



the national weeds strategy

a strategic approach to weed problems of national significance

revised edition

# Implementation of the National Weeds Strategy 1997-2005

**Report by**

**AUSTRALIAN WEEDS COMMITTEE**

**On the**

**Implementation of National Weeds Strategy**

**1997-2005**

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# Implementation of the National Weeds Strategy

## Report 1997-2005

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### **Introduction**

In 1991, the Commonwealth, state and territory ministers responsible for agriculture, forestry and the environment agreed to develop a National Weeds Strategy to reduce the impact of weeds on the sustainability of Australia's productive capacity and natural ecosystems.

In 1997, the three Ministerial Councils, Agriculture and Resource Management Council of Australia and New Zealand, the Australian and New Zealand Environment and Conservation Council and the Ministerial Council of Forests, Fisheries and Aquaculture released the National Weeds Strategy and committed to national action on weeds.

This report outlines the achievements of the National Weeds Strategy Executive Committee (NWSEC) and the Australian Weeds Committee (AWC) in implementing the National Weeds Strategy (NWS) during 1997 – 2005, a period covering over seven years (4/8/97-1/03/05). The first five years provided for a dedicated Project Manager to implement the National Weeds Strategy, with it subsequently becoming part of the National Weeds Management Facilitator's role. The actions under each strategy relate to work specifically undertaken by the NWSEC/AWC and the NWS Project Manager/National Weeds Management Facilitator and do not include many follow on actions which have occurred throughout Australia. This is beyond the scope of this report.

### **Scope of the Strategy**

The National Weeds Strategy provides the mechanism to reduce the impact of weeds on the sustainability of Australia's productive capacity and natural ecosystems.

Weed problems can be managed at several different levels. Some are most effectively dealt with by individual landholders, for others action can be coordinated most effectively on a community, catchment or state basis.

Some weed issues have national significance. These include:

- those that threaten the profitability or sustainability of Australia's principal primary industries
- those that threaten conservation areas or environmental resources of national significance
- those that may require remedial action across several States and Territories.

- weed problems which constitute major threats to Australia's biodiversity.

It is these nationally significant problems that the National Weeds Strategy seeks to address by providing the framework for coordinating weed management activities across Australia.

Many Australians as private and public landowners, land managers and land users spend a great deal of time and effort in dealing with weeds. In financial terms alone, many millions of dollars are spent annually on research, education and training in weed management and on herbicides and other weed control measures. Despite this input, weeds are still one of Australia's major land degradation problems.

Weeds are among the most serious threats to Australia's primary production and natural environment. They reduce farm and forest productivity, displace native species and contribute significantly to land degradation. The cost of weeds to agricultural industries alone has been estimated at over \$3.3 billion per annum.

It stresses the importance of weeds as factors in land and water degradation in both developed and natural ecosystems. It acknowledges that a historical focus on successful primary industries has inadvertently assisted the invasion of natural ecosystems by alien plants. It recognises that action initiated to address these problems must be coordinated and integrated, both between the variety of resource managers responsible and across all ecosystems of the bioregions involved. Above all, it seeks to foster an appreciation among all those involved in natural resource management that weeds are but one of the components of land and water degradation. If the resource is to be rehabilitated and protected in the longer term, none of these components can be tackled on their own.

Finally, the National Weeds Strategy emphasises the commitment of all governments to address weeds of national significance in cooperation with other interested parties.

One reason for the suboptimal manner in which weed management measures have been implemented in the past is the lack of integrated effort on the part of all stakeholders, including governments at all levels, industry, landholders and land managers, community groups and the general public. The National Weeds Strategy provides the guidelines which encourage cooperation and tackle weed problems strategically.

## **Principles**

The National Weeds Strategy is based on the recognition and acceptance of four principles.

1. Weed management is an essential and integral part of the sustainable management of natural resources and the environment, and requires an integrated, multidisciplinary approach.
2. Prevention and early intervention are the most cost effective techniques that can be deployed against weeds.

3. Successful weed management requires a coordinated national approach which involves all levels of government in establishing appropriate legislative, educational and coordination frameworks in partnership with industry, landholders and the community.
4. The primary responsibility for weed management rests with landholders/land managers, but collective action is necessary where the problem transcends the capacity of the individual landholder/land manager to address it adequately

This Strategy proposes three goals. For the achievement of each goal, positive objectives for action are outlined and measurable outcomes defined. Specific action programs were implemented under this Strategy.

## **Launch of the National Weeds Strategy**

The NWS was launched by Australian Government Ministers for the Environment and for Primary Industries and Energy in Wodonga on 20 June 1997 and the Strategy was subsequently widely distributed nationally by the Australian Government departments that are now known as the Department of Agriculture, Fisheries and Forestry (DAFF) and the Department of the Environment and Heritage (DEH) and the NWS Project Manager.

## **Committee Activity**

The position of NWS Project Manager was advertised; Mr John Thorp was selected and commenced work on 4 August 1997. Mr Thorp was based in Launceston, Tasmania.

The NWSEC met on twenty occasions, including six teleconferences and seven field inspections.

A workshop was conducted in Sydney in August 1997 to determine the Committee's work priorities and to provide guidance for the NWS Project Manager in implementing the NWS. The Terms of Reference were prioritised in order to target work that would have the greatest impact on weed management in Australia over the first three years implementing the Strategy.

In May 1999, the Committee participated in the Adelaide workshop to assess progress in implementing the Strategy and to determine future directions and prioritise future actions.

The NWSEC meetings (especially the face-to-face meetings) were resource intensive requiring extensive liaison with Members regarding:

- Organisation of the meeting venue, accommodation, travel, invited guests, speakers and field inspections;
- Setting the agenda;

- Coordinating, writing and distributing agenda papers; and
- Minute recording, distribution and finalisation.

Following NWSEC20 in Adelaide during March 2002, a combined meeting was held with the newly formed AWC. The combined meeting provided the NWSEC with an opportunity to discuss ongoing NWS tasks to be undertaken by the AWC, who oversaw the implementation of the strategy from 30 June 2002.

The AWC had 9 meetings after taking up the role of implementing the NWS. However the implementation of the NWS only formed a small part of their Terms of Reference and work programme.

The Committees promoted much of their work and published all public documentation on the 'Weeds Australia Web Page' ([www.weeds.org.au](http://www.weeds.org.au)). Further information about the website is contained under strategy 1.2.1.

Both Committees developed communications strategies designed to promote all aspects of weed management in the spirit of the NWS. Much of the success claimed in this report, resulted from the efforts of NWS Project Manager and subsequently the National Weeds Management Facilitator who actively communicated with clients at all levels.

The Committee's achievements in implementing the NWS, is detailed under each strategy below.

## **Implementation of the NWS**

This section lists the goals, objectives and strategies of the NWS, accompanied by a description of actions taken by the NWSEC. Where appropriate these are treated on a State and Territory basis.

### **1 Goal: To prevent the development of new weed problems**

#### **1.1 Objective *To prevent the introduction of new plant species with weed potential***

1.1.1 Strengthen import entry protocols for assessing the weed potential of all proposed new plant imports.

#### **Action**

The Australian Quarantine and Inspection Service (AQIS), with the support of Natural Heritage Trust (NHT) funding, developed a Weed Risk Assessment System (WRA), which has been in operation since the 1<sup>st</sup> of August 1997. Every new plant introduction is assessed for weediness, which includes three tiers of assessment. The first is a permitted list, which was progressively developed to avoid the duplicate assessment of species. Plant introductions not on the permitted list were subjected to a documented WRA using a checklist and scoring

system. Plants not clearly shown to be low risk at this stage are subjected to a more detailed analysis.

