



Government of South Australia

South East Natural Resources  
Management Board



# South East Pest Management Strategy

A regional biosecurity plan for the  
control of invasive species





CARING  
FOR  
OUR  
COUNTRY

The development of the South East Pest Management Plan was made possible through the Australian Government Caring for Our Country program.

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## Executive Summary

Pests cost the South East community millions of dollars a year through control costs, production losses and damage. The South East Natural Resources Management (SE NRM) Board has responsibility under the *Natural Resources Management Act 2004* (NRM Act 2004) to ensure declared pest species are effectively managed within the South East region of South Australia and that all landholders carry out effective control of declared pest species on their properties.

The SE NRM Board consulted widely and sought to understand community views in devising the South East Pest Management Strategy to achieve a coordinated approach to strategic pest species management. The South East Pest Management Strategy seeks to address the most harmful pests identified for the SE NRM Board region and which are 'declared' under the NRM Act 2004, as well as emerging pests.

The goals of the South East Pest Management Strategy for the next five years are to have:

1. An informed community proactively undertaking pest management activities.
2. No new pests become established in the South East.
3. Effective management of established pest species.

A framework of objectives and actions supports the achievement of these three goals and guides SE NRM Board expenditure. The objectives are:

- Effectively implement the animal and plant control provisions of the NRM Act 2004.
- Apply a risk-assessment approach to pest management in the South East.
- Ensure early detection of and rapid response to new incursions of pests to the South East.
- Prevent the spread of pests within the region.
- Provide a range of pest management services to the community.
- Maintain a regional pest management database.
- Provide education services to the community on best practice pest management.
- Support State and National biosecurity programs.
- Apply a continuous improvement approach to all aspects of pest management implemented by the SE NRM Board.
- Integrate pest management into all regional NRM activities and relevant plans.

This South East Pest Management Strategy identifies the key pest threats and prioritises them using risk-analysis methods to ensure the most effective use of collective efforts. A regional-scale analysis resulted in the following priority pests to be targeted for eradication (E), destruction of infestations (D) or control of spread (C):

Agricultural priority pests:

(E) Golden Dodder, Dingo/Wild Dog, Goat,

(D) Blackberry, Innocent Weed, Khaki Weed, Silverleaf Nightshade

(C) African Feathergrass, Bathurst Burr, Caltrop, Cape Tulip, Creeping Knapweed, Gorse, Hoary Cress, Salvation Jane, Three Corner Jack, Three Horned Bedstraw, Deer (all species) and Rabbit.

Environmental priority pests:

(E) Bridal Veil, Dingo/Wild Dog

(D) Asparagus Fern, Western Cape Bridal Creeper, Pampas Grass, Goat and Mallard

(C) Aleppo Pine, Blackberry, Bluebell Creeper, Boneseed, Dolichos Pea, Erica, Gorse and Radiata Pine.

Key engagement strategies to encourage the involvement of all stakeholders, including landholders and the wider community are:

- awareness raising (using a broad range of tools);
- involving urban landholders and young people;
- celebrating successes to motivate and inspire ongoing on-ground efforts;
- strengthening the support provided by Authorised NRM Officers;
- and working closely with Local Government, non-governmental organisations, agronomists, chemical suppliers and advisory committees.

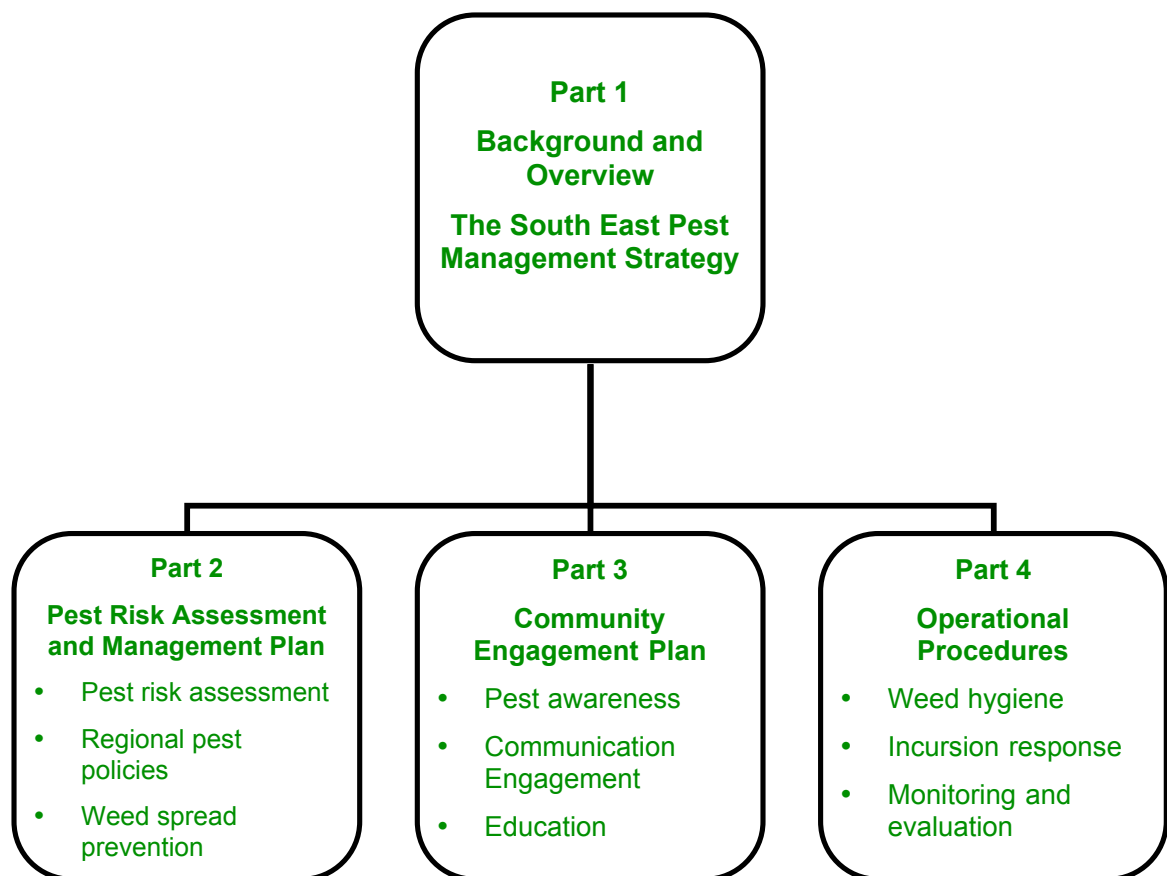
Monitoring the effectiveness of the South East Pest Management Strategy is critical for ensuring the most efficient use of funding and resources. Monitoring programs in the region will be updated to inform management and assess progress at the regional and site level.

Many plants and animals have the potential to pose significant threat to agriculture and the environment. For this reason the South East Pest Management Strategy schedules a review of the pest risk and priority species for 2014.

## Document Map

The South East Pest Management Plan is made up of four-parts:

- Part 1, gives the background to the development of the South East Pest Management Strategy and an overview of its purpose, goals, objectives and expected outcomes;
- Part 2, provides information on pest prioritisation and management in the regions;
- Part 3, is a community engagement strategy for the implementation of the pest management plan;
- Part 4, provides operational procedures for pest management.



