

20. *Animal Pest Control*

Explanation

An animal pest, for the purpose of the CMS, is any introduced animal whose presence or activities result in significant detrimental effects on indigenous plants, animals or ecological processes. An indigenous animal may also be defined as a pest for a specified period, and managed to defined levels, when a restoration plan indicates that its density in a particular locality is injurious to the plan's objectives.

The Department's responsibilities regarding control of animal pests are derived mainly from the Conservation Act 1987, the National Parks Act 1980 and the Reserves Act 1977. The Wildlife Act 1953 and the Wild Animal Control Act 1977 provide for control of animal pests and also allow for such control to be applied to some protected or partially protected species where they are causing damage to land [*Refer Glossary, p 273 for definition of a wild animal*].

Animals which are pests in this Conservancy include: feral goats and deer, possums, wasps, rodents (rats and mice), mustelids (stoats, ferrets and weasels), wandering livestock, wild pigs, rabbits, hares, and feral dogs and cats. Impacts can range from preventing regeneration to preying on or competing with native animals for food. Pest management is the application of methods to manage the impact of a pest to protect conservation values.

Where applicable, the Department's planning and operations for animal pests are undertaken in accordance with:

- 1 Departmental policies on national priority animal pests, priority areas and a National Priority Pool fund.
- 2 National Priority Protected Species fund.
- 3 Threatened species recovery plans.
- 4 National wild animal control plans and strategies.

National priority species and areas were identified in 1990 for mainland areas; pest management on islands was treated separately. It identified feral goats and possums as priority pests.

The basis for this approach is the requirement for management to vary between land holdings and habitats depending on the natural resources present and their vulnerability to pests. It is often not practical to control all pests.

Strategies for the control of goats and possums are sustained control of existing populations, limiting expansion of existing populations and, where feasible, eradicating new and geographically isolated populations.

National animal control plans are established for the priority species. These prioritise areas for control and indicate control methods and conservation goals. Possums, goats, Himalayan thar and wasps are subject to national animal control plans.

The objective of wasp control is to reduce the impacts of wasps on people. Effort is concentrated in areas where high wasp numbers and high recreational use coincide. Impacts on native fauna in the Conservancy are

unknown. The national focus is on biological control research with the objective of providing long term self-sustaining control.

Other pest animals were not identified as priority species as there was insufficient information on their impact (e.g., rats and mustelids in mainland areas), the techniques to control them were not known or they were being adequately controlled by other means without the intervention of the Department (e.g., deer).

Island ecosystems have been the focus of threatened species restoration. Nationwide several pest management programmes have been undertaken, the most ambitious involving eradication of rats and mice. The National Priority Pool (Island Eradication) fund helps to fund these programmes.

Pest management is also carried out by regional councils and the Ministry of Agriculture and Fisheries (MAF). MAF controls possums (through its agent, the Animal Health Board, and the regional councils) to reduce the spread of bovine Tb, as this animal is a significant source of Tb infection for domestic cattle and deer. MAF has the responsibility of controlling Tb-infected animals on land of all tenure including land managed by the Department. The Department and MAF liaise regularly on the respective organisations' priorities and to co-ordinate possum control programmes. Where appropriate the Department will encourage other authorities to undertake manual pest control wherever there are likely to be positive conservation outcomes.

The Department may also have input into the development of pest management strategies for specified animal pests under the Biosecurity Act 1993. The Department and regional councils which carry out other pest management work liaise regularly to ensure appropriate co-ordination.

Liaison specifically occurs with the Wellington Regional Council to control goats on the Council's land adjacent to forest parks. The Department undertakes control in areas which are a source of reinfestation.

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Table 10, p 185 lists animal pests in the Conservancy, their distribution, impact and current control. Table 11, p 186 identifies the areas where animal pest control is a priority.

Priority Strategies

Of the recognised strategies available for dealing with animal pests, the following will be adopted, where possible, in order of preference:

- 1 Prevention (exclusion methods such as stopping natural dispersion by fencing or by controlling pest numbers in established areas; use of existing or imposition of new legal controls to prevent movement of potential pest animals; take appropriate steps, including advocacy to prevent the importation of new potential pest species).
- 2 Eradication (permanent elimination);
- 3 Sustained control (controlling pest numbers below a threshold whereby impact is alleviated);
- 4 Monitor and review only.