#### Permitted List Review

The permitted list was subjected to review as many of the species were treated at genus level, and these could contain weedy species. Therefore the review was aimed at compiling a species list. This review commenced in 1997, but had not been completed at the time of writing this report; however, a commitment has been made by Biosecurity Australia to complete the task by mid 2006.

#### Review of the Weed Risk Assessment Process

Some species cannot be assessed using the WRA. To address this problem a Third Tier Assessment is being established to allow weed risk assessment of plants that possess significant economic potential by using controlled trials and other techniques. This system will operate along similar lines to the existing process for assessing biocontrol agents.

Since the WRA process was introduced over 2250 species were screened, and this work continues as part of AQIS's core work program. At the time of writing, the WRA process was being reviewed by an NRMSC working group expected to report in the early part of 2005.

#### WRA review of material held in Plant Genetic Resource Centres

Public consultation on the WRA review of material held in Plant Genetic Resource Centres (GRC) was undertaken by Biosecurity Australia (part of DAFF) (see strategy 1.2.3). The outcomes of the review were not finalised by the 31<sup>st</sup> December 2004 so AWC assumed responsibility for ongoing monitoring of this issue.

*STRATEGY NEARING COMPLETION. AQIS/OCPPPO/BA have developed and implemented a system that meets the aim of this strategy. Biosecurity Australia will complete the review of the permitted list in 2006. The NRMSC review of the WRA process is expected to be completed in 2005. The AWC will continue monitoring this strategy.*

- 1.1.2 Initiate community education programs to increase awareness of the use of native plant species in preference to importation of some new plants

#### **Action**

The CRC for Australian Weed Management (CRCAWM-formerly the CRC for Weed Management Systems) and government agencies in all states and territories conduct education programs related to the naturalisation of garden plants in environmentally sensitive areas. This particularly relates to their impacts and the pathway they have followed from the garden to naturalisation. The cooperation and involvement of the Nursery Industry Association of Australia (NIAA) has been crucial to the success of this strategy.

Discussions were held with the NIAA relating to new plant introductions, environmental weeds, sale of noxious weeds and mechanisms to identify plants with weed potential. This was featured at their annual conference in February 1998 and a program to address these issues was subsequently developed. The nursery industry is supportive of the NWS, but the issue needs to be dealt with on a state and territory basis through jurisdictional industry bodies.

A significant achievement was the development of an industry strategy, "Garden Plants Under the Spotlight" (GPUTS) coordinated by the CRCAMM, with the full support of the NIAA. This arose from a workshop held in August 1998, and was used as a guide for the nursery industry when addressing the weed issues.

The Strategy resulted in the development of a national list of Australia's 100 worst invasive garden plants or garden thugs following many months of work. This list was developed from a base list made up of 720 naturalised species plus a number of prohibited or noxious weeds. Since the release of the GPUTS report, there were numerous requests for copies of the complete list of garden thugs by the nursery industry and other interested parties.

As an alternative, some jurisdictions promote preferred plant lists through various bodies. Examples being local government, state agencies, NIAA, Kings Park and Botanic Gardens (Perth WA), NSW North Coast Weeds Advisory Committee, just to name a few who have developed "bush friendly" planting guides.

Bush regenerators and Greening Australia were also made aware of this problem and have adopted weed management as an integral component of land management.

The magnitude of the task of educating the general public on the potential of garden plants to become invasive should not be underestimated as there is a general perception that "green is good", which does not recognise the impact of weeds on the environment. Nor is the dumping of garden waste widely understood as a prime pathway for garden plants to start bushland invasions. These are very significant problem in the urban fringe and bordering rural subdivisions, where garden escapes are often found.

One difficulty encountered in implementing this strategy was the diversity of the Australian climate, which requires targeted information and limits the development of a cohesive national approach. The National Weed Awareness Program and Weedbuster (discussed later in the report) have made a significant impact in raising the awareness of the general public regarding this issue.

It should be recognised that local government waste management systems can either encourage bush dumping or mitigate against it. The use of green waste transfer stations, green bins and convenient economic access to disposal sites are some management options which are being used to minimise bush dumping.

Victoria has actively promoted the use of alternate species and is preparing to legislate against the sale and distribution of selected nursery species.

*STRATEGY ONGOING. Significant work has been undertaken on this strategy to initiate community education programs. It is a strategy requiring ongoing repetitive effort in promoting a public message on invasive plants.*

## **1.2 Objective: To ensure early detection of, and rapid action against, new weed problems**

### **1.2.1 Initiate community education programs to increase awareness and facilitate early warning of new weed occurrences**

#### **Action**

#### **National Weed Awareness (also strategy 1.3.5)**

The Committee assisted the Qld Department of Natural Resources and Mines in making an NHT application for a national coordinator for a national weed awareness program to ensure a cohesive approach to weed issues that would result in an increase in community understanding and support. More specifically the position was required to nationally coordinate Weedbuster Week, liaise with state and territory coordinators, gain sponsorship, organise a national launch, to maximise media publicity and develop national weed information products.

The National Weed Awareness program was funded under DAFF's National Weeds Program (part of the NHT) and commenced in 1998. The project was divided into four components:

- Coordination of the national Weedbuster program to assist national cooperation and increase weed awareness;
- National promotion of NWS initiatives to increase weed awareness;
- Development and coordination of national weed information products to assist in national cooperation; and
- Investigation and development of a method to manage private sector contributions for weed management awareness.

The Weedbuster component arose from a Queensland state specific activity and developed to a national program incorporating each State and Territory. It started as a weed awareness week in Queensland in 1994, focused on Weedbuster Day in 1995 and 1996 and then moved to a week long Weedbuster event nationally in 1997, which is continued today.

Following the success of the 1997 event, a national coordination program was initiated and was successful in gaining funding assistance from the NHT.

The Weedbuster component revolves around an annual theme each year and a week-long focus (Weedbuster Week) in the second week of October. The annual themes have been:

1998 – Weed identification for a weed free nation;

1999 – Weed prevention is the intention;  
2000 – Don't hesitate, weeds won't wait;  
2001 – Local heroes, global champions;  
2002 – Protecting Australia's big back yard;  
2003 – Wetlands not Weed lands; and  
2004 – Fighting the Weed Invaders

To increase media attention, national Weedbuster launches were organised each year in the lead up to Weedbuster Week.

A number of nationally coordinated posters and other promotional products were developed and distributed, aimed at delivering a consistent message at lowest cost. These materials, such as posters, bookmarks, stickers, identification cards were used for ongoing weed awareness activities throughout the year.

The "Woody Weed" character acts as a logo and identity for the program with costumes held in each State and Territory. Woody Weed is a favourite of primary school aged children and is available to badge all Weedbuster activities by arrangement with the National Coordinator. Further information and contacts are available from the Weedbuster website (<http://www.weedbusters.info>).

The National Weed Awareness Coordinator and NWS Project Manager cooperated closely on national weed awareness issues. This resulted in a major achievement by the National Weed Awareness program including coordinators appointed in every State and Territory and over 3000 National Weedbuster Week events conducted over the reporting period.

A Weeds Awareness Strategy was developed in conjunction with key stakeholders, which culminated in the AWC endorsing the appointment of a National Awareness Coordinator, for future events who would take a more proactive role with key stakeholders.