**Figure 1: The 'South East Pest Management Plan' document layout**





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## Background and Overview





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## ACRONYMS

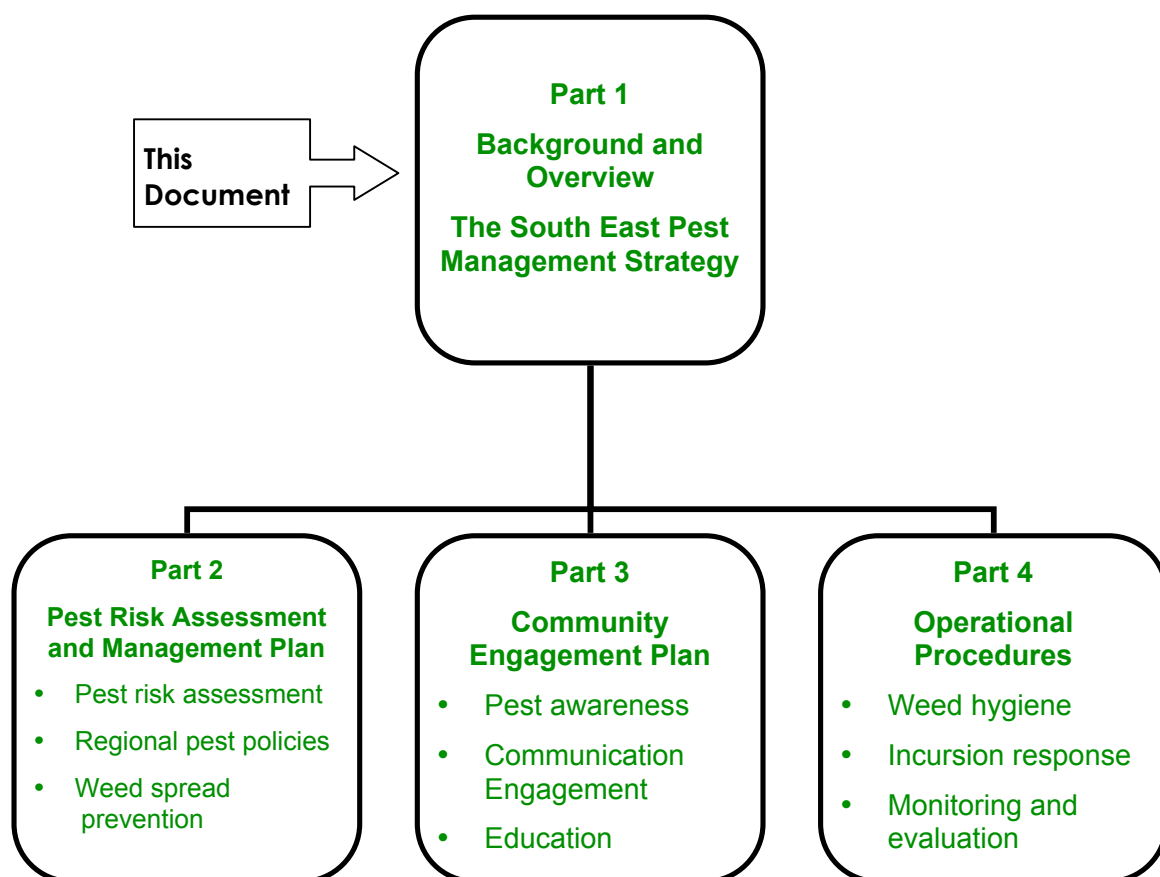
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CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEH	Department for Environment and Heritage
DWLBC	Department of Land, Water and Biodiversity Conservation
IPM	Integrated pest management
NRM	Natural resources management
PIRSA	Primary Industries and Resources SA
SA	South Australia
SARDI	South Australian Research and Development Institute
SE	South East
SEEEWG	South East Environmental Educators Working Group
SE NRM Board	South East Natural Resources Management Board
SERIC	South East Resource Information Centre

## DOCUMENT MAP

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The South East Pest Management Plan is made up of four-parts (Figure 1). This volume, Part 1, gives the background to the development of the South East Pest Management Strategy and an overview of its purpose, goals, objectives and expected outcomes.



**Figure 1: The 'South East Pest Management Plan' document layout**

## 1. WHY DEVELOP A STRATEGY?

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Pest plants (weeds) and pest animals are a recognised threat to the environment, the economy and social well being. Weeds alone cost Australian agriculture \$4.2 billion per annum and an estimated \$2.5 billion to the environment (Sinden *et al.* 2004) with vertebrate pests impacting on our industries, Australia wide, to the tune of \$720 million (McLeod 2004). It is estimated that \$209 million was spent on weed management in South Australia in 2006-07 alone (ABS 2007).

A significant number of plant and animal species have been introduced to the South East region. The South East has a wide-ranging geographic spread of moderate to high rainfall, varied soil types and different land uses, creating an array of conditions for pests to prosper. Pests impact on native species, natural resources, assets and primary production through competition, predation and direct damage.

Pest plants and pest animals cost the South East community millions of dollars a year through control costs, production losses and damage. According to a 2006 Australian Bureau of Statistics report, managing pest species is the number one natural resource management (NRM) issue of landholders at a property level.

Management of natural resources, including pest management, requires the cooperation and coordination of management efforts from private landholders, the general community, industry and government. The SE NRM Board has responsibility under the *Natural Resources Management Act 2004* (NRM Act 2004) to ensure all landholders carry out effective control of pest plant and pest animal species, particularly those 'declared' under the NRM Act 2004 (see Appendix 1 for details about the NRM Act 2004). The SE NRM Board's mission is:

*“Healthy Landscapes for Healthy Living that are home to communities leading the future wellbeing and prosperity of the South East”*

The SE NRM Board invests over \$1.5 million per year on implementing its responsibilities to pest management and related activities. The Board relies on external sources of income and community co-operation to implement on-ground actions. The eradication of all problem pest species is very difficult to achieve and expensive however, and not all threats can be logistically addressed at all times. It is therefore expected that some pest species will continue to persist in the region.

To minimise future detrimental impacts on the region's landscape, economy and community, pest populations need to be rigorously assessed in terms of the most appropriate and cost-effective management options. In order to invest limited NRM resources effectively, a strategic, co-ordinated and proactive approach is required whereby:

- potential future trends are assessed
- pests of highest risk, that are also feasible to control, are targeted
- management actions are cost-effectively prioritised and co-ordinated and
- all stakeholders (community, agencies, industry) are involved.

The purpose of this South East Pest Management Strategy is therefore to achieve:

*a coordinated approach to strategic pest species management through identifying and prioritising threats, educating the community and implementing best practise control techniques.*

This South East Pest Management Strategy has set the goals for pest management in the South East for the next 5 years that will guide SE NRM Board expenditure. It also details the NRM Actions required by the SE NRM Board, landholders and the wider community to protect the region from the negative impacts of pest species. It identifies the key threats and prioritises them to ensure the most effective use of collective efforts.

## 2. WHAT THIS PLAN COVERS

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### 2.1 GOALS AND OBJECTIVES

Part 1 of the South East Pest Management Strategy document introduces pest management issues in the South East and outlines the general purpose, goals and objectives of the South East Pest Management Strategy.

