



POSSUM MANAGEMENT IN NEW ZEALAND

Possums in New Zealand pose serious risks to native ecosystems and to the control of bovine tuberculosis. The Department of Conservation, the Animal Health Board and regional councils rely heavily on Compound 1080 to reduce possum populations. In 1990 and 1993 the Commissioner received complaints from the public about the application of 1080 by air, and in 1993 received requests from possum control agencies to investigate and offer an independent view on the use of 1080. The Commissioner chose to report on possum control in a wider context, including the range of risks posed by possums, the legal framework for control, and issues of accountability, transparency and monitoring, as well as the appropriateness of control methods used by agencies.

This pamphlet summarises the findings of the Commissioner's investigation.

Office of the
PARLIAMENTARY COMMISSIONER FOR THE ENVIRONMENT

Te Kaitiaki Taiao a te Whare Pāremata

PO Box 10-241, Wellington

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SUMMARY OF FINDINGS

Risks Posed by Possums

- **The possum problem is very serious.** Unique native species and ecosystems have already suffered considerable damage from possums and, if adequate resources are not provided in sensitive areas, the loss will continue, and be permanent. Possums contribute significantly to the spread of bovine tuberculosis, and the risk of non-tariff trade barriers against meat and dairy exports will always be with us as long as the incidence of this disease in New Zealand is above international standards. Possums reduce agricultural and forestry production and possibly contribute to the spread of waterborne diseases.
- **Possums are not the only threat to native ecosystems and to the control of Tb.** Other pests threaten conservation values, there are other wild vectors of Tb, and livestock management is a major influence on Tb risk. If these are not also addressed, possum control alone will not achieve the desired result.
- **The possum problem is not new.** Possums were considered a serious enough problem to undertake a national bounty scheme over 40 years ago and the risks to native forest and of Tb spread have been understood for well over 20 years. Possums are established over more than 90% of New Zealand and in most areas the possum population peaked 30 to 60 years ago.
- **New Zealand is the only country in the world with a possum problem.** We are the world's largest user of 1080, and possibly also cyanide and phosphorus, for vertebrate pest control.

Cost-effective Control

- **The possum risk is high only in specific areas.** Possum control must be targeted to these areas to achieve population levels that will actually reduce the long-term risk. Pest control professionals have been effectively 'knocking down' possum populations for well over 40 years, but we still do not know what the 'safe' threshold population level of possums is for either conservation or Tb control. Populations always recover in the absence of sustained maintenance control.
- **Possums cannot be eradicated from New Zealand, and control costs will be ongoing.** Possums have only been eradicated on small islands, at a very high cost per hectare.
- **Monitoring of possum control operations needs improvement, particularly for Tb control.** The success of all operations needs to be measured and assessed, both in terms of possums killed and conservation, Tb or other risks reduced. We still require better developed and standardised monitoring methods and adequate resources devoted to monitoring.
- **Accountability, transparency, and comparison between methods are hampered by hidden overhead costs.** Possum control costings should explicitly include both direct and indirect costs. A move is recommended towards performance-based contracts for all possum control operations.

1080 and Alternative Control Methods

- **Current evidence on the environmental and human health effects of 1080 cannot prove absolute safety, but the risks of using 1080 are acceptable in relation to the benefits of use.** The risks of using 1080 must be compared with the risks posed by possums. Compound 1080 is biodegradable over time. The risk of significant contamination of human water supply from 1080 use is very low. Loss of individuals of non-target species does occur.
- **For possum control over areas of very difficult terrain and poor access, a more cost-effective control than aerial-1080 is not available at the present time.**
- **Continuing heavy reliance on 1080 or any other single toxin is not advisable over the long term.** Even if other environmental risks of 1080 are not felt on balance to be significant, the risk of developing bait and poison shy populations (especially in maintenance operations) must be considered, and widespread use of 1080 may not be viewed as 'clean and green' by our trading partners. Aerial application of poisons, no matter how well targeted, is widely perceived as 'indiscriminate' and public opposition is not likely to go away.
- **Cost-effective possum control *can* be achieved by possum hunters operating under *performance contracts* over considerable areas of accessible terrain.** However, for this option to be viable over a significant part of New Zealand in the medium to long term, more adequately trained hunters are required.
- **Possum control through hunting under performance contracts is *not* the same thing as fur price or bounty-driven possum hunting practices of the past.** When skin prices were high some possum control was exerted in some areas, but this level of control is not enough to achieve the conservation and Tb control goals of agencies today, and bounties cannot be successfully targeted to high risk areas.
- **Possum hunting involves non-target risks too.** Both traps and cyanide can kill or injure individuals of non-target species, and cyanide has killed at least 11 people in New Zealand.
- **Research into biological controls or other breakthroughs in technology might offer alternatives over the long term.** If this potential is to be realised, however, ongoing research must be guaranteed.
- **All possum control poisons (e.g. 1080, cyanide, brodifacoum, phosphorus) are capable of changing the physical, chemical or biological condition of land, water or air and therefore can be considered 'contaminants' under the Resource Management Act 1991.** When poison is applied aerially it is impossible to avoid small watercourses, and therefore aerial-1080 operations can be considered to involve the discharge of 'contaminants' to water. However, whether this discharge is considered to cause a *significant* effect is a separate issue, which will determine how it is dealt with in plans and rules, and/or by resource consent requirements.

Landholder Participation

- **Ownership of the Tb problem by all landholders and other stakeholders is essential.** Cattle and deer farmers can reduce the risk of Tb infection in their stock through adhering to movement control regulations and keeping livestock away from high risk areas, as well as by maintaining low possum numbers. 'Self help' possum control programmes (such as initiated by the Taranaki Regional Council) should be encouraged and expanded to include other Tb management skills. Existing knowledge on farm management methods of lowering Tb risk should be shared with landholders.
- **Landholders should be allowed to control possums in their own way if 1080 or other methods preferred by control agencies are unacceptable, as long as required levels of control are achieved.** The inability to prevent the imposition of unwanted pesticides may affect mental if not physical health, certification for organic growers, and the ability of tangata whenua to exercise *kaitiakitanga*.

Public Information

- **Agencies need to develop a public decision-making and reporting protocol** which includes evaluation of control options and permits scrutiny of how decisions are reached.
- **Possum control costs (including overheads) should be made available to the public.**

Legislation

- **Clarification is required as to the jurisdiction of regional councils in national pest management strategies under the Biosecurity Act 1993, and in pest management under the Resource Management Act 1991.**
- **The permissions needed for the use of controlled pesticides under the Pesticides (Vertebrate Pest Control) Regulations 1983 provide appropriately for supervision by the Medical Officer of Health and the relevant controlling authority.** However, clarification is required on monitoring and enforcement of conditions, criteria are needed for the test of 'harm or inconvenience to the public', and the penalty provisions should be consistent with those of the Biosecurity and Resource Management Acts. Adjustments may be most appropriate as part of the forthcoming Hazardous Substances and New Organisms legislative review.

These findings are taken from a full report which includes:

- outline of legislative framework for possum control
- information on environmental effects of possum control poisons and traps
- costings for a range of ground control and aerial 1080 operations
- summary of the role of possums and other Tb risk sources
- discussion of monitoring issues in possum control
- findings from two case studies, Wairarapa and Taranaki
- 34 recommendations to a range of agencies and organisations.

The full report is available from Bennetts Government Bookshops and GP Publications for \$24.95 including GST. (196 pp.)

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