#### National Weeds Network (also strategy 1.3.5)

The majority of actions within this strategy were undertaken by the Australian Government and state agencies. The NWS Project Manager and NWMF facilitated this by maintaining contact with the Australian Government and state agency personnel, increasing the national weeds network. This encouraged liaison on weed issues within the weeds network, and where necessary, helped to provide solutions to weed issues and concerns, ensuring that appropriate Australian Government and state programs were developed and implemented to increased community education and awareness of weed issues.

In order to achieve this, along with progressing a number of other strategies, numerous visits were undertaken throughout Australia to promote the NWS.

#### Weed Incursion Network (also strategies 1.2.2 and 1.2.4)

The Office of the Chief Plant Protection Officer (OCPPO) was broadened to include a weed component in 1998 which lead the Australian Government's

involvement in the development, adoption and implementation of national policies and programs on plant health issues of national significance. It provided leadership for plant health and protection activities nationally and internationally, and coordinates emergency management of plant health and prevention matters. It also produces professionally independent scientific advice on plant health issues.

Weed incursion responses now come under the OCPPO, which coordinates weed emergency management and supports the national effort to prevent and/or eradicate new weeds. OCPPO acts in close liaison with Biosecurity Australia, AQIS and state and territory governments.

Overseeing responses to weed incursions is primarily an AWC responsibility. The OCPPO chairs the AWC Consultative Committee on Exotic Plant Incursions (AWCCCEPI) in order to ensure that action is taken at the earliest possible opportunity on all new plant incursions that are nationally notified.

In order to improve the reporting of weed incursions, an automated New Plants Notification web page was developed for reporting new plant records, which advises the jurisdiction in which the occurrence was located and the OCPPO of its presence. This data is automatically compiled into a database available to the OCPPO for downloading when required. This complements and provides data to the database of plant pest, disease and weed incursions developed by the OCPPO.

In developing the New Plants Notification web page, a number of trial species were tested and the site was then promoted to appropriate weed botanists across Australia. The web page was incorporated in the Weeds Australia Web Site in March 2002.

Weed issues do not come under the jurisdiction of Plant Health Australia (PHA) but policies and networking linkages were fostered between AWC/NWSEC to encourage inter program consistency.

An alert weed reporting mechanism was added to the Weeds Australia website which operates in conjunction with the weed identification pages. Approximately 14 reports were received over a 6 month period.

An 1800 weed alert telephone hot line was instituted in June 2004, backed by a Spot the Weed promotional postcard and national publicity in conjunction with the national launch of WEEDeck in Rockhampton by the NWMF.

#### Weeds Australia Web Page (also strategy 1.3.5)

The majority of community education occurs through the website ([www.weeds.org.au](http://www.weeds.org.au)). The site was attracting the equivalent of nearly seven million hits per year towards the end of the reporting period. It greatly reduced the cost of distributing documents, at the same time making information more accessible.

A no frills editorial style was followed aimed at fast down load speed for clients with slow lines and easy navigation of the site. Response and download times were further improved by removing large documents from the Launceston server to the USA and switching to ADSL.

The site presents a national noxious weeds list by jurisdiction (the only one available), WoNS explanation and pictures, strategy development, WoNS strategic plans, progress reports and related papers, weed management competency documents, web site database, state and territory contact list for all jurisdictions, NWS, AWC and Ministerial Council information, list of WEEDeck sponsors on the tender page and WEEDeck species status, New Plants Notification web page (March 2002) and general information about the NWS. From July 2001, the Weebuster site was also housed on the server.

The Australian weeds search portal was added in 2001, enabling searches for weed related material including web, pdf and picture files on reputable weed sites across Australia, New Zealand and Oceania. This page was widely promoted as it indexed all government weed related web pages.

A weed identification module covering 172 species was included in a mid 2004 revision of the site. This includes definitive identification material linked to all the credible information published on the Australian web.

Feedback on the site was generally very positive. The website is regarded as one of the best weeds websites in the world generating substantial inquiries from the community. The interactive weed identification tool increased traffic to the site five fold. Specific weed queries were referred to the appropriate jurisdiction for action.

All e-mails were answered (approximately 15 per week; however, on a few occasions return addresses were not provided or emails were returned as unknown) and the small number of complaints received (eight) regarding access to the site were followed up and where relevant and feasible, changes were made to the website. Several complaints were received that weed species were not on the site, or a criticism of one picture. In the majority of cases, the problems experienced were due to the users' equipment having difficulties in accessing the website.

## Media Publicity

All media were targeted throughout the period, with media releases from the NWS Project Manager/National Weeds Management Facilitator, the National Weed Awareness Coordinator. Numerous organisations interested in weeds were also encouraged to seek publicity for their work. This has resulted in approximately 130-150 media hits per month across the nation of which about 70 resulted from NWS activities. These do not include feature articles in magazines and books. Media hits typically rise to approximately 350 for October which arise from Weebuster Week.

## National Cooperation

All jurisdictions and relevant industry bodies were frequently invited to contribute and share in joint national publicity, which resulted in a set of nine national posters being developed, conveying a uniform approach on grasses, garden thugs, water weeds, weed spread, impacts, WoNS and school publicity. Further details of national cooperation are listed above under key achievements of the National Weed Awareness program.

*STRATEGY ONGOING. Significant work has been undertaken on this strategy. It is an ongoing strategy requiring substantial resources.*

#### 1.2.2 Coordinate plant identification and reporting mechanisms involving State herbaria and other expert bodies

##### **Action**

##### Herbaria

All jurisdictions have formally or informally strengthened their relationship with their respective herbaria and channels are in place in all states and territories, which enable the identification of weeds. Specifically, Agriculture WA signed a memorandum of understanding fostering cooperation with the WA Herbarium, which is developing a weed database that can be accessed via the Internet.

Australia's virtual herbaria project was announced in 2001 which could in due course provide weed specific information when the project is fully operational. In the intervening period discussions were held with all state, territory and national herbaria regarding the need for, and importance of, a national reporting mechanism for weed incursions. As outlined under strategy 1.2.1 (Weed Incursion Network), a New Plants Notification web page was developed for reporting new plant records by botanists.

The CRCAM and Queensland Herbarium are conducting a joint project to spot and identify new naturalisations.

##### Weed Identification Cards

The WEEDeck identification card was a concept developed during 1999/2000 in conjunction with NSW Agriculture. They were designed as a tool for field use in identifying new incursions and emerging weed problems.

Each card contains coloured weed identification photographs, a full description of the distinguishing features of the weed on the back of the card and a map showing where the weed is naturalised and where it is likely to spread. This project was a major initiative in developing monitoring networks for agriculture, riparian and environmentally sensitive areas.

By the end of 2004, 172 WEEDeck cards had been sponsored with many decks commissioned. National sets of identification cards were produced for the 4500 rural Landcare groups and specific sets for the NRM regions, all funded by the Australian Government. The project demonstrated that appropriately targeted,

high quality information could be successfully adopted across a broad range of stakeholders.

The project is now managed by Australian Weeds Committee and delivered by the publisher Sainty and Associates.

A public weed reporting system using a 1800 number and the Weeds Australia website is in operation supported by a "spot the weed promotion" and postcard.

DPI Victoria and the CRCAWM in conjunction with the Queensland Herbarium are developing a weed spotter network which has the potential to be extended to cover terrestrial Australia.

Waterwatch has agreed to include weed monitoring in their programme and this is to be developed and implemented in 2005. This will introduce rigorous waterway monitoring for weeds across Australia.