### 2.2 PEST PRIORITIES AND POLICIES – PART 2

Part 2 of the plan document covers pest management priorities and policies. Only pests ‘declared’ under the NRM Act 2004 and emerging pests form the basis of the work plan for the SE NRM Board. Some issues regarding pest management in the region have been identified that are outside of the SE NRM Board’s direct roles and responsibilities. Partnerships are identified wherever this is the case, recognising that the implementation of some actions will, on occasion, be better suited or legislated to the functions and resources of another organisation.

The plan does not address domestic cats and dogs, disease, insects, fresh water fish, marine pests or genetically modified organisms (GMOs). Those responsible for the pests not covered in this document are outlined in Appendix 2.

#### **What are ‘declared’ species?**

A range of plant and animal species are currently declared under the NRM Act 2004. Species that have been declared are those that have been identified as posing a serious threat to agriculture, the environment and/or public safety. The NRM Act 2004 provides a legislated requirement (which may vary according to region, sub-region and species) for specific levels of control and monitoring of these species to be enforced.

### 2.3 COMMUNITY ENGAGEMENT – PART 3

Pest control is primarily the responsibility of the ‘landholder’. Landholders include private individuals, state and local government agencies and companies. Pest management is a shared responsibility; security against pest threats is everyone’s business.

The NRM Act 2004 maintains the philosophy of encouraging cooperation by empowering regional and local communities to set priorities and act holistically to resolve pest issues affecting our natural resources. Part 3 of this plan therefore focuses on community involvement in pest management strategies.

### 2.4 OPERATIONAL PROCEDURES – PART 4

It is the responsibility of the SE NRM Board to help landholders meet their obligations under the NRM Act 2004. The SE NRM Board aims to do this through providing information, advice and integrated control services to landholders and carrying out compliance activities to ensure effective pest management is achieved. Monitoring the effectiveness of the pest management strategies is critical for ensuring the most efficient use of funding and resources. Monitoring programs in the region inform management and assess progress at the regional and site level.

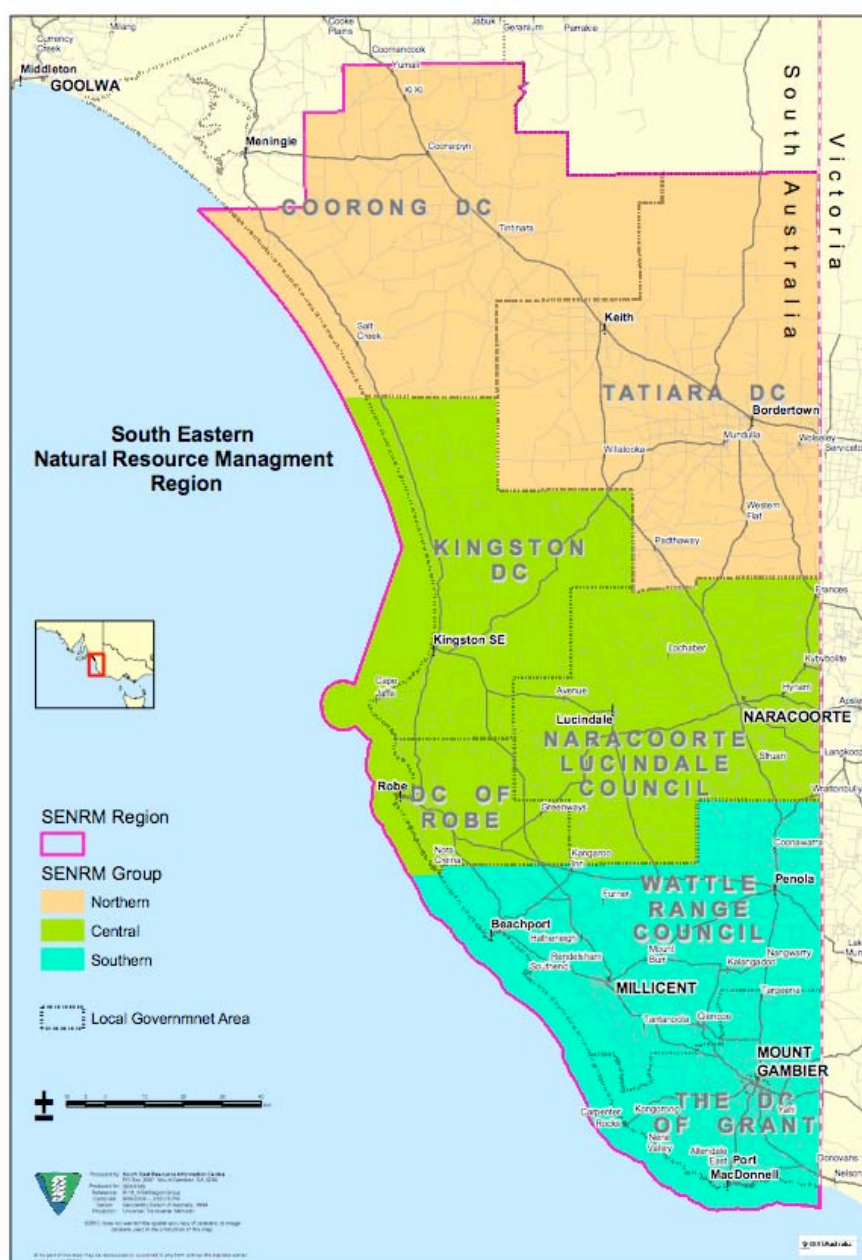
Part 4 of this plan outlines operational procedures to implement and monitor best-practice works.

### 3. WHERE THIS PLAN APPLIES

This plan applies to the SE NRM Board region. The region is situated in the southeast corner of South Australia. It is bounded by the Victorian border to the east, the Southern Ocean to the south and west and the Murray Darling Basin Natural Resources Management Board region to the north.

The South East region is made up of eight local government areas, these being the District Councils of Grant, Robe, and Tatiara, Kingston District Council, Naracoorte Lucindale Council, Wattle Range Council, Coorong Council and the City of Mount Gambier.

Mount Gambier is the main regional centre and only city in the South East. The principal townships are Bordertown, Keith, Kingston, Millicent, Naracoorte, Penola and Robe (Figure 2). For more information on the South East regional description please refer to the comprehensive Regional NRM Plan.



**Figure 2: Map of the South East Natural Resources Management Board region**



## **4. HOW THIS PLAN WAS DEVELOPED**

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### **4.1 COMMUNITY CONSULTATION**

Community and stakeholder involvement in development of this plan was a priority of the SE NRM Board. Extensive community consultation processes were built into the development of the document and numerous opportunities were provided to all members of the community to contribute.

A stakeholder workshop was held during February 2009 to gather initial information for Part 1 of the plan. Most key stakeholder groups were represented (Appendix 4). Participants provided a large amount of information contributing to the purpose of the document, principles behind it, and draft goals and actions.

The South East Pest Management Strategy draft, developed from the workshop, was then released for public comment during June/July 2009. The final document is the product of this process and the SE NRM Board is grateful for all input received.

### **4.2 STATE AND NATIONAL COLLABORATION**

This plan is designed to be consistent with, and achieve the aims of, the following regional, state and national documents:

- South Australia's Strategic Plan (2004)
- State Natural Resources Management Plan (2006)
- South Australian Biosecurity Strategy (2005)
- National Weeds Management Strategy (2006)
- The Minister for Environment and Conservation's policies on declared plants and animals, and the
- South East Natural Resources Management Board Regional NRM Plan.

The relevant principles and goals of these overarching plans and strategies that inform the South East Pest Management Strategy are outlined in section 2 of this document.





