REVIEW OF PROGRESS TOWARDS THE NATIONAL CHILEAN NEEDLE GRASS STRATEGIC PLAN

2006 – 2007

National Chilean Needle Grass Taskforce

Prepared by: Kelly Snell
Weeds of National Significance
National Coordinator for Chilean needle grass

Victorian Department of Primary Industries
September 2007 (revised version, March 2008)

Contents

1. Executive Summary

Background
Chilean needle grass (CNG - *Nassella neesiana*) is one of twenty Weeds of National Significance (WoNS) as it's a vigorous competitor and impacts greatly in agricultural, natural and urban environments. It is challenging to control and identify and can spread very easily over long distances from human activities, thus highlighting the need for national coordination.

This report highlights progress towards the National CNG Strategic Plan. Outcomes achieved to date are a result of national coordination through significant support from the Australian Government, the, six state governments, local governments, regional NRM bodies and linear managers.

Greater awareness of the identity, impacts, and threat of CNG
The number of people aware of the CNG problem has increased in Victoria, NSW, ACT, Queensland, South Australia and Tasmania through promotion of CNG at field days, local shows, and through mail outs of CNG information. Skills of land managers, including state and local government weeds officers, regional land managers, farmers and community groups, to recognise and identify CNG have been improved through workshops and field days conducted across a number of states. Preliminary work to further quantify the CNG problem in indigenous grasslands has started through a PhD supported by the Australian Government, a university and state government of Victoria.

Develop 'best' management options to reduce the prevalence & impacts of CNG
Improved options for CNG control have been developed and identified. Three key biological control agents have been identified as a focus for future investment and have the potential to make the first long-term control for CNG available in Australia within the next two years. Completion of a PhD in conjunction with a NSW university and the Victorian state government has been completed. This provides farmers and land managers with the best techniques for more effective control of large established infestations. Tying work such as this together will be the first comprehensive information on how to manage CNG in Australia. A *National Best Practice Management Manual for CNG* is well underway, and due for completion in late 2007.

Implementation of best management practices to control CNG
As a result of early detection and quick action, eradication all known infestations in the states of Queensland and Tasmania are underway. These, the northern-most and southern-most infestations of CNG in Australia, are on the way to eradication through significant support from the Australian Government, Queensland and Tasmania state governments and local governments. Significant effort towards eradication of CNG from South Australia is also occurring with continued effort to eradicate CNG from Adelaide and the Fleurieu Peninsula. Controlling and containing large CNG infestations on farms, in parks and along roadsides in NSW, ACT and Victoria are continuing. High priority assets have been protected from CNG in the ACT, over twenty local councils and roadside managers have acted to control CNG and prevent further spread.

Where to next?
The challenges for CNG management in the future include to continue to raise awareness and increase early detection and eradication, increase adoption of best practice to prevent spread (particularly along roadsides), and continue to develop and improve control methods, particularly for large infestations.

2. Introduction

History and impact of Chilean needle grass in Australia

Chilean needle grass (*Nassella neesiana*) is a perennial tussock forming grass, native to South America, including Argentina, Bolivia, Chile, Ecuador, southern Brazil and Uruguay.

It was first recorded in Australia in Northcote (a suburb of Melbourne), Victoria, in 1934 and in New South Wales in 1944. Since then CNG has extended its range across Victoria and New South Wales, and into the ACT, South Australia, southern Queensland and Tasmania. However, CNG has a much greater potential range, as it is climatically suited to more than 40 million hectares in Australia.

Chilean needle grass is a vigorous competitor in agricultural, natural and urban environments. It severely reduces pasture productivity and contaminates crops and hay. The needle-like seed can injure stock or pets and downgrades wool and sheep carcasses. Considered one of the worst environmental weeds, it is highly invasive in native grasslands, urban parks and gardens. The spread is facilitated by the movement of seed on vehicles, machinery and equipment particularly along roadsides.

A National Approach

In 2001 the Australian Commonwealth Government, through the *National Weeds Strategy* , recognised twenty Weeds of National Significance (WoNS) in Australia. Chilean needle grass was assessed as one of these twenty nationally significant species. As a result a national strategy for Chilean needle grass was developed. The Australian Government and Victorian Department of Primary Industries support a National Coordinator and National Taskforce for the Chilean needle grass Weeds of National Significance Program who facilitate implementation of the National CNG Strategic Plan. The States and Territories of New South Wales, Australian Capital Territory, Queensland and South Australia all contribute significantly to the National Taskforce and Program.

