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IMPLEMENTATION OF REGIONAL PEST MANAGEMENT STRATEGIES

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ABSTRACT: With the enactment of the Biosecurity Act 1993, New Zealand obtained enabling legislation which makes it possible to develop and implement regional pest management strategies (RPMSs) which are integrated in terms of multi species approach, funding, and outcome objectives. Up until this time local authorities, government departments, and landowners had mixed signals in terms of resource versus pest values, dated legislation, no long-term strategic approach to pest control, and certainly no guarantees for funding. The Waikato Regional Council (Environment Waikato) experience in developing and implementing a regional pest management strategy under the Biosecurity Act is studied and reported on for this paper.

KEYWORDS: pests, implementation, Environment Waikato, regional pest management strategy

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INTRODUCTION

Regional Councils were created under the Local Government Re-organization Order of 1988, and became operative in November 1989. A whole raft of smaller specific purpose local authorities were amalgamated into regional councils with responsibilities for animal and plant pest management, river control and drainage, catchment and coastal management, emergency management, regional planning, and natural resource management (air, water, soil). The Waikato Regional Council (brand named Environment Waikato) combined functions of some 36 former authorities and has jurisdiction over 25,000 square kilometers (10% of NZ's land area). Representation is provided by 14 councilors elected on a triennial basis.

Inherited were plant pest plans over small geographic areas, some rating districts for specific animal pest control generally with no documentation in terms of objectives or strategic purpose, no quality assurance protocols, ill defined budgets, and no long-term financial plans.

The period 1990 to 1993 involved familiarization of what the real business was, what objectives were we attempting to achieve, and defining meaningful outcomes rather than inputs/outputs measurements.

Over this period Environment Waikato (EW) developed a Vision for the year 2000, a Strategic Plan, an annual planning format, and a process for annual reporting achievements. All these contributed towards a higher level of public consultation in the activities Environment Waikato undertook, and substantially increased accountability.

In June 1993 EW convened a national summit on the subject of pest management in order to develop the national debate on a wide range of issues such as legislation to 1080 poison impacts on non-target species. The benefit of this forum was to focus the policy makers on the need for promoting the Biosecurity Act, for increasing public participation in developing pest management strategies, to coordinate inter-agency possum control, and to ensure national consistency in the manner in which regional pest strategies were prepared.

NATIONAL COLLABORATION

The Biosecurity Act was passed into law on 1 October 1993, and this signaled the green light for RPMSs to be prepared for approval. Transition provisions within the Act gave a period of grace for old plans and programs under repealed legislation. Under the auspices of Local Government NZ a group of Biosecurity Managers from regional councils convened a Biosecurity Generic Guidelines Group colloquially known as the BeeGees, to prepare guidelines for the development of RPMSs so that a consistent approach and process would be used. This proved to be an extremely valuable process with several research projects being commissioned for economic analysis modeling and screening procedures for pest species.

The end product was a template for all regional councils to use as they developed their RPMSs. Interestingly there is substantial variation in the end products in terms of timing, content, objectives, reporting, etc. Importantly a valuable network of contacts built up over NZ within regional councils that is still used extensively today, as the initial strategies are about to be reviewed. In fact, the BeeGees are to undergo a revival with several original members and a lot of new recruits to revisit the guidelines and review in light of legislative amendments.

STRATEGY FRAMEWORK

Whilst the Biosecurity Act provides the legislative framework to develop regional pest strategies around, the council has a fair degree of latitude to customize the RPMS to suit regional circumstances. The process prescribes issues that must be taken into account, although there is no mandatory requirement on a regional council to prepare RPMS. In the EW situation Council decided a discussion paper for community and stakeholder input was a good way in which to assess the regional aspirations and concerns on pest management issues. After receipt of comments on the discussion paper, staff prepared a proposed RPMS which went out to the industry stakeholders and community for formal

submissions. A hearing committee received all submissions and made decisions on them, after weighing against a comprehensive staff report, and recommended to Council that the RPMS be approved. The process involved 12 months but resulted in a robust pest management plan for a five-year implementation term.

The philosophy of the RPMS has some key points that are salient to the discussion at this stage:

- The RPMS combines both animal and plant pests
- All landowners are responsible for managing pests on their land
- All land is considered equal regardless of land use or tenure
- There is a greater emphasis on managing environmentally damaging pests
- Pests in low numbers but of significant threat to the region will receive particular attention by EW
- EW will seek to form partnership relationships with communities and organizations to develop creative solutions to pest problems
- A tough line will be taken with land occupiers who do not comply with the requirements of the Strategy
- Funding of the pest management activity will reflect both the land-based nature of the problem and the general "public good" relating to pest control.