# South East Pest Management Strategy

A regional biosecurity plan for the  
control of invasive species



## Part 1: The South East Pest Management Strategy

# 1 PRINCIPLES OF A STRATEGIC APPROACH

## 1.1 BIOSECURITY CONCEPTS

The plan aims to embed best practice values in all aspects of pest management in the South East by following the principles of 'biosecurity'. Biosecurity in this pest management context is a term used to describe a spectrum of activities designed to protect the environment, the economy and the community from the adverse impacts of pests. The key activities in such a holistic approach are preparedness, prevention, response and management.

Preparedness and prevention arrangements ensure that outbreaks of new pests are prevented wherever possible. If an outbreak is detected, resources and services needed to address the outbreak are efficiently mobilised and deployed rapidly to respond and ensure that any effects are minimised (DPIF 2009).

The varied environmental conditions in the South East lend to a diverse range of dryland and irrigated land uses such as grazing and cropping, forestry, viticulture and horticulture. The large scale of productivity in the region presents many opportunities for pest invasion and spread. Many industries bring in and transport fodder, machinery and seed allowing for many opportunities where pests (particularly weed seeds) can be moved.

Prevention, early detection and initiation of rapid responses are the cornerstones of effective and efficient management of new pest plant and pest animals. Ongoing management activities are needed for established pests that are unable to be eradicated.

## 1.2 GUIDING PRINCIPLES

The Strategy is based on eleven guiding principles that were developed during stakeholder consultation and have been adopted by the SE NRM Board (Table 1).

**Table 1: Principles guiding the development of the South East Pest Management Strategy**

1	Pest plants and pest animals are a recognized threat to the environment, the economy and community of the South East region
2	Pest management is a high priority natural resource issue for the South East region
3	Everyone has a responsibility and duty of care for pest management which is best met through partnerships
4	The pest risk assessment system is the recognised method for prioritizing management goals and actions of pest species
5	Early detection and rapid response is the most cost-effective way to manage pest species
6	Community awareness of, and engagement with, pest issues is vital for effective pest management
7	Integrated and coordinated pest management that establishes and utilises best practice methods at a landscape scale is the desired approach
8	An approach which considers the costs compared to the benefits should be applied to pest management
9	Effective pest management requires a long-term strategy involving ongoing commitment and effort
10	Recognise effort and celebrate success in pest management
11	Commitment to continuous improvement through regular evaluation and review

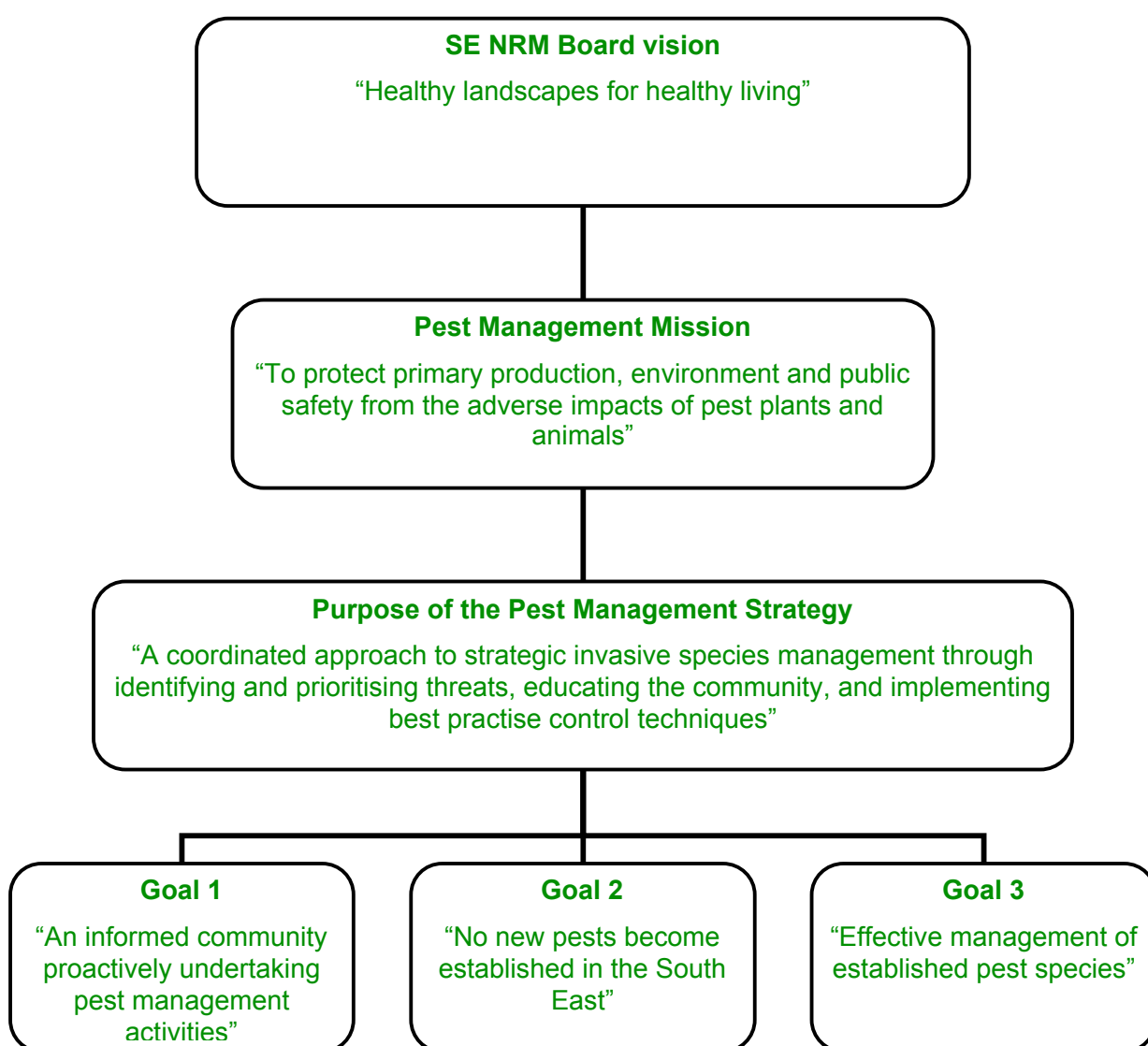
## 2 STRATEGY GOALS, ACTIONS AND EXPECTED OUTCOMES

### 2.1 GOALS

The guiding principles outlined in Section 1 were used to develop three overarching goals to achieve the purpose of the South East Pest Management Strategy (Figure 3). These goals also contribute significantly to reaching the SE NRM Board's pest management mission and regional vision as described in the SE Regional NRM Plan (see Appendix 1 for further detail about the NRM Plan).

The goals of this South East Pest Management Strategy are:

1. An informed community proactively undertaking pest management activities.
2. No new pests become established in the South East.
3. Effective management of established pest species.



**Figure 3: Flow diagram of the Vision, Mission, Purpose and Goals of the South East Pest Management Strategy**

## 2.2 OBJECTIVES

A framework of 'objectives' and 'actions' supports the achievement of each of the three goals. These have been developed to guide the NRM activities of the SE NRM Board and other stakeholders and set the standards for pest management in the South East region.