Progress to date

Major successes to date include declaration of CNG as a noxious weed in all States and Territories; developing a mapping methodology and mapping CNG across Australia; registration of flupropanate for CNG control (the only chemical specifically registered to control CNG); declaration of CNG as a target for biological control and commencement of biological control program; development of a prototype cover that minimises spread of CNG seed on slashers (a major cause of CNG spread).

The following report outlines key achievements made over the 2006-2007 year toward goals of the *National Strategic Plan*.

3. Achievements in 2006 - 2007

GOAL 1: IDENTIFY THE CHILEAN NEEDLE GRASS PROBLEM

Desired outcome: "The Australian community is aware of the identity, impacts, and threat posed by Chilean needle grass."

Raising awareness of identity, threats and impacts

Education and raising awareness of the Chilean needle grass problem is essential in achieving positive outcomes. A range of private landholders, other community members, local governments, regional bodies, industry bodies (including road, water and power companies), school students, State Government employees and agronomists are now better informed on the impacts of Chilean needle grass and trained to recognise Chilean needle grass in the field. This is engaging interest in CNG across many levels and is enabling reporting of new infestations to occur and providing people with the means to act quickly on these.

Awareness raising activities have targeted all States and many local areas across Australia. The impacts of Chilean needle grass demonstrated through displays and CNG information at field days, shows, training days and conferences including Queensland: Clifton Show and Toowoomba Ag Show; Australian Weeds Conference; Glen Severn Shire Council field days, Northern District (Guyra), Henty Machinery Field Days in NSW; Rutherglen Show, Wangaratta Show and Bright Flower and Garden Show in Victoria.

Mailouts of information warning about CNG have occurred in many local areas across Australia including all residents of the three affected Shires in Queensland, New England Tablelands, NSW, Tamworth Regional Council, Greater Hume Shire NSW. Orange Shire NSW, Fleurieu Peninsula SA, Dhurringile area and Arthurs Creek in Victoria.

Identification training and field days

Chilean needle grass is an extremely difficult weed to identify as it is easily confused with native and other grass species. Identification training has occurred in numerous locations to equip managers with the skills to recognise CNG in the field, differentiate CNG and other grasses and identify CNG when in early flowering stages. Identification workshops and training have occurred across Australia. Two have occurred in Canberra with over 120 participants, one in Greater Hume Shire and Holbrook Rural Land Protection Board, three across the Werribee River and Pinkerton Landcare and Environment Group district including Shire of Melton, Indigenous Flora and Fauna Association and Werribee River contractors. A training and awareness raising session occurred in Tasmania for Department of Primary Industries and Water (DPIW), Local Government, Community Groups with 30 participants. Staff of NSW DPI included Chilean needle grass in the general identification workshops, 'Paddock Plants'. Staff of Victorian DPI included CNG information in Weed Alert training targeting community members, local government, CMA and DPI staff across Victoria.

A CNG management workshop was conducted in Benalla, Victoria. It brought together Catchment Management Authorities (CMA), Landcare, DPI, Department of Sustainability and Environment (DSE), Parks Victoria, VicRoads and other interested community members. The workshop was very successful for information sharing on CNG management perspective and led to follow up meetings of a core group of stakeholders aiming to develop a regional approach to CNG management.

Scoping and identifying the CNG problem

Further surveying work occurred in Hobart to determine the extent of CNG in Tasmania, with two new infestations discovered. This was supported by DPIW, with further surveying required in 2007-2008.

Surveillance and new survey work has been done in Queensland by Biosecurity Queensland and local shires to determine the extent of infestations downstream of affected properties along the Condamine River. CNG does not appear to have spread any further downstream than known infestations and control work will focus on upstream infestations.

Maps of Chilean needle grass in NSW have been prepared and will be published by NSW DPI in late 2007. These will soon be available to update knowledge of the CNG problem in NSW and target resources and key messages accordingly.