#### **STRATEGY COMPLETED.**

*With the formation of the OCPPO, the AWCCCEPI and the New Plants Notification web page, reporting of new weed incursions is being effectively coordinated and the aim of the strategy has been substantially completed. The WEEDeck project will continue, while further cooperation is required from the herbaria at a national level to ensure reliable national reporting of new naturalisations.*

#### **1.2.3 Develop guidelines for assessing the weed risk of plant material being used for breeding or selection trials prior to its release for commercial use**

##### **Action**

AQIS/Biosecurity Australia held a meeting of Genetic Resource Centres in early 1998, which considered a variety of issues, of which three specifically related to this strategy:

- The first was to review existing accessions with a view to identifying weedy material that it would be unwise to release;
- The second was the development of a protocol for testing weedy material in a secure environment that minimises the risk of escape into the wider environment; and
- Thirdly an issue of wide interest was the release of new varieties containing weedy potential, by virtue of new genes incorporated by traditional breeding techniques. The developers of genetically modified plants face similar concerns regarding this issue.

Public consultation on a weed risk assessment review of material held in GRC has been undertaken. Biosecurity Australia progressed, assessment of the GRC and Botanic Garden collections. Six hundred species of high priority were nominated by GRC to be assessed. CSIRO Forestry in Canberra provided a list of plants of interest for potential release held in their collection, and these were assessed along with the GRC species.

Assessment of these species was contracted to consultants. WRA of the high priority species in GRC collections were completed, however a degree of variability was identified arising from consultant bias in the results, and all assessments were audited prior to finalisation.

The outcomes of the review had not been finalised by end of 2004 with the AWC assuming responsibility for ongoing monitoring of this issue. Results will be forwarded to the GRC, the AWC and appropriate state and territory agencies when the report is completed, at which point Standing Committee agencies will need to negotiate with the holders of the germplasm regarding requirements for any weedy species selected for release. A national agreement on the use of weedy accessions of GRC material is required.

Preliminary discussions were held with the Council of Heads of Australian Botanic Gardens in late 1998, as a result of which living collection records were to be checked and any plants of concern identified. Responses were received from a number of the gardens, but no weedy plants identified. Royal Botanic Gardens, Sydney went further, to the extent of withholding material not on the AQIS permitted list. Progressing this with other botanic gardens remains on the AQIS work program.

*STRATEGY NEARING COMPLETION. The WRA guidelines being used meet the aim of this strategy but the rules for use of weedy material have not been addressed. The AWC will continue to monitor the implementation of this process.*

#### 1.2.4 Develop a contingency plan, identifying key groups, reporting procedures and a funding mechanism

##### **Action**

##### Weed Incursion Network

As outlined under strategy 1.2.1, the OCPPO coordinates the AWCCCEPI. The AWCCCEPI addresses species incursion management issues under a generic incursion management plan, which is appropriately customised, according to the species being addressed. This flexibility is necessary in order to cope with the diverse range of reproductive and dispersal mechanisms associated with weed incursions. It has also reduced the need for individual State/Territory contingency plans.

At an AWCCCEPI meeting in October 2001, it was agreed that a principles paper on the conditions to be met to qualify for a nationally funded weed eradication program would be drafted and this is available on the Weeds Australia Website. In addition, PHA was undertaking a broader task to establish agreed principles for funding and compensation for eradication of exotic plant pests and diseases.

While the AWCCCEPI/AWC principles paper refers to the broader PHA task, its scope was confined to the technical criteria for evaluating potential impact and feasibility of eradication. The paper did not set out quantitative criteria for making

decisions. This level of detail is a longer-term objective of the CRCAWM (see below). In addition, at the 4<sup>th</sup> meeting of the AWC, it was agreed that a discussion paper examining criteria for longer-term approaches to weed incursions (when eradication may not be feasible) should be developed. The OCCPO in their role of coordinating the AWCCCEPI have agreed to convene an expert working group to undertake this task. The paper is expected to be completed by the end of 2005.

The paper on 'principles for determining nationally coordinated response and cost-sharing for exotic plant incursions' was endorsed by the AWC (March 2002) and now forms part of the AWCCCEPI's operating principles.

When the funding mechanism currently used for weed incursions is customised to suit the situation. Usually states and territories pay 50% of the total cost, a sum weighted for each jurisdiction according to the population of the impacted jurisdiction and the Australian government pays 50% depending on the sectors impacted.

### Weed Risk Assessment and Prioritisation

The AWC, as part of their 2001-2002 work program undertook the task of reviewing current processes for assessing weed priorities. This included drafting a paper on current weed prioritisation processes by:

- Sourcing information from Australian /state/territory governments and other contacts;
- Checking legislative requirements for each jurisdiction; and
- Collating the above information.

In conjunction with the OCCPO and the CRCAWM, a Weed Risk Assessment Workshop was held in Canberra in March 2002 to develop a national approach to weed risk assessment and prioritisation.

The paper described above was distributed and formed an important background component for the Workshop. An agreed position for a national framework was reached at the Workshop with the CRCAWM drafting the proceedings and developing a discussion paper for AWC consideration. The aim was to have the national framework endorsed by the NRM Standing Committee in order to gain the widest possible acceptance and use. Subsequently the CRCAWM developed a national technical specification for endorsement by Standards Australia.

The CRCAWM will continue to develop the weed risk assessment process through continuous improvement as new research knowledge is gained about the process.

*STRATEGY ONGOING. Significant work has been undertaken on this strategy. It is a matter requiring ongoing resources and will never be completed as new knowledge will continue to shape the asset. This includes AWC's task on developing a cost-sharing agreement on weed incursions, AWCCCEPI's examination of criteria for longer-term approaches to weed incursions, endorsement of a national framework for weed risk assessment and prioritisation and the CRCAWM's continuous improvement of the national framework. One of*

*the major issues still unresolved is the need for environmental and conservation agencies to fully participate and resource weed incursion management of environmental weeds.*

### **1.3 Objective: To reduce weed spread to new areas within Australia**

#### **1.3.1 Provide guidelines to states and territories to ensure appropriate consistency in weeds legislation**

##### **Action**

The first draft of a discussion paper on this issue was completed in early August 2001. In developing principles for weeds legislation, the paper explained the rationale for government intervention through weeds legislation, examined the aims and objectives of relevant Australian government legislation and weeds legislation of the states and territories, compared existing state and territory weeds legislation and outlined principles previously suggested by various authors.

The draft went through a number of amendments following consideration and comment by the NWSEC and the AWC.

There was some concern that the principles paper was an attempt to seek uniform weeds legislation throughout Australia, but these principles were to be applied to each state and territory weeds legislation, whenever they were being reviewed/redrafted,. There was never any intention of seeking uniform weeds legislation, with the NWS philosophy being that weeds legislation does not need to be identical or uniform, but sufficiently consistent to limit the spread of weeds within and across borders.

It was noted that a Standing Committee taskforce had been examining the feasibility of nationally uniform agricultural plant and animal health legislation for a number of years. While there was general consensus that nationally uniform agricultural plant and animal health legislation has merit, it has not been possible to gain agreement on an acceptable approach across all jurisdictions.

The core set of principles in the discussion paper was an attempt to address the major causes of weeds spread that could be applied nationwide without being too prescriptive. At the individual state and territory level, it was envisaged that additional principles may be added to suit particular jurisdictions.

The slow progress of gaining NWSEC and AWC endorsement of the discussion paper highlights the difficulty in gaining agreement across jurisdictions when it requires a change in approach to an issue that does not fit the existing framework.