The objectives are:

1. Effectively implement the animal and plant control provisions of the NRM Act 2004
2. Ensure early detection of and rapid response to new incursions of pest plants and pest animals
3. Increase the community's awareness of, and involvement in, best practise pest management
4. Provide a range of pest management services to the community
5. Prevent the spread of established pest plants and pest animals within the region
6. Apply a risk assessment approach to pest plant and pest animal management
7. Apply a continuous improvement approach to all aspects of pest plant and pest animal management implemented by the SE NRM Board
8. Maintain a regional pest management database
9. Support State and National Biosecurity programs

## 2.3 OUTCOMES

The South East Pest Management Strategy will achieve a number of outcomes including:

- A clear and detailed work program for the SE NRM Board
- creation of a thoroughly researched community engagement strategy
- alignment of SE NRM Board and community expectations in regards to pest management in the region
- provision of information to the community on pest management in the South East, and,
- more people undertaking effective pest management

## 2.4 ACTIONS TO ACHIEVE GOALS

This section describes the objectives and actions for strategic management of pests in the South East region. The objectives and actions shown in Table 2 are in order of priority as determined from the public consultation process and assessment through a series of criteria, as seen in Appendix 3.

**Table 2: South East Pest Management Strategy, objectives, goals and actions**

Objective				Goal	Action	Action Descriptions	Timeline	Stakeholders	Measurement	Current funding source
1	Effectively implement the animal and plant control provisions of the NRM Act 2004	All	1.1	Employ and authorise a network of officers across the region to establish relationships with landholders and implement the NRM Act 2004	Ongoing	SE NRM Board, DWLBC	Authorised NRM Officers employed and regionally located	Levy		
			1.2	Implement policies and procedures for the control of pest plants and pest animals to achieve compliance with the NRM Act 2004	Ongoing	SE NRM groups, SE NRM Board, Landholders	Standards for the control of pest species met	Levy, private landholders		
			1.3	Ensure the SE NRM Board’s responsibilities are met for the control of declared pest plants and pest animals on roadsides	Ongoing	SE NRM groups, SE NRM Board, Landholders	Seasonal weeds circulars are distributed	Levy, fee for service		
			1.5	Implement active surveillance activities for the detection of pest plants and pest animals and administration of the NRM Act 2004	Ongoing	SE NRM groups, SE NRM Board, Industry, the community	Authorised NRM Officers undertake inspections of 50% of properties and 100% of roadsides	Levy		
			1.4	Seek voluntary compliance through cooperative working relationships with landholders	Ongoing	SE NRM groups, SE NRM Board, Landholders,	Authorised NRM Officers contact at least 50% of landholders in their	Levy		

ObjectiveGoalActionAction Descriptions				Timeline	Stakeholders	Measurement	Current funding source	
					Industry	area per year		
		1.6	Undertake enforcement action as required to ensure compliance with the NRM Act 2004	As required	DWLBC, SE NRM Board	Compliance actions successfully resolved	Levy	
		1.7	Keep declaration of pest plants and pest animals under review	Every 3 years	SE NRM groups, SE NRM Board, DWLBC	Review of pest species undertaken	Levy	
2	Ensure early detection of and rapid response to new incursions of pest plants and pest animals	1,2	2.1	Develop, promote and implement a collaborative regional incursion response strategy	2010	Community, SE NRM Board, Australian Government	Incursion response strategy developed and implemented	External
			2.2	Undertake community education and awareness activities on potential new pest plants and pest animas	Ongoing	SE NRM Board, SE NRM groups, Australian Government	At least one education/ awareness activity undertaken annually	Levy, External
			2.3	Develop a regional surveillance network to detect new pest plants and pest animals	2010	SE NRM Board, SE NRM groups, DWLBC, community members, Australian Government	Network developed and implemented	External



Objective		Goal	Action	Action Descriptions	Timeline	Stakeholders	Measurement	Current funding source
			<b>2.4</b>	Investigate the establishment of a new incursion fund for rapid response	2010	SE NRM Board, DWLBC, Industry, Australian Government	Investigation undertaken and results presented	External
<b>3</b>	Increase the community's awareness of, and involvement in, best practise pest management	All	<b>3.1</b>	Develop a comprehensive and relevant range of best practise pest management educational materials	Ongoing	SE NRM Board, DWLBC, Industry, Australian Government	At least two educational materials produced	External, Levy
			<b>3.3</b>	Establish a community volunteer network for pest management	2010	SE NRM Board, SE NRM groups, DWLBC, community members, Australian Government	Community volunteer network established	External
			<b>3.4</b>	Implement adult pest management education programs	Annually	SE NRM Board, SE NRM groups, DWLBC, community members, Australian Government	Two adult education programs implemented	External

Objective		Goal	Action	Action Descriptions	Timeline	Stakeholders	Measurement	Current funding source
			<b>3.5</b>	Ensure pest topics are incorporated into the regional school curriculum	Ongoing	SE NRM Board, SEEWWG, Schools	Membership to South East Environmental Educators Working Group and provision of pest education programs to schools	External
			<b>3.6</b>	Repeat the community survey in five years to detect changes in attitude and behaviour as a result of activities	2014	SE NRM Board	Results compared to the original community survey	External
<b>4</b>	Provide a range of pest management services to the community	2,3	<b>4.1</b>	Identify, promote and implement best practise pest management techniques	Ongoing	SE NRM groups, SE NRM Board, Industry	Information disseminated twice annually	Levy
			<b>4.2</b>	Provide a pest identification and advisory service to the community	Ongoing	SE NRM Board, DWLBC	Pest identification service provided	
			<b>4.3</b>	Operate a viable pest control operation that meets all legislative requirements	Ongoing	SE NRM Board	OHS&W audits and 1080 audits undertaken	Fee for Service/levy
			<b>4.4</b>	Assist with the research and deployment of biological control programs	Ongoing	SE NRM Groups, SE NRM Board, DWLBC, SARDI, CSIRO.	Six new biological control release sites established annually	Levy and External
<b>5</b>	Prevent the spread of established pest plants and pest animals within the region	3	<b>5.1</b>	Administer provisions of the NRM Act 2004 to manage authorised movement or sale of declared pest plants and pest animals	Ongoing	SE NRM Board, DWLBC	Permits for movement of contaminated produce are issued as required	Levy

Objective		Goal	Action	Action Descriptions	Timeline	Stakeholders	Measurement	Current funding source
<b>6</b>			<b>5.2</b>	Identify and inspect pest plant and pest animal pathways in the region for new infestations	2010	SE NRM Board, Community, SE NRM groups, DWLBC, Australian Government	Pathways identified and inspected annually	Levy and External
			<b>5.3</b>	Manage pest plant and pest animal regional containment zones	Ongoing	SE NRM Board, Community	Regional mapping shows control efforts	Levy, private
			<b>5.4</b>	Develop and implement hygiene protocols for all stakeholders and the community	2010	SE NRM Board, pest plant and pest animal stakeholders	Hygiene protocols developed	External
	Apply a risk assessment approach to pest plant and pest animal management	2,3	<b>6.1</b>	Develop policies for the control of individual pest species based on the risk assessment results	Ongoing	SE NRM Board, SE NRM groups, DWLBC	All declared pest plant and pest animal policies developed	Levy
			<b>6.2</b>	Regularly review the pest plant and pest animal risk assessment results and update the priorities	Every three years	SE NRM Board, SE NRM groups, Industry	Pest plant and pest animal risk assessment reviewed	Levy
			<b>6.3</b>	Map priority assets in the region to target pest control activities	2010	SE NRM Board, Australian Government, Industry	Priority areas mapped	External