Intensive mapping of South Australia's Fleurieu Peninsula was done during Spring 2006 by the Stipoid Grass Weeds Working Group (SGWWG) and the Adelaide and Mt Lofty Natural Resource Management Board (AMLR NRMB). This revealed reduced densities at high priority sites which have had regular control over the past three years. However low priority and more established infestations increased in size. The SGWWG has recommended a review of regional management plans for needle grasses to address this issue.

Determining the impacts of CNG on biodiversity

A PhD project on biodiversity impacts of CNG on indigenous grasslands has commenced funded by the Australian Governments Defeating the Weeds Menace Program. Victorian DPI and Victoria University are both providing a large amount of in-kind contributions to this project. Preliminary studies have been undertaken in Victoria and ACT with two papers prepared for 16th Australian Weeds Conference. Preliminary results suggest that CNG presence correlates with reduced plant biodiversity. Work continues to ascertain whether CNG is a cause or consequence of altered biodiversity.

Where to next?

Due to difficulty in identification a continual effort is required to raise awareness of CNG and its impacts. Mapping of CNG infestations requires updating to more accurately reflect the situation as state, regional and local mapping is continually evolving and improving. Determining and quantifying impacts and movement of CNG along waterways and riparian vegetation is a current knowledge gap and further research is required. The impact of CNG in indigenous grasslands will need to continue and recommendations for best management disseminated to land managers.

GOAL 2: DEVELOPMENT OF "BEST" MANAGEMENT OPTIONS FOR CHILEAN NEEDLE GRASS CONTROL.

Desired outcome: "Australia develops 'best' management options to reduce the prevalence and impacts of Chilean needle grass."

Large widespread infestations are a major management issue as once established they are extremely difficult to control or eradicate due to the unique reproductive capability of CNG. Research into best practice, short and long term control methods have brought about the following outcomes.

Biological control program

The CNG biological control program is funded by the Australian Governments Defeating the Weed Menace program, and supported by Victorian DSE. Over the 2006-2007 reporting period three potential biological control agents were identified and will form a focus for future research and investment. This is of particular significance as there is now potential to provide the first long-term control for CNG in Australia.

Three rust fungi, *Puccinia nassellae, P. graminella* and *Uromyces pencanus* are the identified potential biological control agents. Preliminary host specificity testing has begun with *Uromyces pencanus.* No attack on 11 non-target species has been observed which is a promising result. Techniques for microscopic assessment of pathogen attack have been developed and will be tested on native species over 2007-2008. This is the final phase of the biological control program, and if successful will enable the first long-term control for CNG in Australia. A paper has been produced for 16th Australian Weeds Conference on progress of work. The project is expected to be completed by December 2008.

New herbicide application technique: wick wiper trials

Biosecurity Queensland DPI&F, Clifton Shire Council and Victoria University continue to investigate the effectiveness of wick wiping for CNG control in turf. Clifton Shire have purchased a pressurised wick wiper for use on Polo fields and around town footpaths. Trial work carried out on Polo fields using a regime of wick wiping and slashing has so far reduced CNG from 80% to 10% cover in 8 months.

Another trial funded by the Victorian government's Tackling Weeds on Private Land Initiative and led by Victoria University with VicRoads has investigated the use of wick wiping as a control method for roadsides. The technique shows great promise and a new project, funded by Defeating the Weed Menace began in May 2007 to collaborate with road authorities and shires across Victoria, Queensland, NSW, ACT and Tasmania to test this technique. It will potentially be a method to reduce CNG infestations along roadsides across Australia, a major source for CNG infestations. This project is well underway and due for completion in June 2008.

Development of Best Management Practices in grazing situations

A PhD funded by the Natural Heritage Trust, and in conjunction with the University of New England (NSW), Victorian DPI and CRC for Australian Weed Management has been completed. This provided long anticipated results on best practice management of large CNG infestations in grazing situations. Farmers and land managers now have access to improved knowledge on techniques that can help them more effectively control large established CNG infestations. The CNG Taskforce has been able to include this information in a best practice manual to improve dissemination to land managers. This study also investigated the use of fertilisers, slashing, and herbicides as CNG control methods and has developed draft "AgNotes" to disseminate information on these methods to land managers. This will be the first detailed information on individual CNG control techniques. This information will be available to land managers in late 2007.