Priority Species Control

The following animal pests will be controlled, in accordance with any national priorities, plans and strategies. (Not in priority order.)

- 1 Goats
- 2 Deer
- 3 Possums
- 4 Trespassing livestock
- 5 Rodents
- 6 Wasps
- 7 Mustelids
- 8 Other animal pests as relevant

Table 10:
Status of Animal Pests in Wellington Conservancy, 1993

PEST	DISTRIBUTION	IMPACT	CURRENT CONTROL STRATEGY
Goats	All Rimutaka and Mt Bruce forest, isolated area in Aorangi FP, isolated groups in Tararua FP and some peripheral areas around areas managed by the Department following the escape of domestic goats.	Kill and prevent regeneration of preferred food plants and can accelerate soil erosion.	Prevention where not present, otherwise sustained control by ground hunting.
Deer	Red deer: all forest parks, Mt Bruce forest, and most larger conservation areas. Sika deer: several locations within and adjoining Tararua FP following illegal liberations.	Prevent regeneration of preferred food plants and can accelerate soil erosion.	Prevention where not present, otherwise sustained control by recreational, commercial and departmental hunting.
Possums	Everywhere	Kill preferred food plants. Prey on bird chicks and eggs. Compete for nesting space with some birds.	Permit commercial hunting; sustained control in priority areas.
Domestic livestock	Periphery of areas managed by the Department where fencing inadequate to exclude stock.	Eliminate forest understorey and prevent regeneration.	Exclusion fencing.
Rodents	Everywhere except Mana, Somes, Ward and Mokopuna Islands. No mice on Kapiti Island.	Kill native animals. Eat seeds, which inhibits regeneration and limits food supply for indigenous species.	Targeted control of rats around <i>Powelliphanta</i> snail areas. Proposal to eradicate rats from Kapiti Island. Contingency planning and operations to prevent establishment on islands.
Wasps	Lowland forest areas.	Reduce quality of recreation experience, kill forest invertebrates, compete for food with native birds and attack nestlings.	Nest destruction surrounding areas of high recreational use.
Mustelids	Everywhere	Kill native animals.	Control only at National Wildlife Centre.
Other animal pests, rabbits, wild pigs, cats	Rabbits and feral cats are widespread. Wild pigs found in larger forested areas managed by the Department.	Impacts range from predation on indigenous species to prevention of regeneration.	Nil.

Priority Protection Outcomes

- 1 Eliminate impact (eradication or pest kept at very low density by intense control methods and/or by exclusion fencing);
- 2 Alleviate impact sufficiently for recovery to occur (pest kept below its damage threshold);
- 3 Alleviate impact sufficiently to prevent a defined level of decline (pest kept below a threshold where some damage alleviated).

Priority Areas

An assessment of priority areas in relation to priority pest species has been undertaken by the Department in the Conservancy. It has identified the following areas in Table 10 as important for management. These are not listed in any priority order:

Table 11:
Priority Areas for Animal Pest Control

PLACE	PEST SPECIES	STRATEGIES	OUTCOME
Islands	Rats	Eradication and prevention.	Threatened species recovery.
Mainland areas important for threatened species, focus (1993) on <i>Powelliphanta</i> land snails.	Rodents, mustelids, goats, deer, possums, domestic livestock.	Sustained control of rodents and mustelids. Prevention and eradication of all other pests.	Threatened species recovery.
Remnant natural areas <2,000 ha	Goats, deer, possums, domestic livestock.	Eradication (domestic livestock, goats, and deer), or sustained control (deer, possums) and prevention.	Regeneration of pests' preferred food plants.
Alpine grassland and high altitude forest, Tararua Forest Park	Goats, deer, possums.	Prevention (goats), eradication (goats), or sustained control.	Regeneration of pests' preferred food plants.
Ecological Areas	Goats, deer, possums, domestic livestock.	Prevention and eradication of goats, sustained control of deer and possums, exclusion of domestic stock.	Regeneration of pests' preferred food plants.
Lowland forest in the forest parks.	Goats, deer, possums, domestic livestock.	Prevention and eradication of goats, sustained control of deer and possums, exclusion of domestic stock.	Regeneration of pests' preferred food plants.
Fuchsia forest, Tararua Forest Park	Goats, deer, possums.	Eradication (goats), sustained control of deer and possums.	Maintenance and regeneration of fuchsia trees.