	Objective	Goal	Action	Action Descriptions	Timeline	Stakeholders	Measurement	Current funding source
7	Apply a continuous improvement approach to all aspects of pest management implemented by the SE NRM Board	All	7.1	Ensure provision of appropriate technical expertise to SE NRM Board, groups and other community groups	Ongoing	SE NRM Board, SE NRM groups, DWLBC	Pest plants and pest animals are adequately considered in all strategic and operational plans	Levy
			7.2	Maintain and improve the pest management skills and knowledge of SE NRM Board staff	Ongoing	SE NRM Board, DWLBC, Industry	Staff undertaken relevant training courses	Levy
			7.3	Utilise the knowledge and experience of NRM Groups to facilitate pest management activities at the local level	Ongoing	SE NRM Board and Groups	NRM Groups contribute to planning and implementation of pest management activities	Levy and External
			7.4	Establish cooperative partnerships with relevant stakeholders to ensure coordination of pest management programs and outcomes	Ongoing	SE NRM Board, DEH, DWLBC, PIRSA, Forestry SA, & other NRM Boards, Industry, Community, Australian Government	Partnerships established and utilised	Levy, External
			7.5	Regularly review activities to monitor and report progress against work plans	Annually	SE NRM Board, SE NRM groups DWLBC	Work plans reviewed annually	Levy

Objective				Goal	Action	Action Descriptions	Timeline	Stakeholders	Measurement	Current funding source
			7.6	Establish technical advisory committees to add value to pest management programs where appropriate	As appropriate	SE NRM Board, Industry, Community, Australian Government	Technical advisory committees formed and supported	External, Levy		
			7.7	Review the South East Pest Management Strategy to ensure current relevance	Every 5 years	SE NRM Board, SE NRM groups, DWLBC	South East Pest Management Strategy reviewed and updated	External, Levy		
8	Maintain a regional pest management database	2,3	8.1	Ensure ongoing distribution and density mapping of pest plants and pest animals in line with State and National mapping standards	Ongoing	SE NRM Board, SERIC, DWLBC, Australian Government	Priority weeds are mapped annually	Levy, External		
			8.2	Support staff in the use of the mapping of pest plants and pest animals by utilising current mapping database	Ongoing	SE NRM Board, SERIC	The utilisation of NRM space	Levy and External		
			8.3	Continue to improve the regional pest database to gain maximum benefit from data	Ongoing	SE NRM Board, SERIC	Improved database system	Levy and External		
			8.4	Share data with other relevant stakeholders	As appropriate	SE NRM Board, SE NRM groups, PIRSA, DEH, DWLBC,	Data shared where appropriate	Levy and External		

	Objective	Goal	Action	Action Descriptions	Timeline	Stakeholders	Measurement	Current funding source
						Forestry SA, other NRM boards, Industry, Australian Government		
<b>9</b>	Support State and National Biosecurity programs	2,3	<b>9.1</b>	Actively seek alternative sources of funding to undertake key pest management projects	Ongoing	SE NRM Board, DWLBC, Australian Government	Funding for pest plant and pest animal programs applied for	External
			<b>9.2</b>	Ensure compliance and consistency with National and State legislation and policies, e.g. SA State NRM Plan, Australian Weed Strategy	Ongoing	SE NRM Board, DWLBC, Australian Government	South East plans and policies support state and national initiatives	External and levy
			<b>9.3</b>	Contribute to the implementation of National and State biosecurity initiatives as required, e.g. Weeds of National Significance	As required	SE NRM Board, DWLBC, Industry, Australian Government	SE NRM board participates in state and national programs as required	External and levy

## APPENDIX 1: OVERARCHING STRATEGIES AND PLANS

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### NATURAL RESOURCES MANAGEMENT ACT 2004

The SE NRM Board has responsibility under the NRM Act 2004 to ensure declared pest species are effectively managed within the region and, all landholders carry out effective control of declared pest species on their properties. The NRM Act 2004 provides for a number of actions to obtain compliance with the requirements of the NRM Act 2004 with respect to the control of pests.

Key points are that the NRM Act 2004:

- provides for enforced control or destruction of declared plants in part or all of the State
- restricts entry and movement of declared plants within the State and,
- prevents the sale of produce contaminated with seeds of a declared plant anywhere in the State.

Pest plants and pest animals may be declared under one or more sections of the NRM Act 2004, each section regarding a specific provision for control:

- section 175 restricts the movement of declared plants or animals or produce or goods carrying plants
- section 176 prohibits possession of a declared animal
- section 177 restricts the sale of declared plants and animals
- section 179 prohibits the release of a declared pest animal in the region
- section 180 requires the notification of the presence of declared plants
- section 182 requires the owner of land to destroy or control declared plants and animals on their property and
- section 185 allows the NRM authority to recover costs from adjoining landowners for control of declared pests on roadsides.

The NRM Act 2004 sets out the following responsibilities for landholders:

- Landholders are required to effectively control all declared pests present on their property in accordance with the SE NRM Board's regional pest policies.
- Declared pests cannot be introduced, moved or sold in the region. Landholders must take care with produce, stock and machinery to prevent the spread of declared pests.
- The SE NRM Board will ensure that declared pests are controlled, including on roadsides (in which case, the SE NRM Board may recover the control costs from the adjoining landholder).
- Failure to meet the above responsibilities may result in formal action.

Local Authorised NRM Officers fulfill the responsibilities of the SE NRM Board (as per the NRM Act 2004) by:

- implementing the legislated requirements for animal and plant control described in the NRM Act 2004
- ensuring landholders achieve control of declared pests according to regional policies
- educating and encouraging landholders in best practice control techniques

- inspection and monitoring of declared pest infestations, and,
- provision of pest control products and services.

Voluntary compliance and a good working relationship between Authorised NRM Officers and landholders is a key component to effective pest control programs. Authorised NRM Officers work with landholders to implement pest control programs in the South East region resulting in on-ground action being undertaken. Authorised NRM Officers also monitor control activities on selected properties and contact landholders as required. If all other avenues have been exhausted, failure of landholders to meet the responsibilities of the NRM Act 2004 may result in formal action, which is instigated by Authorised NRM Officers.

### **SOUTH AUSTRALIA'S STRATEGIC PLAN**

This South East Pest Management Strategy helps to address Objective 3 of South Australia's Strategic Plan (2007):

#### *Objective 3: Attaining Sustainability*

- T3.1 Lose no species: lose no known native species as a result of human impacts.

### **STATE NATURAL RESOURCES MANAGEMENT PLAN**

This South East Pest Management Strategy helps to address Goal 4 of the State Natural Resources Management Plan (2006):

#### *Goal 4: Integrated management of biological threats to minimise risks to natural systems, communities and industry*

- 4.1 No new pest species become established in South Australia from 2010.
- 4.2 There is a net reduction in the impact of established pest species and over-abundant native species on natural and productive systems and the community by 2010.

### **SE REGIONAL NATURAL RESOURCES MANAGEMENT PLAN**

The Draft Regional NRM Plan for the South East is a strategic document that describes the natural resources of the South East region, potential threats and opportunities and the collaborative effort needed to protect these resources for the long term. The four key components of the SE Regional NRM Plan are:

- a regional description
- a strategic plan for natural resource management in the region including 50-year vision, 20-year goals, 20-year Resource Condition Targets and 5-7 year actions that will help to achieve the longer term goals
- a business plan for the SE NRM Board including potential sources of income and the work program that will lead SE NRM Board staff and partners towards sustainable use and management of the natural resources of the region, and,
- a policy section that includes land management, water affecting activities and high-level region-wide policy relating to pests.