CONSULTATION PROCESS

During the development of the discussion document and the proposed RPMS, numerous consultative groups were kept involved in the process. The Biosecurity Committee of Council had two advisory subcommittees that provided important feedback and were used to develop the funding mechanisms particularly. These groups comprise landowner and industry representatives with broad geographic distribution and have a specific interest in biosecurity issues.

Six public meetings were convened over the region to provide the public with an opportunity to meet, listen, and question/debate both the discussion document and the proposed RPMS. Although total attendees to these meetings numbered approximately 120 from a regional population of 360,000, the feedback and comments from the meetings were well worthwhile. Submissions to the Proposed RPMS numbered 88 and approximately 35 persons/organizations addressed the Hearings Committee with their submission.

An extensive publicity program via newspapers and radio was also used to promote awareness within the region.

ANIMAL PEST STRATEGY OBJECTIVES

The RPMS has three animal pest goals:

1. Eradication of rook and wallaby over the period 1 July 1996 to 30 June 2001.
2. Prevent further spread and work towards the eradication of feral goats
3. Manage in accordance with specified standards and prevent further spread of magpie, mustelids, possum, rabbits, and wasps.

The Strategy identifies objectives for each particular pest species targeted:

Possum (*Trichosurus vulpecula*)

Reduce possum numbers to a level where they do not cause adverse effects to the region's environment and production sector.

Rabbit (*Oryctolagus cuniculus*)

Reduce rabbit populations (particularly in identified rabbit prone areas) to acceptable levels by adopting a regulatory approach and ensuring that land occupiers meet their obligations to control rabbits.

Dama Wallaby (*Macropus eugenii*)

Contain and reduce the range of Dama wallabies in the Waikato region through the development of a sustained management program, including distribution and habitat studies and systematic eradication.

Feral Goat (*Capra hircus*)

Prevent the escape of farmed goats into areas of regional ecological significance and reduce goat populations in specified areas to a level where significant environmental or production damage does not occur.

Mustelids (ferret, stoat and weasel – *Mustela spp*)

Minimize the adverse effects of mustelids in the environment through the provision of information, and control where there is a link with other pest control operations.

Rook (*Corvus frutilligula*)

Contain rooks at their present distribution and eradicate all rookeries in the Waikato Region by 30 June 1999.

Magpie (*Gymnorhina tibicen* and *G. hypoleuca*)

Minimize the adverse effects of magpie infestations by promoting community awareness of their impacts and the control methods available.

Wasp (*Vespula spp*)

Minimize adverse effects on human health, environmental and economic values by promoting awareness of the problems caused by wasps and the control methods available.

IMPLEMENTATION METHODS

For vertebrate pests the following methods are utilized to ensure pest management is undertaken in an efficient and cost effective manner.

- Regulation—involves the setting of enforceable rules, restrictions and standards.
- Inspection and Monitoring—regular property inspections ensure that rules and standards are being achieved. Monitoring is undertaken to measure the effectiveness of pest control operations and to determine trends in pest populations.
- Direct Control—EW funds and carries out control on pests that poses the most serious threat to the Waikato region (e.g., rooks, wallabies, possums).
- Information and Advice—EW offers a free advice service to raise awareness of pest problems and provide land occupiers with information they need to control pests on their land.

- Community Initiatives—EW provides support to and promotes community driven initiatives to control pests (financial incentives to approximately 30% of cost of project).
- Biological Control—EW contributes to research work investigating biocontrol options for both plant and animal pests.

Initially EW employed up to 75 staff for animal pest control, but has subsequently disestablished the service delivery capability from in-house and now out-sources all control work, and a lot of the advice and information services. EW is now a policy and contract management organization, which has involved a major paradigm shift.

FUNDING POLICY AND MECHANISMS

A major part of the RPMS development involves the identification of beneficiaries and exacerbators (or contributors) of a particular pest issue. This then forms the basis for developing a funding policy which must be consistent with another linked piece of legislation that Regional Councils operate under—the Local Government Amendment No. 3 Act. In the case of the RPMS a matrix model was developed which identified beneficiaries, contributors, extent of benefit and contribution, assessment of costs, apportioned the relative portions of costs, and nominated mechanisms for payment.

Costs for the RPMS are generally apportioned in three ways:

- Private costs
- General rate contribution representing public benefit over whole region
- Biosecurity Works and Services Rate representing benefit and contributor costs from the rural community

The relative contributions to the RPMS are likely to be in the order of \$45M private costs, \$1M General rate collected on a capital value basis, and \$380,000 Biosecurity Rate collected on a land area basis per annum.

