1080

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1080 is a poison that has led to substantial reductions in rat, stoat, and possum populations in Aotearoa New Zealand. It plays a crucial role in protecting native plants and animals, as well as protecting dairy herds from bovine tuberculosis (which is spread to cattle by possums) and protecting young trees in plantation forests. It is mixed with bait and most commonly used in aerial drops to manage pests in rugged, inaccessible terrain where trapping, shooting, or other control methods aren't feasible. While stoats don't eat 1080 baits directly (unlike possums and rats, which do), they can be killed by 1080 when they eat poisoned rats and mice, a major part of their diet.

A landmark report

A 2011 report[1] produced by the Parliamentary Commissioner for the Environment Jan Wright was firm in its conclusion that 1080 plays a crucial role in pest management. The report also found that, for large, inaccessible areas, there were no feasible, cost effective alternatives in Aotearoa. By-kill was found to be very rare and, for native birds, outweighed by the population growth resulting from pest reductions. The report noted that an extensive study of water samples collected after 1080 drops found 1080 in just 2% of all samples, none of which were drinking water samples and all of which were well below levels that would pose health risks to humans. A 2013 follow up report[2] reaffirmed that "aerial 1080 is the most cost effective way of controlling the three key pests of possums, rats and stoats over large areas." Jan Wright was interviewed in 2018[3] and reiterated the same conclusions.

Updated evaluation

Providing a more recent assessment of the evidence on 1080, a 2021 review article in the *New Zealand Journal of Zoology*[4] highlighted that there is no evidence to indicate 1080 builds up in the environment or causes human health harms through waterways. It also highlighted the significant conservation and bovine tuberculosis control benefits associated with 1080 use and concluded that there remain no feasible alternatives, although noted potentially promising lines of research. The review highlighted ways in which 1080 use has been refined to address community concerns and reduce use while still achieving pest control gains.

Read more

- Science Learning Hub[5]
- New Zealand Science Media Centre expert comments on 1080[6]
- Forest and Bird 1080 frequently asked questions[7]
- Department of Conservation[8]

Endnotes

[1] Parliamentary Commissioner for the Environment publication – Evaluating the use of 1080: Predators, poisons and silent forests (2011), accessed on 23 February 2022 https://www.pce.parliament.nz/publications/evaluating-the-use-of-1080-predators-poisons-and-silent-forests

[2] Parliamentary Commissioner for the Environment publication – Update report: Evaluating the use of 1080 (2013), accessed on 23 February 2022 https://www.pce.parliament.nz/publications/update-report-evaluating-the-use-of-1080-predators-poisons-and-silent-forests

[3] *Newshub* article – NZ 'lucky' to have 1080 in the fight against predators (2018), accessed on 23 February 2022 https://www.newshub.co.nz/home/rural/2018/09/nz-lucky-to-have-1080-in-the-fight-against-predators-former-parliamentary-commissioner-for-the-environment-jan-wright.html

[4] *New Zealand Journal of Zoology* article – Alternatives for mammal pest control in New Zealand in the context of concerns about 1080 toxicant (sodium fluoroacetate) (2021), accessed on 23 February 2022 https://www.tandfonline.com/doi/full/10.1080/03014223.2021.1977345

[5] Science learning Hub webpage – 1080: An overview, accessed on 23 February 2022 https://www.sciencelearn.org.nz/resources/2684-1080-an-overview

[6] Science Media Centre Expert Q&A – 1080 use in NZ (2018), accessed on 23 February 2022 https://www.sciencemediacentre.co.nz/2018/09/05/1080-use-in-nz-expert-qa/

[7] Forest and Bird webpage – Frequently Asked Questions about 1080, accessed on 23 February 2022 https://www.forestandbird.org.nz/resources/frequently-asked-questions-about-1080?gclid=Cj0KCQiAk4aOBhCTARIsAFWFP9HDrRz3oZus_dWnzKHajYgM_T8dT5mRyO_8_BnKftfpahOuTQMTW-oaAh3TEALw_wcB

[8] Department of Conservation webpage – Why we use 1080, accessed 22 April 2022 https://www.doc.govt.nz/nature/pests-and-threats/methods-of-control/1080/why-we-use-1080/