Pest control is considered to be an integral part of all chapters of the Regional NRM Plan. The linkages between the Regional NRM Plan and the South East Pest Management Strategy are shown in Figure 4.



The goals and actions of this South East Pest Management Strategy contribute to reaching the following draft SE Regional NRM Plan Goals and Management Action Targets (SE NRM Board 2008):

**Goal A: Healthy landscapes supporting high value ecological systems**

**A.1 Improving native vegetation**

By 2015, the condition and extent of vegetation in at least 50 priority remnant areas is improved by active management.

**A.5 Managing priority habitats**

Six (6) priority terrestrial and wetland habitats are identified and managed to improve condition and species viability, with reference to habitat benchmarks, by 2015.

**A.9 Managing threatened species**

Five (5) threatened species of flora and five (5) threatened species of fauna are managed according to species action plans, to increase their abundance and/or extent, by 2015.

**Goal B: Regional communities active in NRM**

**B.1 Involving primary producers**

Active involvement of primary producers in on-ground NRM is increased by at least 20%, by 2015.

**B.2 Supporting community groups and volunteers**

Support for community groups and volunteers, and participation by volunteers in NRM in the region is increased by 20%, by 2015.

**B.3 Engaging schools**

All schools in the region are participating in local environmental education, by 2015.

**B.4 Increasing community awareness**

Community awareness and understanding of local NRM issues is increased by 20%, by 2015.

**B.5 Planning across agencies**

A regional (cross-agency) Community Engagement Plan is developed and implemented, by 2015.

**Goal C: Resilient industries taking responsibility for sustainable use and management of natural resources**

**C.2 Reducing key invasive species**

The occurrence of at least five (5) key invasive species that threaten the integrity of habitats and/or the productivity of landscapes are reduced by 10%, by 2015.

**C.8 Managing pests**

The range of effective management options to control declared pest plants and pest animals in the region is increased, by 2015.

**Goal D: Leadership, adaptability and partnerships for effective NRM.**
**D.1 Responding to new pests**

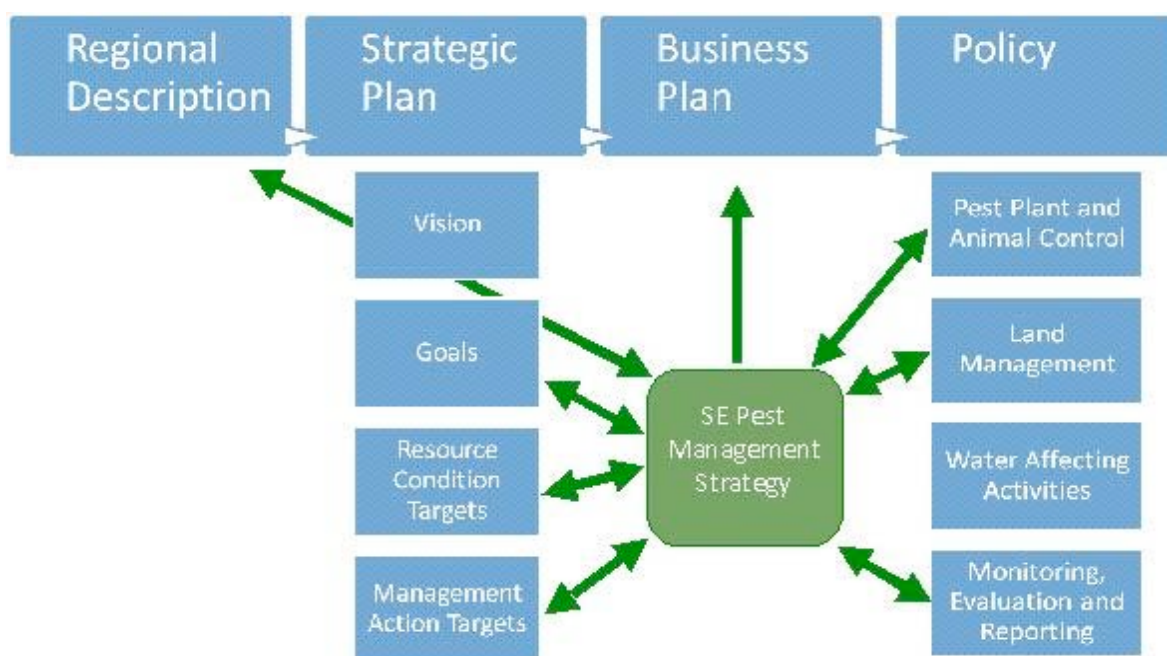
The ability of the region to detect, respond and manage new pest plant and pest animal incursions is maintained and/or improved (ongoing).

**D.4 Maintaining skills, knowledge & funding**

NRM knowledge, skills and funding resources for the region are maintained or increased (ongoing).

**D.6 Supporting biodiversity on private land**

The level of support, both human and financial, for biodiversity conservation of the Region's remaining native vegetation on privately-owned land is maintained or improved compared with 2007 levels (ongoing).



**Figure 4: Linkages between components of the SE Regional NRM Plan (blue boxes) and the South East Pest Management Strategy (green box).**

**OTHER COMPLEMENTARY STRATEGIES**

**Table 3: Other strategies that the South East Pest Management Strategy forms linkages with**

Strategy	Goals
South Australian Biosecurity Strategy (2005) (draft)	<ul style="list-style-type: none"> <li>Goal 1 – Preparedness</li> <li>Goal 2 – Prevention</li> <li>Goal 3 – Detection and incursion response</li> <li>Goal 4 – Ongoing management</li> </ul>
The Australian Weeds Strategy – a national strategy for weed management in Australia, 2007.	<ul style="list-style-type: none"> <li>Goal 1: Prevent new weed problems</li> <li>Goal 2: Reduce the impact of existing priority weed problems</li> <li>Goal 3: Enhance Australia's</li> </ul>



	capacity and commitment to solve weed problems
Australian Pest Animal Strategy – a national strategy for the management of vertebrate pest animals in Australia, 2007.	<ul style="list-style-type: none"> <li>▪ Goal 1 Provide leadership and coordination for the management of pest animals</li> <li>▪ Goal 2 Prevent establishment of new pest animals</li> <li>▪ Goal 3 Manage the impacts of established pest animals</li> </ul>

## APPENDIX 2: RESPONSIBILITIES FOR OTHER PESTS

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### CAT AND DOG MANAGEMENT

The SE NRM Board has no direct responsibility for the control and management of domestic cats and dogs. Management of the day-to-day enforcement and administration of the legislative provisions for the management of dogs and cats in the community is undertaken by local government through the administration of the *Dog and Cat Management Act 1995*. The SE NRM Board does provide advice and assistance to landowners to aid in the preservation of biodiversity and reduction of agricultural impact from the presence of feral cats and dogs in the rural environment.

### MARINE AND FRESHWATER VERTEBRATE PESTS

PIRSA Fisheries is responsible for the management of freshwater and marine vertebrate pest incursions. This responsibility is outlined in the *Fisheries Management Act 2007* and its associated regulations.