Regional Best Practice Management trials supported by Defeating the Weeds Menace and led by Victorian DPI also continue to be monitored, examining the effects of grazing with sheep as a means of CNG control. Field days held in November at the Greenvale Regional Best Practice Management (RBPM) demonstration site showcased the options that are being trialed and the results to date to a range of local landholders, local government environmental staff, state weeds officers and roadside managers.

CNG seedbank management

Detailed monitoring of CNG biology by Victorian Department of Primary Industries has identified that the basal cleistogene (stem seed) is a critical reproductive mechanism for CNG maintaining its population:

- Trials are underway to determine how timing of herbicide control can best destroy CNG and CNG basal cleistogenes.
- Low rates of glyphosate have also been identified as a spray topping solution to prevent panicle and stem seed production in CNG.

Improved herbicide use

Biosecurity Queensland, DPI&F and local governments have been testing the residual herbicide flupropanate on local soil types. Volume measure of soil seed bank and toxicity levels in fish in the Condamine River are being tested. Funding is continuing on this project in an attempt to determine whether flupropanate is a safe tool to aid the eradication of CNG in Queensland.

A project by the Victorian Department of Primary Industries is underway looking at chemical control of CNG seedlings with selected sites treated during May 2007. The project is looking to gain registration for low rates of flupropanate to control CNG seedlings (as with serrated tussock). This will provide the first registered method to enable control of CNG long before seed-set. This would have potential to reduce seedbank input by destroying young CNG plants before all three seed types are mature.

Where to next?

Many knowledge gaps still exist for CNG, however the priorities for future work will which include the need for further research on efficiency of different types of wick wipers and other methods for management of roadside infestations; the most effective methods to reduce CNG spread from vehicles and machinery and in particular slashers; further knowledge on longer term effects of slashing, fire, chemical and grazing regimes for CNG control; and future importation of biocontrol agents and set up of a biocontrol release program.

GOAL 3: PREVENT, CONTAIN, AND REHABILITATE CHILEAN NEEDLE GRASS INFESTATIONS.

Desired outcome: "Australian communities implement best management practices to control Chilean needle grass."

National Coordination

The National CNG Taskforce continues to support and advise best management of CNG across Australia. The Taskforce met twice over 2006/2007 to discuss the direction and set priorities for CNG management in Australia. In May 2007 the Taskforce met in Canberra and identified gaps within the National Strategy to determine four priorities for 2007/2008. These will form the basis for activities and projects over the next reporting period. The Taskforces priorities are:

- A focus on hygiene to reduce the spread of CNG (including develop protocols if appropriate).
- Provide assistance to prevent, contain or eliminate new Chilean needle grass outbreaks.
- Prioritise areas, assigning highest priorities to lands with high conservation values, or with small, new infestations emerging that are 'easily' treatable.
- Assist the development of necessary state, regional and local Chilean needle grass management plans.

A list of contributing Agencies and current Taskforce members can be found in Appendix 1.

Eradication of westernmost CNG infestations

A big step towards eradicating the westernmost CNG infestations in South Australia has occurred with the first successful eradication of an infestation in the Adelaide Parklands. Control over fours years by the Adelaide City Council has meant no CNG was observed during surveying in Spring 2006 and as a result native spear grass species were abundant. Monitoring will continue at this site over the next few years.

Control of other CNG infestations across South Australia's Fleurieu Peninsula occurs under direction of the SGWWG and AMLR NRMB. Individual property visits were conducted to encourage best practice control measure to be undertaken, and awareness campaigns (including development of a webpage, newsletter, fact sheet distribution, identification field day) were undertaken to educate the community on CNG. These groups continue to make a significant contribution to containment and eradication of CNG from South Australia.

Eradication of southernmost infestations

Five infestations occur in Hobart, Tasmania and each of these went under active management during 2006-2007. Management plans have been developed for each site and 80% of known infestations were controlled. All sites will be followed up, particularly some where ineffectiveness of control was an issue. Support by the Australian Governments Defeating the Weed Menace Program is enabling follow up control and more intensive survey work to be carried out over 2007-2008. This project is led by Southern Regional Natural Resource Management Association and DPIW (Tas). The project is helping prevent the spread of CNG into uninfested areas and allows local and state government, community groups, industry and individuals to work cooperatively to control and eradicate CNG and create a basis for on-going and self-sustaining management.