The principles as outlined in the draft paper were endorsed by the NRM Standing Committee, and the national principles will be considered by individual jurisdictions when reviewing and redrafting their weeds legislation.

**STRATEGY ONGOING.**

*Significant work has been undertaken on this strategy, but there is still scope to improve the consistency of weeds legislation*

### 1.3.2 Facilitate adoption of the guidelines

#### **Action**

Queensland, Northern Territory and New South Wales have attempted to incorporate these draft Principles for Weeds Legislation into their acts when redrafting weeds legislation. Unfortunately the drafting and legislative process has been protracted for Northern Territory and New South Wales, but these jurisdictions should complete this work in 2005. Victoria is amending their legislation at a level that does not encompass revising the basic principles.

#### **STRATEGY REQUIRING MAJOR WORK.**

*This strategy cannot be completed until the principles are incorporated into each jurisdiction's weeds legislation. This is likely to be a long timeframe as it will only be undertaken as individual jurisdictions review and redraft their weeds legislation.*

### 1.3.3 Encourage state, territory and local governments to develop contingency plans for action against new weed infestations

#### **Action**

Four States (NSW, WA, SA and Tas) have formal incursion management plans appropriate for weeds. Victoria has weed specific plans. The remaining jurisdictions were encouraged to prepare for handling new incursions.

As outlined under strategy 1.2.4, the AWCCCEPI follows a generic incursion management plan, which is appropriately customised, according to the weed species being addressed. This flexibility is necessary in order to cope with the diverse range of reproductive and dispersal mechanisms associated with weed species. It has also reduced the urgency for individual state/territory contingency plans.

National Biosecurity, Surveillance, Incident Response and Tracing (BIOSIRT) software is being developed for Surveillance, Quarantine, Control and Recovery (SQCR), and Resources Management (RMP) for national emergency and routine response which will support animal and plant pests and diseases and weed incursion incidents. This will encode national business rules and provide for ongoing management at various landscape scales. This should be completed in 2005.

There is a need to develop a weed management policy document based on "Plantplan" to provide an overarching policy framework for managing weed incursions, "commonly termed Weedplan".

*STRATEGY ONGOING. Significant work has been undertaken on this strategy principally through the AWCCCEPI. The BIOSIRT program will further strengthen the management of weed incursions, but will require the development of a "WEEDPLAN" to provide the overarching policy framework.*

- 1.3.4 Establish effective procedures for restricting the spread of new weeds within Australia, for example, hygiene practices, machinery cleaning codes of practice, controls on nursery plant and seed sales

### **Action**

#### National Noxious Weeds List

The NWSEC placed a database listing all the noxious weeds in Australia on the Weeds Australia Web Page. This was designed to assist various industries (eg nursery, seed, grain, livestock etc) in complying with State and Territory legislation. It also highlighted the complexity of the system and shows how difficult it is for interstate traders to comply with the diverse requirements.

#### Containment Strategies

The development of WoNS strategies encouraged the establishment of proactive anti-spread weed measures; a key management strategy for weeds where the agent of spread can be controlled. Protocols and declaration procedures are being implemented across Australia and are usually combined with pest and disease and/or chemical residue issues.

A few examples of programs currently in operation or in preparation are listed below.

Agriculture WA has a biosecurity program and is extending the Grainguard program nationally. They maintain rigorous border controls in order to exclude pest disease and weed problems entering the state. This includes ensuring that stock is cleaned of weed seeds externally and internally.

NSW Agriculture requires compulsory cleaning of harvesting machinery at the NSW/QLD border for machines entering NSW. It is estimated that this costs contractors \$2.2m pa, which is recouped through contractor harvesting charges.

Department of Natural Resources and Mines Qld has developed a weed vendor declaration procedure and supporting documentation for stock, farm produce and machinery (similar to that used to manage chemical residues in stock). Its use may be regulated, but it is expected that landholders will adopt it readily in order to minimise the impacts of weeds on their properties. It is also a requirement under the Qld weeds legislation for local government area pest management plans to reflect the weed seed prevention provisions of both the State Weed Strategy and the principles in the legislation. This legislation also prescribes prevention of spread methods for certain weeds, such as parthenium.

The AWC has discussed the merits of a national project to address the issue of weed seed/propagule spread generally and Queensland has supported the development of a national weed seed spread project. South Australia has developed protocols used to reduce the spread of branched broomrape. It is hoped that a national system will be adopted Australia wide in due course.

The Department of Business, Industry and Resource Development NT maintains an active program with the Army in order to prevent the spread of weeds during military exercises on tracked vehicles and equipment.

A number of corporations, mining, gas, rail and electricity which manage land or landscape corridors, target weeds in their environmental programs and actively aim to minimise the spread of weeds when undertaking activities.

The Environmentally Aware Contractors (EAC) system helps organisations and businesses identify the hazards they face and how to implement appropriate risk management. EAC includes a **Code of Practice**, vehicle, machinery, equipment and material hygiene standards along with training for staff and employees together with an auditable management system. The EAC system is simple and designed to be implemented at the workplace, not just by management. Work books have been produced specifically for employees in the field that provide simple easy to understand procedures.

The Tasmanian Contractors Association has developed a protocol for preventing weed spread by their machinery. Contractors are trained and accredited to undertake this work.

The AWC was successful in gaining endorsement of the concept of a consistent national declaration of weeds to prevent trade and distribution at the 17<sup>th</sup> meeting of SCARM with a list of potential and established (20 WoNS) weed species to be declared in each state and territory. It is the AWC's understanding that each state/territory would declare these weeds to at least prevent trade and distribution of weeds. Owing to legislative difficulties only SA and ACT have been able to fully meet this request.

In September 1999, the Seed Industry Association of Australia (SIAA) launched a national code of practice for seed labelling and marketing to replace existing state/territory seeds legislation. The development of the code was due to the impact of mutual recognition legislation and the need to standardise labelling and marketing provisions for sowing seed across all states and territories.

Under the code it is an offence to sell seed which is contaminated with prohibited seeds or diseases. The code is to be binding on all seed marketers irrespective of whether or not they were members of the SIAA. Certified seed sales do not appear to be a major source of weed spread due to the quality control and risk management measures that are industry requirements.

## Nursery Weeds

See discussion under strategy 1.1.2.

*STRATEGY ONGOING. Significant work has been undertaken on this strategy. It is recognised that much needs to be done in this area, but jurisdictions are being proactive in developing mechanisms to prevent the spread of weeds. There is a groundswell of people who recognise this problem and many more programs are expected to be developed, similar to those identified above.*

- 1.3.5 Educate landowners, land users, industry and the general public in procedures to restrict the spread of weeds

### **Action**

Refer to National Weeds Network, Weeds Australia Web Page and National Weed Awareness discussion under strategy 1.2.1.

*STRATEGY ONGOING. Significant work has been undertaken on this strategy. It is a strategy requiring ongoing resources that will be difficult to complete. This is a large task, but feedback from member states indicates that there has been a significant increase in public enquiries for weed information, increasing their workload, which is due in some part to the implementation of the NWS.*

## **2 Goal: To reduce the impact of existing weed problems of national significance**

### **2.1 Objective: To facilitate the identification and consideration of weed problems of national significance**

- 2.1.1 Develop guidelines and a procedure to establish when weed problems are of national significance

### **Action**

The NWSEC considered that the scope of weed problems/issues of national significance to be too broad and narrowed the focus to WoNS.