Management Issues

Extent of the Problem

The Department is unable to tackle all animal pest problems in all parts of the Conservancy because of the size of the problem and technical or resource limitations. Where it does undertake control, it is of the identified priority species, currently goats and possums, within areas of significant natural resources and a high vulnerability to pest impacts. These operations are often funded from a Department national priority pool fund. The Department's control of deer, pigs and possums is supplemented by recreational and

commercial hunting. Some animals (mustelids and feral cats) are not subject to any control effort, with the exception of the National Wildlife Centre, because of lack of information on their impact or technical inability to implement effective control. (Mustelid control at the National Wildlife Centre is only effective because intense control occurs within a small area; this is impractical for larger areas.) Wasps are only controlled around areas of high recreational use. This will continue until effective large scale control methods are developed, making ecological control possible.

Inability to control all animal pests results in two problems. First is the extent and consequences of ecological degradation in the areas where some or all of the pest species are not being controlled. Appropriate monitoring has not been established to assess the consequences of no control.

Second is the focus in animal pest control on single species control. In some areas this approach does not adequately deal with the collective impacts of similar impact pest species or of all of the pest species in the control area. For instance, a Conservancy priority is the sustained control of goats, but in areas where they are controlled, deer are also present. As both deer and goats have similar effects on forest, a reduction in goat density will result in an increase in deer numbers as competition for food is reduced. The benefits of goat control for improving the regeneration of their preferred food plants are, therefore, likely to be lessened.

The Department will draft a pest management plan in which it will seek to identify and prioritise the impacts of all pests on all areas managed and to determine areas where pest control will be implemented. Resources will be sought to control all pest species identified as having an adverse effect on the natural resources, rather than single species. Measurable and auditable performance levels will be set. The Conservancy pest management plan will be subject to policies in national control plans and strategies. Areas or species not subject to any control will be identified for monitoring, to assess the types and degree of ecological impacts. Recreational and commercial hunting will continue to be regarded as a control tool for some species but their capacity for protecting natural resources in priority areas will have to be determined.

During formulation of the Conservancy pest plan, the Department will consult with hunters, recreational and conservation interests.

The Department will contribute to and initiate research to determine the impacts of all animal pests and methods for their control.

Commercial and Recreational Hunting

Some animals, such as deer and pigs and at times goats and possums, which are pests on areas managed by the Department are sought by recreational and commercial hunters. These hunters can help the Department control animal pests. Their hunting efforts will be encouraged. Huts and tracks may be maintained or constructed to encourage recreational hunting in priority areas for animal control [*Refer Section 27.4.1: Recreational Hunting, p 251*]. The forest park CMPs permit landings for recreational purposes at eight designated sites in Tararua Forest Park, two sites in Aorangi Forest Park and throughout the Orongorongo Valley in Rimutaka Forest Park. In Tararua Forest Park this has concentrated recreational hunting around a few huts throughout the "Remote Experience" zone of the central range. The Department wishes to increase recreational hunting opportunities in the central Tararuas as an assistance to its other wild animal control methods. By creating a landing zone for helicopter operators holding a concession granted

by the Department of Conservation, the Department will encourage hunters to spread their hunting effort over a wider part of the Tararua range and in areas of eastern Rimutaka Forest Park where access is restricted and difficult. This policy is not expected to greatly increase either recreational helicopter activity in the parks or the impacts of helicopter noise and disturbance.

Survey and Monitoring

The surveying and monitoring of animal pests is important for determining impacts and assessing control effectiveness, but it consumes resources. The level of resource commitment has limited this activity in recent years, although the need for information remains.

The Department will review surveying and monitoring needs, determine priority areas and species, and implement a programme that is effective and sustainable given available resources.

Liberation of Sika Deer and Goats

Sika deer have been illegally introduced for recreational hunting in areas within and surrounding Tararua Forest Park. They have a more severe impact on plant communities than the established red deer and are harder to control.

Escaped domestic goats are re-establishing in areas where they had been eliminated or had not previously occurred, and are a potential threat in other areas. Many escape from farms where fencing is inadequate.

The Department aims to contain the known population of sika deer and goats with the long-term aim of eradication. Sika deer sightings will be reviewed and measures taken to deal with them.

The presence of farmed or feral goats around the areas managed by the Department and the status of fencing will be identified. Establishment of controls on the location of goat farms within infiltration distance of areas managed by the Department will also be sought.