INTEGRATION PROCESSES

The most significant component of integration is that animal and plant pests are combined in one strategy. The secondary benefit is that all land managers have a clear direction in which they can meet their obligations for pest control consistent with the community expectations. Importantly the Crown (Central Government departments) is bound by the RPMS to defined expectations and performance standards. This latter issue of government land has and still is a major point of community frustration from the position that cross boundary conflicts often arise because the Crown does not meet their obligations as landowners. Very good relationships have been established with all landuser interest groups—Crown (principally Department of Conservation), commercial forestry sector, mining and quarrying, farmer organizations, and District Councils to the extent that wide acceptance of the RPMS objectives are seeing real achievements in both animal and plant pest control.

REPORTING PROCEDURES

Formal reporting procedures are required under the legislation in terms of an annual operational plan setting

out what the RPMS seeks to achieve, what funds are to be expended, and what projects are to be undertaken. Clear performance objectives and performance targets are defined in a published document produced at the same time as EW's corporate annual plan.

An annual report is produced within three months of financial year-end that indicates performance against objectives and targets, total expenditure against budget, monitoring results and generally includes several case studies of particular projects. This is published and circulated to all stakeholder groups, land-user organizations and is available to the public either on request or through the internet.

In addition each major animal pest control operation has a post-operational report available for reference.

In a more informal manner staff prepare advertorials for local newspaper publication on a quarterly basis with highlights of work completed or about to be undertaken to keep the public informed on biosecurity issues in their local area.

INNOVATION AND CUSTOMER FOCUS

Part of the EW corporate culture is encouragement of innovation particularly to support customer service goals. In implementing the RPMS innovation has been at the forefront and many operational improvements have been made to improve processes, enhance communication with customers and generally make the achievement of Strategy objectives of high priority.

As the Strategy was developed EW produced factsheets on all pest species, a "Hitchhiker's Guide" to the RPMS for a quick reference, Standard Operating Procedures for most of the statutory processes, a staff training package, and information on funding of the RPMS in terms of landowners' costs.

Advice and information programs have been greatly facilitated by field days, landcare group sessions with landowners, incentives on offer for self help pest control schemes, and a number of partnership arrangements with farm supply stores on control materials and equipment, Maori and community groups for work schemes. Supply arrangements have been set up with pest control companies to deliver control services to EW specifications in a variety of situations. All the above innovations have resulted in landowners taking a much greater degree of responsibility for their own pest control obligations which has been one of the main objectives of the RPMS.

EW has contracted out all service delivery and only seven staff remain in policy, monitoring, and contract management roles.

BENEFITS TO THE REGION

The RPMS has provided the Waikato region with a comprehensive strategy to enable the management of the specified pest species in very measurable ways. A national standard for monitoring possum populations has been developed which has provided immense benefits to monitor in a statistically valid manner. Now control operations can be assessed for effectiveness and residual populations monitored to determine when intervention is needed to maintain the environmental gains being achieved. A good example is the recovery of coastal vegetation on the Coromandel Peninsula from the ravages

of possums. Endangered indigenous plant, bird, animal and insect species in ecologically significant sites now have an opportunity of survival. As part of the animal pest program and in conjunction with other initiatives of EW the ecologically significant sites on private land within the region are being assessed and mapped as a preliminary to having pest management projects being implemented.

The various communities that make up the region have the opportunity to participate in pest control projects that are of most concern to them—this may be magpies on bush margin areas, possum projects to reduce environmental and economic damage, or plant pest eradication in urban centers.

Land-user groups have certainty of the standards and rules in place which underpin the enforcement procedures that is of more application to the plant pest program, however a rigorous framework is in place should it be necessary for the animal pest situation.

Possum control community schemes are being developed at a steady pace over the region and significant gains are being achieved in the battle against New Zealand's worst animal pest.

SUMMARY

The annual cost to regional ratepayers of implementing the RPMS is NZ\$ 2.2m, and benefits are considerable both in terms of immediate impacts and long term accumulative positive changes to ecosystems and economic values. The fortunes of the Waikato region are primarily land-based in terms of dairying, sheep and beef farming, forestry, mining, and tourism; therefore, the long term integrity of the production ecosystems are very dependent upon biosecurity policies being implemented on a sound policy and funding basis.

Similarly the native bush, wetlands, and alpine ecosystems so important to tourism, recreation, water yield, and catchment protection must receive essential biosecurity management inputs to ensure they are maintained and enhanced to fulfill their functions in a sustainable way.

With a RPMS in place for the region and given the widespread support for the implementation methods, I consider the biosecurity needs of the region in terms of animal pest management are being met in a very positive manner.