A separate SCARM paper on WoNS administrative procedures and guidelines for writing WoNS species strategies was developed and endorsed, that covered all relevant biological, industry and community issues. This would ensure efficient and effective use of available funds, as well as describing the magnitude of the project and scope of the outcomes sought.

Committees, comprised of senior officials and key stakeholders representing those States where a WoNS could exist as a significant problem, are overseeing the implementation of each strategic plan. This process gives confidence to stakeholders and potential investors that progress is being made.

To ensure that this process is fully implemented, one of the final actions of the NWSEC was to write to the state/territory lead agency, and where they existed, WoNS Management Groups for each WoNS highlighting the need for and

importance of a management group for implementation and reporting of WoNS strategies.

The support of the previous three Ministerial Councils by endorsement of the species as a WoNS has improved the opportunities for states and territories to gain additional funding for strategic actions for reducing the impacts of weeds. Other benefits are also starting to flow with national recognition, such as the encouragement of ongoing research and development support and national regulation of the species as a noxious weed. This strengthening of a shared vision with shared responsibility and problem solving should improve the containment efforts of all WoNS resulting in a collective advantage to all states, territories, producers, environmental interests and land managers.

*STRATEGY COMPLETED. The work undertaken to date is sufficient to fulfil the requirements of this strategy, particularly as the WoNS process including implementation of the strategies is now well under way.*

#### 2.1.2 Strengthen existing weeds specialist networks to ensure that information to assess weed problems is readily accessible

##### **Action**

The NWS Project Manager and National Weeds Management Facilitator have regularly visited all state and territory agencies concerned with weed management, control and/or research. This has amounted to in excess of 100 organisations comprised of over 1100 personnel. On all occasions a presentation was made on the NWS followed by discussion of the organisation's role, which resulted in information exchange and a canvassing of organisations or people with a common interest in other parts of Australia.

A number of conferences and meetings have been addressed where the NWS Project Manager and National Weeds Management Facilitator has presented information on the NWS, at the same time fostering cooperation and interaction across jurisdictions. The WoNS process has provided numerous forums where stakeholders worked together to solve common problems. This has promoted discussion of wider issues and follow-up communication to the benefit of all parties.

The CRCAWM continues to cooperate extensively with state and territory weed management agencies by providing research and technical support in developing management plans and techniques. The CRCAWM fully supported the NWS and in cooperation with State and Territory agencies and CSIRO provided extensive input into the development of the WoNS strategies.

*STRATEGY COMPLETED. While it is acknowledged that there will always be a need to strengthen existing weeds specialist networks, it is the committee's view that in terms of the NWS, this strategy has been completed.*

#### 2.1.3 Establish procedures for assessing the relative priority of weed issues of national significance

## Action

As previously noted, the NWSEC considered that the scope of weed problems/issues of national significance to be too broad and narrowed the focus to WoNS.

A consultancy was commissioned to develop criteria for determining WoNS, the results of which were reported separately to the three Standing Committees. This was undertaken by the Animal and Plant Control Commission of South Australia and funded by Australian government DEH.

The NWSEC further developed the criteria and methodology for assessing WoNS, and called for species nominations from member states and territories. Seventy-four nominations were received with distribution, environmental and economic data also provided by states and territories according to guidelines prepared by the Committee. The NWS Project Manager facilitated the formation of expert panels to assess the invasiveness and impacts for each species.

The dataset was compiled and forwarded to the Bureau of Resource Sciences (part of DAFF) for statistical analysis and mapping of the current distributions. Agriculture WA using CLIMATE computer modelling software generated potential distribution maps.

The Committee developed a mathematical model for combining the ten variables used in the analysis and their individual scores, which were then used to rank the weed candidates, resulting in the final list of twenty WoNS.

The three Ministerial Councils approved the inaugural list of twenty WoNS in early 1999, followed by a public announcement on the 1<sup>st</sup> June of that year.

The process and the results have been documented in hard copy and on CD-ROM under the title "The Determination of Weeds of National Significance". Copies of this publication were distributed to all agencies and personnel involved in the project with some being available for purchase through DAFF. It is also available on the World Wide Web at [www.weeds.org.au](http://www.weeds.org.au).

*STRATEGY COMPLETED. It is recognised that this process was not perfect and could be improved. At the time, it was a world first in attempting to develop a list of a nation's worst weeds through a process that was objective, transparent and defensible and is therefore more than adequate to fulfil the aim of this strategy.*

## **2.2 Objective: To deal with established weed problems of national significance through integrated and cost effective weed management**

2.2.1 Develop mechanisms for assembling the information required to develop management strategies for the problems.

## Action

Guidelines for developing species specific weed strategies were developed and over 700 copies distributed to interested people and organisations. The NWS Project Manager facilitated the development of the WoNS strategies using these guidelines resulting in a consistent format. They incorporated a strategic focus from a national perspective down to the property level.

The development of WoNS strategies was managed by a committee of key stakeholders which worked under the lead state or territory agency, facilitated by the NWS Project Manager.

All 20 WoNS strategies were developed and endorsed at the Standing Committee level and then printed by the Queensland Department of Natural Resources and Mines for the lead agencies.

The completed WoNS strategies were placed on the Weeds Australia Web Page.

The example provided by the WoNS process has encouraged many jurisdictions, regions, districts and land managers to develop strategies for managing weeds. This represents a cultural shift in weed management approach over the life of this report.

*STRATEGY COMPLETED. The NWSEC reviewed and provided comments on all the draft WoNS strategies before forwarding them to Standing Committee(s) for endorsement.*

#### 2.2.2 Establish procedures for developing cost efficient and effective management plans.

##### **Action**

The guidelines for developing species specific weed strategies included sections on identifying priority actions. These sections were included in each WoNS strategy with management plans being developed for each participating jurisdiction on a needs basis.

*STRATEGY COMPLETED. The NWSEC reviewed and provided comments on all the draft WoNS strategies including the priority actions in each strategy before forwarding them to Standing Committee(s) for endorsement.*

#### 2.2.3 Establish procedures for implementing, monitoring and evaluating the management plans

##### **Action**

The NWSEC monitored the development of the WoNS strategies on a monthly basis and required that each strategy specify goals, performance measures, evaluation procedures and project management methodology.

## Implementation of Weeds of National Significance Strategies

Lead agencies for WoNS strategies were encouraged to form management groups for implementation of the strategies. For efficiency reasons, a number of similar weeds were combined under the one management group (such as the management group for the three prickly weed species of parkinsonia, prickly acacia and mesquite and the management group for the aquatic weeds).

The NWSEC considered that it was vital that each WoNS had a functioning management group for strategy implementation and reporting. At this time all strategies have effective management in place.

## Reporting and Evaluation

The NWSEC noted that although it was desirable to obtain financial information for the implementation of each WoNS strategy, in a number of jurisdictions, expenditure was not recorded in a weed specific manner to allow separate financial reporting. Where financial information is incomplete, none is provided so as not to present a misleading picture of expenditure.

Reporting templates were developed for each of the WoNS strategies and distributed to the management groups or lead agencies. Each management committee monitors and report annually to the AWC who will advise the Standing Committee on the achievements and status of the implementation of all WoNS strategies.

*STRATEGY COMPLETED. Procedures are in place for implementing, monitoring and evaluating WoNS strategies and management plans.*

- 2.2.4 Provide guidelines to ensure that wherever possible, the Landcare approach (coordinated community action) be considered the appropriate delivery mechanism for much of the on ground action on weed issues implemented under this Strategy.