Objectives

- 1 Maximum protection of natural and historic resources from the damaging effects of animal pests within allocated resources.
- 2 Implementation of an appropriate programme for surveying and monitoring animal pests, their impacts and the effectiveness of pest management programmes.
- 3 Encouragement of the control of animal pests by recreational hunters, as a complement to other control efforts.
- 4 The public informed about the extent of animal pest problems, action being undertaken, and the rationale behind the action.

Implementation Planning

- 1 In accordance with policies for national control plans and priority funding for goats and possums, complete annual operational plans for each animal pest operation and implement appropriate monitoring to review the effectiveness of each operation.
- 2 To prepare and implement, subject to national control plans, priorities, and strategies, a Conservancy pest management plan and consult with hunters, recreation and conservation groups during its preparation.
- 3 Complete a review of pest management monitoring requirements in areas managed by the Department, and produce and implement an appropriate regime.

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- 4 Regularly examine and review the use of new methods and technology for the control of animal pests.
 - 5 Contribute to and support initiatives on research into animal pest ecology, impacts and control methods.
 - 6 Consult with tangata whenua about the use of poisons in areas of significance to them.
 - 7 Liaise and co-ordinate with, and encourage, local authorities' animal pest control operations wherever there are potential conservation benefits.
- Goats and Deer*
- 8 Survey all Sika deer and new goat populations, and examine and if feasible implement measures to prevent extension of their range and for their eradication.
 - 9 Eradicate goat and deer populations in priority areas where practicable, and in other areas control to levels where impacts are alleviated.
 - 10 In non-priority areas, monitor and review goat and deer densities and impacts.
 - 11 Foster recreational hunting, and use commercial hunting on areas managed by the Department, especially where this complements other control methods used in priority areas. Monitor and analyse the effectiveness of these forms of control.
 - 12 Advocate for controls on goat farming adjacent to or near areas managed by the Department and liaise with landowners.
- Possums*
- 13 Control possums in priority areas to levels where ecological impact is alleviated.
 - 14 In accordance with a monitoring plan, establish appropriate monitoring in non-priority areas to assess possum densities and impacts.
 - 15 Support commercial hunting of possums in areas where this conforms with the Department's priorities.
- Domestic Livestock*
- 16 Survey the boundaries of all areas managed by the Department and rank the threats due to domestic livestock intrusion.
 - 17 Prepare and implement a fence construction and maintenance programme to exclude domestic livestock at priority boundaries requiring fences.
- Rodents*
- 18 Prepare and implement mammal contingency plans to prevent the entry of pests on all islands managed by the Department that are free of introduced mammals.
 - 19 Eradicate rodents where practicable from island priority areas and undertake appropriate control in specific mainland areas important for threatened species recovery.
 - 20 In accordance with a monitoring plan, establish appropriate monitoring to assess rodent density and impact over a variety of habitats.
- Wasps*
- 21 Control wasp nests where wasps present a problem at high-use visitor sites.
 - 22 Keep informed about research into wasp impacts and control technologies, and periodically review the necessity for wasp impact monitoring and control in the Conservancy.
- Mustelids*
- 23 Continue to control mustelids at National Wildlife Centre.
 - 24 In accordance with a monitoring plan, establish monitoring to assess mustelid density and impacts.

- Other Animal Pests*
- 25 Undertake appropriate action when other animal pests are identified for control in a Threatened Species Recovery Plan or the Wellington Conservancy Pest Management Plan.
- 26 In accordance with a monitoring plan, establish monitoring to assess other animal pest densities and impacts.
- Public Awareness*
- 27 Undertake programmes to inform the public, associates, and other agencies of pest management plans and their importance for protecting indigenous biodiversity.
- Recreational Hunting*
- 28 Provide huts and tracks where it is considered this would assist hunting in priority areas for animal pest control [*refer Appendix 3 for existing Wild Animal Control (WAC) huts*].
- 29 Not maintain and remove when unsafe WAC huts which are no longer required for wild animal control.
- 30 Only allow recreational hunters access by helicopter to the Remote zone of Tararua Forest Park and eastern Rimutaka Forest Park [*see also Sections 26.1, p 215 and 27.4, p 246 and ROS Map, facing p 240*].
- 31 Allow helicopters to land at the designated landing sites subject to permit application and Section 27.4 Helicopters, Implementation 3.