Eradication of northernmost infestations

The northernmost infestations of CNG are in Southern Queensland and these are now all under active management for eradication. This is due to a partnership between Biosecurity Queensland (DPI&F), Clifton, Warwick and Cambooya Shires, Main Roads, Ergon Energy, the Condamine Alliance, and farmers.

Biosecurity Queensland (DPI&F) and Greening Australia have assisted in development of individual Pest Property Plans for 12 properties plus the Clifton Showgrounds and conducted a workshop for affected property owners. All participants signed off on the plans and Biosecurity Queensland staff continue to assist land managers in implementation of these plans.

Major infestations across Clifton Shire continue and were treated during spring 2006. A major achievement has been the reduction of CNG cover from 80% down to 10% cover. This has been achieved via wick-wiping over a number of years at the Clifton Showgrounds. This trial is also supported by a project led by Victoria University that is funded by Defeating the Weed Menace.

Preventing the spread of CNG infestations

Hygiene is a major issue to prevent the spread of CNG. The National CNG Taskforce during a planning and prioritising exercise in May 2007 determined hygiene as one of its four priorities for 2007-2008. This will be a priority to accelerate implementation through the National Strategy in 2007-2008.

Parks, Conservation and Lands, ACT has developed a Rural Roads Mowing Tender to limit the spread of CNG in along roadsides and into parklands. This has clearly defined mower hygiene practices that are included in tender documents. On ground inspection of slasher units prior to mowing is still required and a future need will be dedicated resources available for machinery inspection.

Weed Seed Spread prevention activities have been facilitated by Biosecurity QLD to prevent CNG moving further north. This includes:

- Clifton Council has provided an area for wash-downs and the dumping of unwanted contaminated soil from roadworks and construction works.
- Construction companies are briefed on the possible weed spread issue and given instruction to prevent it.
- Signage at the Showgrounds warning visitors of the danger of weed seed spread.

Activities to prevent CNG spread at a local scale are important to CNG management. Examples include the Mid North Coast Weeds Advisory Committee, which is successfully preventing CNG entering their area with CNG inspections unable to detect CNG on any properties. Activity to maintain awareness of CNG continues.

The Enviromark program uses specialised ‘markers’ to alert roadside managers (particularly contractors who undertake slashing activities) to the presence of CNG, and therefore the need to exercise hygiene measures. The Taskforce encourages adoption of these measures. Mitchell Shire Council in Victoria identified CNG on three roadsides and marked these sites with Enviromark. Relevant staff have been trained to undertake vehicle hygiene in accordance with the notes developed as part of Enviromark. On-ground staff have undertaken an accredited Weed Movement, Machinery Inspection and Cleaning Workshop.

Containment and implementation of management plans

Local management plans developed in accordance with the National CNG Strategic Plan continue to be implemented across New South Wales. Roadside control works, property inspection programs and treatment of CNG infestations have occurred within Greater Hume Shire, Tamworth Regional Council and nine councils in the Lachlan Valley region, including Cowra Shire NSW which has CNG contained and reducing. The Northern Inland district has treated a majority of its CNG infestations and found very few new infestations during inspections. This district includes Glen Innes Severn, Inverell and Tenterfield Shire Councils, the New England Weeds Authority, and the Rural Lands Protection Boards of Armidale and Northern New England.

One small infestation of CNG was recorded in Albury for the first time. Albury City successfully chemically treated this site and no new germinations have been recorded. Inspection of properties showed no CNG although this is likely due to drought conditions, therefore properties will be re-inspected in Spring 2007.

Treatment of CNG in high priority urban conservation areas occurred in Spring 2006 across the ACT by Parks, Conservation and Lands, some of which was delayed by the drought. Planning for 2007 has been conducted with selected high priority urban conservation areas programmed for CNG treatment in Spring 2007 and follow up treatment required in late Autumn 2008. Treatment of over 350 ha of CNG in native grassland parks and reserves within Victoria was conducted by Parks Victoria.

Treatment of CNG areas in the Indigo Shire, Victoria has taken place, with the Shire and the Victorian Farmers Federation (supported by the National Taskforce) enabling chemical distribution for CNG control to go ahead. This allowed farmers to spray roadsides or edges of their properties during Spring 2006 to contain the CNG and prevent further spread.

Where to next?

