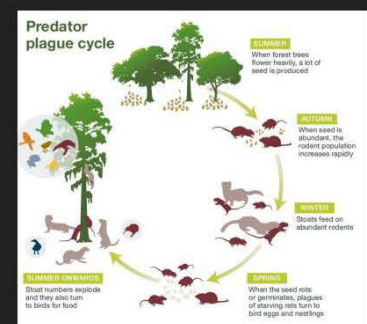


Effect of 1080 in Aotearoa, New Zealand



[PDF of the research behind these pictures](#)



The issue

The growing number of introduced pests to Aotearoa is becoming a danger to New Zealand's native species as the risk of becoming extinct is becoming greater.



RATS

New Zealand has three invasive species of rat. The Pacific rat, or kiore (*Rattus exulans*), was introduced from Polynesia in about the twelfth century; the ship rat (*Rattus rattus*) arrived in the late 1700s; and the Norway rat (*Rattus norvegicus*) became established in the 1860s. All three prey on native birds, insects and lizards, and have been blamed for the decline or extinction of a variety of species.



POSSUMS

The Australian brushtail possum (*Trichosurus vulpecula*) was introduced to New Zealand in 1837 to enable settlers to trade the fur, and quickly spread to most of the forests in the country. It destroys crops and competes with native birds, bats, lizards and insects for food, but will also eat adult birds and bats. It can carry and transmit the agricultural disease bovine tuberculosis.



STOATS

Stoats (*Mustela erminea*), along with their mustelid cousins weasels and ferrets, were introduced in the 1880s in an attempt to curb invasive populations of rabbits and rats, which had grown out of control. But stoats don't just eat rabbits and rodents; they also prey on native birds such as kiwis, as well as on insects and fish, and have been implicated in the extinction of the bush wren and laughing owl.

Science informed response to the issue [Link](#)

The use of 1080 is a bait made from sodium fluoroacetate. It is a pest control strategy that is used to attract pests to consume it, so that they will pass away therefore they will not harm or be a threat to New Zealand's native species. 1080 is aerial dropped which means that 1080 is dropped from the air in helicopters so that it is easier to cover large terrain.



Science ideas that were used to decide on the response or action? [Link 1](#) [Link 2](#) [Link 3](#)

1080 is Sodium Fluoroacetate which is a naturally occurring toxin that is found in many poisonous plants around the world. 1080 bait contains synthetic salt form of this toxin. Sodium fluoroacetate is deadly to mammals, which is why it is used because it is effective for pest control in New Zealand. Places like DOC decided to start using 1080 as an action to stop introduced pests from killing New Zealand's native species, introduced pests kill around 25 million native birds in New Zealand each year. When 1080 is being used to control the introduced pests, the populations of native birds, insects, plants, bats and frogs have a much higher survival rate. A quote from DOC's website stated "When introduced predators are controlled, native species have a better chance of survival, their food source is more abundant, and the forest is healthier." Years of observing and studying the pests in New Zealand have shown that conducting one aerial 1080 drop every 2–3 years, can keep pest numbers at a lower level. This gives native species a chance to survive, breed, and improve their populations. This means that when 1080 is used to effectively to control pests that there are proven benefits for the entire ecosystem.



[The link of the PDF to this image](#)

DOC (Department of Conservation) perspective of 1080 [Link](#)

Introduced pests such as rats, stoats, possums, and other animals kill an estimated 25 million New Zealand native birds each year, because of this DOC wants to protect New Zealand's native species from introduced pests. DOC believes that the best way to do this is by using 1080 to exterminate the pests. DOC believes that 1080 is the most effective way to reduce the numbers of introduced pests to keep New Zealand's native species safe. As they believe that 1080 bait is a safe tool for controlling the numbers of introduced pests and that 1080 is used to target predators. DOC states in their website that "New Zealand is unusual, because apart from bats, there are no native land mammals. This means we can control introduced mammalian predators without negatively impacting populations of native species. 1080 targets introduced predators such as rats and possums. Stoats are also controlled through scavenging of poisoned rat carcasses."

The population of New Zealand's native species such as birds, insects, plants, bats, and frogs have a much higher survival rate than when 1080 is not being used. Another quote from the DOC website says "Decades of monitoring and research have shown that conducting one aerial 1080 operation every 2–3 years, on average, can maintain predator numbers at a low level. This allows native species to survive, breed, and increase their populations. In some cases, more operations are necessary to protect highly endangered species or during periods of more frequent forest masts."

1080 is biodegradable which means that it breaks down quickly in the environment so that it does not stay in the food chain. 1080 also does not build up in insects, water life, or plants and is backed by science as it is supported through research by independent scientists. 1080 protects against 'predator plagues' just meaning that the use of 1080 can stop large amounts of predators reproducing says DOC.

SPCA perspective of 1080 [Link](#)

SPCA are against the use of 1080, as it is a poison aimed to kill animals and it causes high levels of suffering to the pests. They would like to see a ban on the use of 1080. This is because the substances cause such intense and lengthy suffering to animals that they believe their use can never be defended. SPCA thinks that there should be a new solution that would enable species that can't be removed completely to live at the same time as New Zealand's native species. Or that there should be research done with the development of human alternatives, therefore including a replacement of lethal methods with non-lethal methods. SPCA does not think that one species life is more important than another's, but they do recognize that there is a negative impact from the pests and sometimes it is needed to capture certain animals or manage population of certain species. SPCA believes that methods that are proven to be effective to humans should be used on pests and that the health of all animals should be viewed equally. As people should recognise that the pests deserve protection from the suffering, pain and distress. Whether an animal is native or introduced, anything should be done to manage the impact as these animals have the capacity to experience pain, suffering and distress whether there a pest or native specie.

What has SPCA done to ban the use of 1080? The SPCA is very concerned with the use of 1080 and other poisons and they are working hard to create positive changes. Since SPCA is a charity they have limited resources, but they said on their website "but the use of 1080 and other poisons is a priority for us as an organization." They are working whenever they can to change the law, speaking publicly about how they are against the use of 1080 whenever possible. They have also made numerous submissions to the government regarding the use of different poisons.

Why can't SPCA inspectors stop 1080? SPCA inspectors can't stop 1080 because of New Zealand's current laws specified in the Animal Welfare Act 1999, which allow the use of 1080 under a permit system within permitted drop-zones. This means if a poison is used to de-live an animal and it meets requirements, there is currently no legal course of action SPCA inspector can take. This is because no offence has been committed. Even though the poison has caused suffering, pain and distress to the animals.

How does this response to the issue demonstrate tiakitanga (taking care, ownership, or responsibility)?



We show that we are demonstrating tiakitanga for the environment in New Zealand when we use 1080 by protecting New Zealand's native species and land from introduced pests. Using 1080 in New Zealand means that our government is taking care of our land and native species as well as taking ownership and responsibility of handling the issue of 'the growing number of introduced pests to Aotearoa is becoming a danger to New Zealand's native species as the risk of becoming extinct is becoming greater.' By using 1080 this means that the government is taking the most efficient way to get rid of the pests while not harming New Zealand's native species.