### OVER-ABUNDANT NATIVE SPECIES

The Department for Environment and Heritage (DEH) has responsibility for the management of over-abundant native species through the implementation of the *National Parks and Wildlife Act 1972*.

### INVERTEBRATES (EUROPEAN WASPS, LOCUSTS AND GRASSHOPPERS)

Invertebrates are presently excluded from the NRM Act 2004. The legislated responsibility for the management of invertebrate pests currently lies with local government via the *Noxious Insects Act 1934*. This Act is about to be superseded by the *Plant Health Act 2009* (not yet enacted) which will devolve the responsibility to PIRSA. PIRSA already undertake the management of fruit flies and the protection of major agricultural areas in South Australia from the impact of locusts and small plague grasshoppers. Many local councils still employ and are likely to continue active management programs for European wasps.

#### **Snails**

We are unaware of any legislation surrounding the enforced management of snails. SARDI Entomology Unit in conjunction with GRDC (Grains Research Development Council) and SAGIT (South Australia Grains Industry Trust) has been conducting extensive research into field management, snail ecology, pollution dynamics and biological control. The results have contributed to the development of management control options for snails in pastures, crops, horticulture and viticulture. The Bash' Em, Burn' Em Bait' Em -snail management guide is available for purchase or alternatively visit:

[http://www.sardi.sa.gov.au/pestsdiseases/pests/crop\\_pasture\\_pests/snail\\_management](http://www.sardi.sa.gov.au/pestsdiseases/pests/crop_pasture_pests/snail_management)

### GENETICALLY MODIFIED ORGANISMS (GMO'S)

(Adapted from PIRSA Website)

Legislation, *Genetically Modified Crops Management Act 2004*, is in place to ensure that any potential hazards from the use of genetically modified organisms and the risks they present to human health or the environment are assessed. It is only after scientific evaluation and a judgement as to whether any risk can be eliminated, minimised or managed to an acceptable level that cultivation of a particular crop might be permitted.

Presently GM food crops cannot be cultivated anywhere in South Australia, by virtue of the Genetically Modified Crops Management (Designation of Areas) Regulations 2004.



South Australia (as with other states and territories) allows the conduct of approved experimental trials of GM crops, providing certain requirements are satisfied. These Exemption Notices will have conditions attached for the thorough containment of the cultivated GM crop to ensure that local production and supply chains are unaffected.

The Genetically Modified Crops Management Act 2004 also provides for Authorised NRM Officers from the Department of Primary Industries and Resources SA to monitor compliance with these conditions of operation.

More Information is available at <http://www.pir.sa.gov.au/gmc/home>



## APPENDIX 3: PRIORITISATION CRITERIA FOR ACTIONS

The criteria used to prioritise actions listed in Table 2 of this Strategy are shown in Table 4. A score was given for each of the criteria to rank actions by highest total score.

**Table 4: Prioritisation criteria and scoring for actions**

Criteria	Score
Is the NRM Action included within statutory limits/ obligations of the NRM Act 2004?	Yes (2), Partially (1), No (0)
What are the implications of not undertaking the NRM Action?	Rank between no change (0) to catastrophic (5), on a scale of 0-5
Does the NRM Action have the potential to achieve multiple outcomes within the strategy? <ul style="list-style-type: none"> <li>• Community engagement</li> <li>• On-ground works</li> <li>• Pest prevention</li> </ul>	Score according to the number of outcomes (0-3)
Is the NRM Action feasible to undertake within the time frame and scope of current funding availability?	Yes (1), No (0)
Does the NRM Action address a need or gap unlikely to be addressed through other funding mechanisms?	Yes (2), Partially (1), No (0)
Is this NRM Action a pre-cursor to other actions i.e. needs to be completed before other actions?	Yes(1), No (0), reliant on other actions (-1)



## APPENDIX 4: STAKEHOLDER ENGAGEMENT

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A workshop was held in February 2009 to involve key stakeholders in the development of this South East Pest Management Strategy. Below is a list of Stakeholders represented at the workshop:

- Department for Environment and Heritage
- Department for Water, Land and Biodiversity Conservation
- Forestry SA
- Great Southern Limited
- Green Triangle Forest Plantations
- Naracoorte Lucindale Council
- PIRSA Forestry
- Robe District Council
- Rural Solutions SA
- South Australian Murray Darling Basin Natural Resources Management Board
- SE Field Naturalists
- SE Natural Resources Management Board
- SE Central Natural Resources Management Group
- SE Southern Natural Resources Management Group

## FURTHER INFORMATION

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### SE NRM BOARD

The South East NRM Board pest plant and pest animal policies can be found at [www.senrm.sa.gov.au](http://www.senrm.sa.gov.au) under the pest plants and pest animals tab.

### POLICIES

The Minister for Environment and Conservation's state wide policies on declared plants and animals are published on the Department for Water, Land and Biodiversity Conservation website:

[http://www.dwlbc.sa.gov.au/assets/files/lbsap\\_declarationofplantsandanimals.pdf](http://www.dwlbc.sa.gov.au/assets/files/lbsap_declarationofplantsandanimals.pdf)

### FARM BIOSECURITY

Whether you are a livestock producer, a plant producer or both, Farm Biosecurity is important. Here you'll find tools to help assess the risks on your property and ways to reduce them: <http://www.farmbiosecurity.com.au/>

### SARDI ENTOMOLOGY

The Entomology science program area has expertise in insect taxonomy, ecology and molecular biology, applied to diagnostic services and integrated pest management programs for agricultural, forestry and urban pests:

<http://www.sardi.sa.gov.au/pestsdiseases>

### WEEDS COOPERATIVE RESEARCH CENTRE

The CRC for Australian Weed Management (Weeds CRC) is working to reduce the risks posed by current and new weed incursions through programs in research, education and information delivery across Australia: [http://www.weedscrc.org.au/index\\_flash.html](http://www.weedscrc.org.au/index_flash.html)

### INVASIVE SPECIES COOPERATIVE RESEARCH CENTRE

The Invasive Animals CRC creates new technologies and integrated strategies to reduce the impact of invasive animals on Australia's economy, environment, and people:

<http://www.invasiveanimals.com/>

### AUSTRALIAN GOVERNMENT NATURAL RESOURCES MANAGEMENT

This web site is hosted by the Australian Government. It provides information about the integrated delivery of two Australia-wide natural resource management initiatives: the National Action Plan for Salinity and Water Quality (NAP) and the Natural Heritage Trust (the Trust): <http://www.nrm.gov.au/nrm/index.html>





## REFERENCES

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ABS (2007) *Natural Resource Management on Australian Farms, 2006-07*. Australian Bureau of Statistics, Canberra.

DPIF (2009) *Queensland Biosecurity Strategy 2009-2014*. Department of Primary Industries and Fisheries. Queensland Government.

DWLBC (2008) *South Australian Pest Risk Assessment Guide*. Department of Water Land and Biodiversity Conservation (unpublished). Government of South Australia.

McLeod, R. (2004) *Counting the Cost: Impact of Invasive Animals in Australia 2004*. Cooperative Research Centre for Pest Animal Control, Canberra.

South East Natrual Resources Management Board (2008) *Draft regional NRM plan (Unpublished)*

Sinden, J., Jones, R., Hester, S., Odom, D., Kalisch, C., James, R. and Cacho, O. (2004) *The Economic Impacts of Weeds in Australia*. CRC for Australian Weed Management, Adelaide.