There is much going on around Australia in regards to CNG control and implementation of best practice management. However the key challenges will be to continue this good work and increase the number of local governments, farmers, community and roadside managers on who are actively reducing, eradicating or containing CNG. A greater emphasis is required on hygiene measures and influencing uptake of these to limit CNG spread. Networks in the future will also need to expand to include greater influence on stakeholders such as other linear managers (eg rail and power), as well as working with industry to collaborate on way to improve best practice implementation.

GOAL 4: DEVELOP APPROPRIATE EXTENSION PACKAGES

Desired outcome: "Appropriate extension materials are developed to extensively publicise information on Chilean needle grass, and its "best" management in areas at risk."

Local government environmental and weeds staff, roadside managers, state weed officers, landcare coordinators and members, regional natural resource management staff and other interested land managers have been informed of progress of CNG projects and updates on CNG management across Australia through the following:

- Two editions of the National CNG Taskforce newsletter "CNG News" were distributed to almost 300 people.
- The National CNG Communications plan continues to be implemented with standard press releases, articles on identification of CNG, promotion and updating of the National CNG website (www.weeds.org.au) highlighting some of these activities.
- A National Best Practice Management Guide is well underway, and due for completion in late 2007. Funded by Defeating the Weed Menace its development has been led by Victorian DPI with significant contribution from other key CNG managers. It will contain information on the plant's biology and ecology, options for management in various situations, and several real-life case studies highlighting how to achieve success. This guide once complete will be an essential tool to aid managers of CNG and will be the first comprehensive information on CNG management in Australia.
- A Landcare note has been developed by Victorian DPI that will be published and distributed in late 2007 to encourage improved hygiene practices. This will back up previous work that identified slasher covers can significantly reduce transport of seed.

A full list of publications and extension materials can be found in Appendix 2.

Where to next?

The National CNG extension and education resources require updating and expansion to create a greater awareness of the CNG problem and its control. Such resources needed include an updated CNG management brochure, completion of the best practice guide, an awareness flier and posters to aid early detection and eradication.

4. Contributions to Chilean needle grass management in Australia

The total investment in CNG management by the Australian Government over 2006/2007 was $527, 695. These contributions have come from a range of sources including Natural Heritage Trust, regional Bushcare and Defeating the Weed Menace (Table 1).

Program	Project	Lead Organisation	Australian Government Investment
National - Landcare	National Project Officer for the WONS Chilean Needle Grass Program	Victorian Department of Primary Industries	$106,000
National - Landcare	Implementation of biological control of Chilean needle grass	Victorian Department of Primary Industries	$133,000
Regional - Bushcare	Protect Biodiversity Assets by Implementing Control Programs for Significant Pests and Diseases	Adelaide and Mount Lofty Ranges Natural Resources Management Board	$25,925
Defeating the Weed Menace	Biodiversity impacts of Chilean Needle Grass on Australia's Indigenous Grasslands	Victorian Department of Primary Industries	$49,110
Defeating the Weed Menace	Chilean Needle Grass - Regional Best Practice Management (old ID 52132)	Victorian Department of Primary Industries	$97,770
Defeating the Weed Menace	Inter Regional Control and Eradication of Isolated and Outlier Infestations of WoNS Grasses	Southern Regional Natural Resource Management Association	$40,890
Defeating the Weed Menace	Removal of Chilean Needle Grass from Roadside Across Australia using Wick Wiping	Victoria University	$75,000

All of these investments were matched dollar for dollar by lead agencies, and include further in-kind contribution from state, regional and local partners in these projects. It is difficult to estimate other investment in CNG management outside of these projects, however it is know that significant investment and in-kind contribution from state agencies, regional NRM bodies, local governments, industry (road, rail, water, power bodies), contractors, Landcare, and the community occur on top of this dollar for dollar in-kind contribution. For example over $200,000 has been invested in CNG management by only three of the potentially hundreds of stakeholder groups, this includes Parks Victoria, SGWWG, and the NSW Northern Inland region (Figure 1).