### **Action**

The Landcare/community involvement approach was promoted as the most effective way of harnessing community action in the fight against weeds. The guidelines for developing WoNS strategies followed this model, with all WoNS strategies including community action as appropriate. Each WoNS strategy includes a list of roles and responsibilities for the key stakeholders.

Successful implementation of WoNS strategies and community involvement using the Landcare approach was always going to require the appropriate infrastructure and funding. In some cases devolved grants have been provided to assist community groups managing WoNS. The level of commitment and resources provided varies considerably between jurisdictions.

There was an unrealistic expectation that Australian Government funding through the National Weeds Program of NHT would provide sufficient funding for all

aspects of WoNS strategy implementation. Strategy development and implementation was always a separate issue to funding/resourcing and a request from the Federal Primary Industries Minister to his state/territory colleagues regarding a joint commitment to funding proposals resulted in variable responses.

This highlights the varying priorities that each state/territory has placed on WoNS and strategy implementation. In part, it reflects the significant amount of resources required to complete and then implement the twenty WoNS strategies.

It is also evident that there was less support and commitment for funding of environmental WoNS by environmental/conservation agencies.

*STRATEGY ONGOING. For the Landcare approach to be fully adopted it will require an increase in prioritisation for WoNS strategy implementation amongst some jurisdictions.*

**3 Goal: To provide the framework and capacity for ongoing management of weed problems of national significance**

**3.1 Objective: To strengthen the national research, education and training capacity to ensure ongoing cost effective, efficient and sustainable weed management**

**3.1.1 Integrate and coordinate weed research, education and training programs throughout Australia**

**Action**

Weed Research

The CRCAWM, formerly the CRC for Weed Management Systems, has coordinated weed research in the public sector across temperate, subtropical and tropical Australia, also providing some extension support for environmental and agricultural weed species. Cooperation amongst researchers has ensured a minimal duplication of effort, at the same time fostering a team problem-solving ethos.

The CRCAWM was successful with its second five-year funding bid and since July 2001, the responsibilities of the CRCAWM were extended and it now integrates weed research across Australia. Support and advice was provided by the NWS Project Manager in the funding bid by identifying linkages to the NWS, WoNS and government policy development in order to strengthen the adoption of research results.

The areas covered by the CRCAWM programs are:

- Program 1 – Weed Incursion and Risk Management;
- Program 2 – Sustainable Cropping Systems;

- Program 3 – Landscape Management;
- Program 4 – Community Empowerment; and
- Program 5 – Education.

Further information on the CRCAWM can be found at their archived website [http://pandora.nla.gov.au/pan/64168/20080620-0000/www.weeds.crc.org.au/index\\_flash.html](http://pandora.nla.gov.au/pan/64168/20080620-0000/www.weeds.crc.org.au/index_flash.html)

The WoNS process and strategy development has brought together the key people in policy, regulatory control and research and has acted as means of fostering linkages and cooperation. While this only applies to an extremely limited number of species, hopefully it will be a catalyst for further integration and coordination on weed research.

#### Formal Tertiary Weed Education (also strategy 3.1.3)

During 2002, the CRCAWM undertook a review of university weed management courses in Australia. The CRCAWM developed a weed management course which meets the objectives of the NWS and has made this available free of charge to any training institution. The course is currently run at the University of Adelaide, University of New England and Charles Sturt University.

To facilitate wider adoption of at least parts of the course, the CRCAWM has unitised the course into a number of stand alone units.

#### National Weed Management Training Competencies (also strategy 3.1.2)

The NWSEC, in conjunction with NSW Agriculture and representatives of the agricultural and environmental sectors from all states and territories, embarked on a process to establish national weed management training competencies in 1999.

The competencies cover agricultural and environmental occupations, examples of which are listed below:

- Weed Control Assistants;
- Weed Spray Operators;
- Weed Control Officers (local Government);
- Weed Control Contractors;
- Parks Rangers;
- Bush Regenerators;
- Community Group Members;
- Landholders;
- Government Advisers;
- Labour Market Programs;
- Managers of Weed Management programs at all levels; and
- Volunteers - eg, Greencorp and Australian Trust for Conservation volunteers.

The book, 'Efficient weed management, protecting your investment in the land' was published in early 2001 by NSW Agriculture with funding from the NHT as part of a component from earlier funding for scoping the development of weed management training competencies. The book was well received and provided an

important link between weed research, education and training. Material from the book was suitable for use in the development of training units for weed management.

National weed management training competencies were completed and incorporated into the Conservation and Land Management Training Package that was developed by the Rural Training Council of Australia (RTCA). These were endorsed in May 2002 by the Australian National Training Authority with the RTCA expressing their appreciation for the extensive support, cooperation and dedication displayed over the life of the project by clients across Australia.

A network of training workplace assessors has been developed in order that recognition of prior learning accreditation can be applied to the existing national workforce.

Several training institutions have developed substantial weed training courses, the most notable being that operated by Tocal College in NSW. NSW Department of Primary Industries weed officers have adopted this training, setting a national example for the merits of training and value of early adoption.

This was a particularly notable achievement as the weed management competencies are likely to have the greatest single impact of any of the NWS actions on weed management in future years. These competencies will form the basis of consistent training across the nation, encourage professional standards for weed officers, and enable job mobility and promotional standards to be developed.

*STRATEGY ONGOING. Significant work has been undertaken on this strategy. The completion and endorsement of the national weed management training competencies achieved substantially more than the NWSEC thought possible within this strategy over the period of the Committee's existence. This strategy requires ongoing resources and will not be completed as training and contents updating is a continuing process.*

- 3.1.2 Facilitate and coordinate the delivery of training and awareness programs in integrated weed management for landowners/managers and other on ground resource users

### **Action**

Refer to the National Weed Awareness and National Weed Management Training Competencies discussions under strategies 1.2.1 and 3.1.1 respectively.

*STRATEGY ONGOING. Significant work has been undertaken on this strategy. The strategy requires ongoing resources to ensure that the national weed management training competencies are widely adopted and utilised. It is the adoption of these competencies that bring ongoing fundamental improvement and professionalism to weed management that will endure well into the future. This may well prove to be one of the most significant impacts of the NWS.*

- 3.1.3 Encourage tertiary institutions to emphasise, in weed science courses, the need to adopt integrated weed management practices across all ecosystems

#### **Action**

The NWS Project Manager addressed a number of student groups and met with lecturers developing short and full time courses in weed management across Australia. In all cases the national weed management training competencies were promoted and their use encouraged. Whilst these competencies will not be used directly in university weed science courses, they serve as a useful reference for designing tertiary level weed science courses.

Also refer to Formal Tertiary Weed Education under strategy 3.1.1.

*STRATEGY COMPLETED. Tertiary institutions have acknowledged the need to adopt integrated weed management practices across all ecosystems and have access to course material through the CRCAWM weed management course and the national weed management training competencies.*

### **3.2 Objective: To encourage the development of strategic plans for weed management at all levels**

- 3.2.1 Promote the benefits of developing complementary strategic plans for weed management at the state, regional, catchment, locality and property scale

#### **Action**

Refer to the discussions on WoNS strategies under objective 2.2 with WoNS strategy guidelines being used extensively as a basis for regional, catchment and landholder strategies.

Landcare and other NHT funding components have supported the development of strategies and plans at all levels, ranging from an environmental weeds strategy in WA through to local management plans achieving on the ground weed management.

