislative implications

49. If the Committee agrees that all or some of the five organisms should be reclassified as “not new” under the HSNO Act, the Parliamentary Counsel Office will draft an appropriate Order in Council to amend the Regulations.

Regulatory impact analysis

50. The Regulatory Quality Team at the Treasury has determined that the regulatory decisions sought in this paper are exempt from the requirement to provide a Regulatory Impact Assessment, as they have no, or minor, impacts on businesses, individuals or not-for-profit entities.

Gender implications

51. There are no gender implications of the proposals in this paper.

Disability perspective

52. There are no disability implications of the proposals in this paper.

Publicity

53. I propose that this paper be made publicly available once the decision has been made, and published on the EPA and MfE websites.

¹⁴ As noted above, this is a statutory pre-requisite before organisms can be reclassified as “not new” under the HSNO Act.

Recommendations

The Minister for the Environment recommends that the Committee:

1. **note** that the Hazardous Substances and New Organisms Act 1996 (HSNO Act) enables “new” organisms to be reclassified as “not new” by Order in Council;
2. **agree** that the following organisms be reclassified as “not new” under the HSNO Act, by amending the Hazardous Substances and New Organisms (Organisms Prescribed as Not New Organisms) Regulations 2009:
 - 2.1. The beetle *Cybocephalus* sp – MPI voucher code T12_03094
 - 2.2. The ladybird *Harmonia axyridis*
 - 2.3. The parasitoid wasp *Aridelus rufotestaceus*
 - 2.4. The bacterium *Komagataeibacter xylinus*
 - 2.5. The bacteriophage (virus) *Listeria virus P100*
3. **Invite** the Minister for the Environment to issue drafting instructions to the Parliamentary Counsel Office to give effect to the above proposal.

Authorised for lodgement

Hon David Parker

Minister for the Environment

Appendix 1.

EPA report: *Evaluation of the proposed regulation of five new organisms*, June 2018

Appendix 2.

Considerations under sections 4 to 8 of the HSNO Act

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| <p>Section 4: Purpose of the Act: “The purpose of this Act is to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms.”</p> | <p>Reclassifying the organisms as “not new” is consistent with the Act’s purpose. Removing the new organism controls for the five organisms does not compromise environmental protection or health and safety because any risks will be minimised or mitigated (as set out below).</p> |
| <p>Section 5: Principles relevant to purpose of Act: “All persons exercising functions, powers, and duties under this Act shall, to achieve the purpose of this Act, recognise and provide for the following principles:</p> <p>a) the safeguarding of the life-supporting capacity of air, water, soil, and ecosystems:</p> <p>b) the maintenance and enhancement of the capacity of people and communities to provide for their own economic, social, and cultural well-being and for the reasonably foreseeable needs of future generations.”</p> | <p>Reclassifying the five organisms will facilitate their use as biocontrol agents which could mean fewer chemical pesticides used, thus benefiting water, soil and ecosystems. This could also enhance the capacity of people to provide for their economic well-being, in that it could lead to lower costs (due to less use of pesticides) for the horticultural industry. There are some potential risks to native species of reclassifying the three insects (hence, potential threats to ecosystems). However, the EPA advises that since the organisms proposed for reclassification are already well-established in New Zealand and no attempts are being made to manage, control or eradicate them under any Act, the suggested risks may eventuate regardless of the organisms' status under the HSNO Act. The EPA also advises that these risks are outweighed by the potential benefits of reclassification, including research into the biology and effects of the reclassified organisms, which could lead to benefits to ecosystems.</p> |
| <p>Section 6: Matters relevant to purpose of Act: “All persons exercising functions, powers, and duties under this Act shall, to achieve the purpose of this Act, take into account the following matters:</p> <p>a) the sustainability of all native and valued introduced flora and fauna:</p> | <p>a) Reclassifying the three insects could potentially lead to risks to native organisms, however the EPA advises that reclassification does not lead to undue risks. As above.</p> <p>b) There are potential benefits and potential risks to the intrinsic value of ecosystems, as set out above.</p> |

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| <p>b) the intrinsic value of ecosystems:</p> <p>c) public health:</p> <p>d) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, valued flora and fauna, and other taonga:</p> <p>e) the economic and related benefits and costs of using a particular hazardous substance or new organism:</p> <p>f) New Zealand’s international obligations.”</p> | <p>c) There are no implications for public health.</p> <p>d) The EPA consulted with iwi/Māori. The EPA received a submission on the proposals from Ngāi Tahu, which supported the reclassification of all five organisms as “not new”. Ngāi Tahu noted that the ladybird proposed for reclassification may have some negative effects on native species, but also that the ladybird is already quite widespread and “research will allow the positive and negative impacts of this species to be evaluated.”</p> <p>e) The reclassification may have economic benefits, for example by facilitating the three reclassified insects being used as biocontrol agents, which may lead to economic benefits for the horticultural industry.</p> <p>f) There are no implications with regard to New Zealand’s international obligations.</p> |
| <p>Section 7: Precautionary approach: “All persons exercising functions, powers, and duties under this Act including, but not limited to, functions, powers, and duties under sections 28A, 29, 32, 38, 45, and 48, shall take into account the need for caution in managing adverse effects where there is scientific and technical uncertainty about those effects.”</p> | <p>There is some uncertainty about the effect on native species of reclassifying the three insects. However, as stated above, the EPA advises that the suggested risks may eventuate regardless of the organisms’ status under the HSNO Act.</p> |
| <p>Section 8: Treaty of Waitangi: “All persons exercising powers and functions under this Act shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).”</p> | <p>The EPA has undertaken consultation with iwi/Māori (as outlined above). This consultation takes into account the principles of Te Tiriti o Waitangi.</p> |