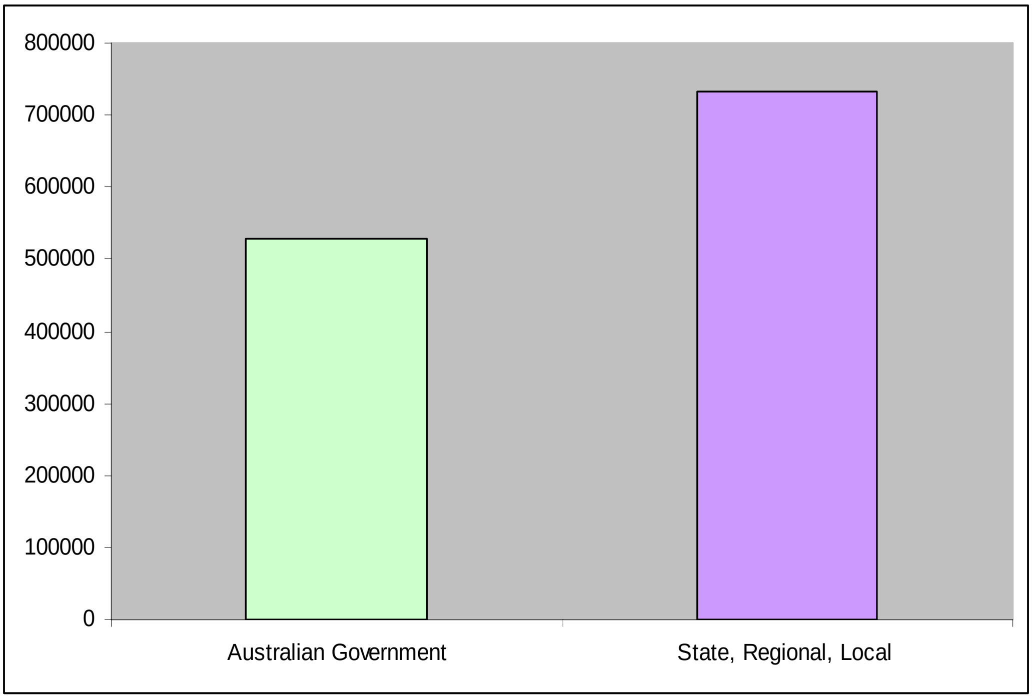

Figure 1: Investment in CNG management across Australia for 2006-2007.

There is also significant investment and contribution to CNG management by private landholders in an agricultural context, a figure that is not feasible to estimate and is therefore not accounted for. Adding other CNG control works, awareness campaigns, other management and in-kind contributions from all states, regions, localities and communities across Australia would mean the in-kind contribution estimated in this report are a significant underestimate of the full contributions to CNG management across Australia.

5. Appendices

APPENDIX 1: National Chilean Needle Grass Taskforce Members

Members as at 30 September 2007:

Keith Hamilton, Chair, VIC

Frances Overmars, Community representative, VIC

Graham Hardwick, Department of Primary Industries and Fisheries, QLD

David McLaren, Department of Primary Industries, VIC

Michael Michelmore, Department of Primary Industries, NSW

Geoff Price, Parks Conservation and Lands, ACT

Kelly Snell (Executive Officer), National CNG Coordinator, VIC

Colin Hocking, Victoria University, VIC

Ian Lobban, National Farmers Federation, VIC

Nigel Ainsworth, Department of Sustainability and Environment, VIC

Georgie Bailey, Department of Agriculture Fisheries and Forestry, ACT

John Thorp (ex-officio), National Weed Management Facilitator, TAS

Corresponding members:

Michael Hansford, Department of Primary Industries, VIC

Andrew Crane, Department of Primary Industries and Water, TAS

Dennis Gannaway, Department of Water Land and Biodiversity Conservation, SA

APPENDIX 2: Chilean needle grass publications 2006/2007

Papers

Anderson F, Diaz M and McLaren D. 2006. Current status of research on potential biological control agents for *Nassella neesiana* and *Nassella trichotoma* (Poaceae) in Australia. Proceedings of the 15th Australian Weeds Conference, eds C.Preston, J.H. Watts and N.D. Crossman (Weed Management Society of South Australia, Adelaide).

Anderson F, Flemmer A, Hansen P, McLaren D and Barton J. An update on progress towards biological control of *Nassella neesiana* in Australia and New Zealand. Submitted to 16th Australian Weeds Conference.

Faithfull I, Hocking C, McLaren D. An investigation of the effects of disturbance on the establishment of *Nassella neesiana* (Trin. & Rupr.) Barkworth (Poaceae) in an Australian native grassland. Submitted to 16th Australian Weeds Conference.