#### State/Territory Weed Strategies

All states/territories have in place operational weed strategies.

#### Declared Weeds Under State/Territory Weeds Legislation

The more recent weeds legislation introduced by Tasmania, Queensland and the Northern Territory, has incorporated the philosophy of the NWS into their objectives of attempting to apply a strategic and sustainable approach to the management of weeds encompassing both primary industries and the environment. There are also requirements for declared weed management plans in Tasmania and the ACT.

*STRATEGY COMPLETED. Since the launch of the NWS, widespread adoption of strategic and management planning has occurred across the nation. Whilst there is still scope for this strategy to be further developed requiring ongoing resources, this should be seen as a cultural shift in weed management.*

### **3.3 Objective: To establish institutional arrangements to ensure ongoing management of weed problems of national significance**

3.3.1 Ministerial Councils will nominate an appropriate body to coordinate cross sectional issues and actions relating to weeds

#### **Action**

This was initially achieved with the formation of the NWSEC in 1997.

From 30 June 2002, the AWC has taken the role of coordinating cross sectional issues and actions relating to weeds.

*STRATEGY COMPLETED.*

3.3.2 Establish a position of Coordinator: National Weeds Strategy

#### **Action**

The NWS Project Manager, John R Thorp was appointed on 4 August 1997, for an initial term of three years working under a DAFF consultancy agreement being based in Launceston, Tasmania. Following this term, another contract as the NWS Project Manager was awarded (via a tender process) to John R Thorp until 30 June 2002.

From March 2003, the National Weeds Management Facilitator has continued to assist AWC and Australian Government to continue implementing the NWS.

*STRATEGY COMPLETED.*

3.3.3 Develop triennial plans for action on weed issues of national significance

#### **Action**

A workshop was conducted in Sydney in August 1997 to determine Committee work priorities and to provide guidance for the NWS Project Manager in implementing the NWS. The Terms of Reference were prioritised in order to target key actions that would have the greatest impact on weed management in Australia over the first three years of the NWS, along with a three year work plan that was monitored at each Committee meeting and reported annually.

In May 1999 in Adelaide, the Committee participated in a workshop to assess progress in implementing the Strategy and to determine future directions and prioritise future actions.

A two year work program was developed in 2000 to prioritise future work, describing what would be done, by whom and when, with expected outcomes, which was reviewed each Committee meeting.

The AWC maintains strategic, communication and action plans which are reviewed triennially, supported by action plans.

The AWC decided in June 2004 that it is time for the NWS to be revised. The strategy was scheduled for revision during 2005.

*STRATEGY COMPLETED.*

### 3.3.4 Establish a mechanism for resolving sectoral conflicts on weed issues

#### **Action**

Every state and territory was encouraged to clarify roles and responsibilities across agencies within their jurisdiction, as a component of their respective weed strategies. This has resulted in greater communication within the majority of jurisdictions.

Recognition of the respective importance and interrelationship of weed issues across the primary industry and environmental sectors has encouraged agencies involved to broaden their view of the problem and cooperate more closely in solving what is often a shared problem.

#### Weed Coordinating Committees

Every State and Territory has a coordinating body that is responsible for dealing with weed issues. This varies from weed issues being the primary focus of the coordinating body to weeds constituting one component of wider natural resource management responsibilities. The following is a list of the state and territory coordinating bodies:

- NSW Noxious Weeds Advisory Committee (with 138 Local Control Authorities);
- Vic Catchment and Land Protection Council (with 10 Regional Catchment Management Authorities);
- Qld Land Protection Council supported by Operational boards formed under the Land Protection Act 2002;
- WA Agriculture Protection Board (with APB Regional Advisory Committees). The steering committee responsible for developing the State Weed Plan is currently developing terms of reference and guidelines for membership of a State Weed Coordinating Council;
- SA Weeds Advisory Committee (with Local Animal and Plant Control Boards);
- Tas Weed Management Committee;
- NT Weeds Advisory Committee; and
- ACT Weeds Working Group.

#### National Weeds Workshop

A PHA/AWC National Weeds Workshop was held in Canberra in March 2002, which examined a number of weed issues and made recommendations for improving the coordinated approach to weed issues. Stakeholder attendance at the Workshop highlighted the difficulty in attracting a wide cross section of environmental/conservation interests to such forums.

#### Australian Weeds Conference/National Weeds Forum

As a result of the National Weeds Workshop, the NWSEC and the AWC considered a number of options for greater consultative input into the policy direction of the AWC. It was agreed that the AWC would address community/industry weed issues and concerns through consultation with one option being through the biennial Australian Weeds Conference.

#### NRM Regions

Over the past two years, 57 NRM regions have been established across Australia and weeds are part of their brief, however their uptake has been variable as most planning has been undertaken on an asset basis. NRM Regions are being encouraged to develop regional weed plans and be more proactive in managing the weed task. These regions require ongoing assistance and encouragement to address the weed issue effectively.

*STRATEGY COMPLETED. Mechanisms are in place for helping to resolve sector conflicts on weed issues through the new structure of the AWC and links to related national bodies and the region. The success of this strategy will depend on the implementation of those mechanisms.*

## CONCLUSION

Over the seven years of implementing the NWS, the Committees have been highly successful in progressing the majority of the NWS strategies. Of the twenty-six strategies listed in the NWS, thirteen have been completed, two are nearing completion and ten have had significant work undertaken, noting that these latter strategies are ongoing and will never be completed. There is only one strategy (1.3.2) requiring major work for completion and this covered an issue beyond the control of the NWSEC/AWC and the NWS Project Manager/National Weeds Management Facilitator.

During the last two years of this report a regional model for addressing NRM issues was implemented and this structure was not addressed in the original NWS, therefore it should be considered in any revision of the strategy.

This report covers numerous achievements but overall the NWS has resulted in a changed culture and more strategic approach to the management of weeds across Australia. The WoNS species have become icons and focused case studies which show the weeds community what can be achieved when science, policy, regulation and social change strategies are combined at a national level in order to manage weed species on the ground. These 20 WoNS strategies represent an outstanding

example of national cooperation on the part of the state, territories and Australian Government and serve as a model for national weed management programmes.

## ACRONYMS

AQIS	Australian Quarantine Inspection Service
AWC	Australian Weeds Committee
AWCCCEPI	Australian Weeds Committee Consultative Committee on Exotic Plant Incursions
BA	Biosecurity Australia
BIOSIRT	National Biosecurity, Surveillance, Incident Response and Tracing
BRS	Bureau of Rural Sciences
CLIMATE	a computer program to predict the distribution of weed species
CRAWM	Cooperative Research Centre for Australian Weed Management
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries & Forestry
DEH	Department of the Environment and Heritage
EAC	Environmentally Aware Contractors
GPUTS	Garden Plants Under the Spotlight
GRC	Genetic Research Centres
NHT	National Heritage Trust
NIAA	Nursery Industry Association of Australia
NRMSC	Natural Resource Management Standing Committee
NWMF	National Weed Management Facilitator
NWS	National Weeds Strategy
NWSEC	National Weeds Strategy Executive Committee
OCPPO	Office of the Chief Plant Protection Officer
PHA	Plant Health Australia
RMP	Resource Management Program
RTCA	Rural Training Council of Australia
SCARM	Standing Committee of Agriculture and Resource Management
SIAA	Seed Industry Association of Australia
SQCR	Surveillance, Quarantine, Control and Recovery
WoNS	Weeds of National Significance
WRA	Weed Risk Assessment