Faithfull I, Hocking C, McLaren D. A preliminary assessment of the composition and cover of vascular plants associated with patches of *Nassella neesiana* (Trin. & Rupr.) Barkworth (Poaceae) in an Australian native grassland. Submitted to 16th Australian Weeds Conference.

Gaur S, McLaren D and Butler K. Spraytopping reduces seed production in Chilean needle grass (*Nassella neesiana* (Trin. & Rupr.) Barkworth). Submitted to 16th Australian Weeds Conference.

Gaur S, McLaren D, Butler K, and Bonilla J. Broad acre chemical control for Chilean needle grass infestations. Submitted to 15th Aust Weeds Conference.

Grech C. Grazing management for the long term utilisation and control of Chilean needle grass (*Nassella neesiana*). PhD Thesis submitted to the University of New England, April 2007.

Grech C, McLaren D, Sindel B. Evaluation of Chilean needle grass (*Nassella neesiana*) – Feedvalue and Integration for grazing. International Landcare Conference.

Grech C, McLaren D, Sindel B. 2006 Effect of grazing management and stockclass on Chilean needle grass (Nassella neesiana) seed production. Proceedings of the 15th Australian Weeds Conference, eds C.Preston, J.H. Watts and N.D. Crossman (Weed Management Society of South Australia, Adelaide).

McLaren D, Palmer W, and Morfe T. 2006. Costs associated with declaring organisms through the Biological Control Act when conflicts of interest threaten weed biological control projects. Proceedings of the 15th Australian Weeds Conference, eds C.Preston, J.H. Watts and N.D. Crossman (Weed Management Society of South Australia, Adelaide).

McWhirter L, Lowien J, Grech C, McLaren D, and Sindel B. 2006. Regional best management of Chilean needle grass (*Nassella neesiana*) – New South Wales preliminary trial results. Proceedings of the 21st Annual Conference of the Grassland Society of NSW, 25th-27th July, Charles Sturt University, Wagga Wagga.

Other publications:

Chilean needle grass Fact Sheet. 2007. Whittlesea City Council, Victoria.

Chilean needle grass Warning Brochure. 2006. Natural Resources and Water, Queensland Government.

Chilean needle grass infestation Maps -NSW Southern Tablelands. 2006. Department of Primary Industries, NSW.

CNG News Edition 5 (July 06). Newsletter of the National CNG Taskforce

CNG News Edition 6 (March 07). Newsletter of the National CNG Taskforce.
2007.

Protecting your grazing future: Chilean needle grass update, Natural Resources and Water, Queensland Government.

APPENDIX 3: Statement of expenditure of funds for national coordination

	2006-2007	Planned budget		Actual Expenditure	
	Employees & Positions Held	**Recipient's Contributions** (without GST)	**Funds paid by the Commonwealth** (without GST)	**Recipient's Contributions Expended** (without GST)	**Commonwealth Funds Expended** (without GST)
	Co-ordinator salary and on-costs		$85,000		$86,542
	0.1 Project Leader Vic Priority Weeds DPI:	$8,754		$8,754	
	Vic DPI Statewide leader weed sciences:	$5,309		$5,309	
	0.5 Research officer and DPI Extension officers	$111,000		$115,000	
	National Chilean needle grass Taskforce	$20,800		$27,800	
A	**Total Employment Costs**	**$144,863**	**$85,000**	**$151,768**	**$86,542**
	Operating Cost Items	**Recipient's Contributions** (without GST)	**Funds be paid by the Commonwealth** (without GST)	**Recipient's Contributions Expended** (without GST)	**Commonwealth Funds Expended** (without GST)
	National co-ordinator Operating expenses:	$12,275	$9,000	$10,066	$9,403
	WONS Publications	$4,000	$2,000	$5,500	$1108.00
	National CNG Taskforce operating	$12,600	$10,000	$13,050	$8,947
B	**Total Operating costs**	**$28,875**	**$21,000**	**$28,616**	**$19,458**
C	**Total Cost (without GST) (A+B)**	**$173,738**	**$106,000**	**$185,179**	**$106,000**
D	**GST (10%)**	$17,373	$10,600	$18,517	$10,600
E	**Total Cost (including GST)**	**$191,111**	**$116,600**	**$203,696**	**$116,600**