



# Review of progress towards the National Athel Pine Strategic Plan 2006 / 2007

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on behalf of the  
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## Executive Summary

### Background

The genus *Tamarix* is native to a zone stretching from southern Europe to Asia. *Tamarix* spp. were introduced from the 1930s onwards as ornamental plants and more recently for mine rehabilitation and salinity management. The *National Athel Pine Strategic Plan 2001* includes all three *Tamarix* species present in Australia, namely Athel Pine *Tamarix aphylla*, *T. parviflora* and *T. ramosissima*. Athel Pine is a Weed of National Significance and is declared in all states and territories. The other two species present a considerable risk as they have also begun to naturalise and spread in some southern arid and semi-arid catchments in Australia. Athel Pine has naturalised in Northern Territory (NT), Queensland (QLD), South Australia (SA) and Western Australia (WA). *Tamarix* spp. primarily invade riparian areas affecting water resources, biodiversity, local salinity levels and pastoral management. Strategic control and community education programs are currently being implemented in all mainland states.

### National Coordination and funding

The National Athel Pine Strategic Plan was published in 2001 and the National Athel Pine Management Committee formed in November 2005. A full-time Coordinator was appointed in December 2006, funded by the Defeating the Weed Menace initiative, enabling considerable advances towards implementing the national strategy. Over 100 stakeholders in key areas are now actively engaged in nationally strategic projects, whilst most naturalised infestations have been inspected and recommendations made to stakeholders. National coordination has been enhanced by securing targeted investment to control naturalised *Tamarix* spp. protecting water and biodiversity assets and pastoral properties in all affected states and the NT. Investment in *Tamarix* spp. is being made from a wide variety of sources including national, state and local government, various NRM/ CMA bodies, community groups and landholders. Funding of \$556,800 was received for this reporting period. Total funding for the national program to date is \$2,271,000 and has been matched or exceeded by project proponents and stakeholders throughout Australia, resulting in an excellent return on investment.

### Additional outcomes for 2006/ 07

As a result of national coordination, the majority of known infestations of *Tamarix* spp. in riparian areas throughout Australia have active eradication programs thus preventing further spread downstream and into adjoining states. In addition partnerships have been created and funding secured for the majority of new *Tamarix* spp. infestations located during 2006/ 07. As a result, 11 catchments and their associated biodiversity and water assets are being protected from invasion by *Tamarix* spp. nationally including Finke, Ross and Lander Rivers, NT; Dawson, Flinders, Leichhardt and Georgina Rivers, QLD; Menindee Lakes/ Darling River, NSW; Riverlands/ Murray River, Yunta and Tilcha Creeks, SA and Gascoyne River and Avon River/ Swan catchment, WA.

Documenting evidence on naturalisation and impacts in Australia, together with information on the rate of invasion and the risk of hybrids from USA and feeding this information into state and territory Weed Risk Assessments will guide strategic management for the future.

Community awareness on the risks, impacts and identification of *Tamarix* spp. has been expanded across Australia resulting in increased surveillance, reporting and control.

### Future priorities

- Create a national distribution map for *Tamarix* spp. and identify catchments at risk,
- Investigate the issue of formal herbicide registration for *Tamarix* spp. in Australia,
- Investigate potential native biocontrol agents for use in large-scale Athel Pine infestations,
- Continue to increase community awareness on the risk of *Tamarix* spp. throughout Australia.

## Introduction

This report documents progress towards implementing the *National Athel Pine Strategic Plan 2001* throughout Australia. It provides evidence for the benefits of a nationally coordinated program demonstrating that this had led to improved stakeholder understanding, involvement and commitment to the long-term management of Athel Pine (*Tamarix aphylla*) and other *Tamarix* species throughout Australia. The national strategy states that there are several *Tamarix* species that have shown weedy tendencies both in Australia and overseas. For Australia these additional species are *Tamarix parviflora* and *T ramosissima*. The national strategy includes actions to address the threat that these additional two species pose to Australia.

### ***Athel Pine, its history and impact in Australia***

The genus *Tamarix* is a native to a zone stretching from southern Europe and north Africa through to the Middle East and south Asia to China and Japan. Of the three species present in Australia, only Athel Pine is a Weed of National Significance and declared in all states and territories. Both *T parviflora* and *T ramosissima* present a significant risk and are naturalising in southern arid and semi-arid areas in Australia. *Tamarix* spp. invades riparian areas including ephemeral streams and lakes, and also mine sites and water storage areas and impact on water resources, biodiversity and pastoral management. A mature tree consumes up to 750 litres/ day, twice that of willows, and significantly increases local salinity levels.

Athel Pine is classified as a 'sleeper' weed because it was present in Australia for some time before it became weedy. It was first promoted as a useful tree for wind and sun shelter at homesteads, communities, bores, stockyards and later for erosion and salinity control throughout semi-arid and arid Australia. Introduced in the 1930s and 1940s at Broken Hill NSW and Whyalla SA, widespread plantings occurred throughout Australia between the 1940s and 1950s. Salinity plantings by community groups occurred in WA during the 1970s and 1980s whilst mine rehabilitation plantings occurred in QLD and WA over the last 20-30 (?) years. It was not until the 1970s and 1980s that the true weed potential of this species was recognised, by which time it had spread along 600 km of the Finke River in NT. This rapid and sudden expansion corresponded with several large summer floods which are thought to have provided the perfect environment for seed germination and establishment. In addition both *T ramosissima* and *T parviflora*, like Athel Pine, were introduced as ornamentals, however, documented history of their introduction is absent. In the WA Wheatbelt area *T parviflora*, together with Athel Pine was planted for salinity management by community groups during the 1970-1980s.

Western USA experience with Tamarisk (*T ramosissima* and hybrids) is that it is now covering more than 1.5 million riparian acres and expanding by 40,000+ acres each year. In addition hybrids between *T aphylla* (Athel pine) and *T ramosissima* have been recorded with concern that these hybrids may prove more invasive than either of the parent plants.

Currently Athel Pine only occurs across a small fraction of its potential distribution in Australia, with infestations restricted to the northern arid zone, whilst *T ramosissima* and *T parviflora* appear to be a risk in the more southern arid and semi-arid zone. In addition any of these species may naturalise where there are plantings adjacent to permanent or semi-permanent water sources. Refer to Appendix D for current and potential distribution maps for Athel Pine.

### ***A national solution***

The National Athel Pine Strategic Plan was developed by the NT government with full support from all states and territories and the Australian Government and was published in 2001. The National Athel Pine Management Committee (NAPMC) was formed in November 2005. A full time coordinator was appointed on 11 December 2006 as the National WoNS Coordinator for *Mimosa pigra* and Athel pine funded by the Australian Government's Defeating the Weed Menace initiative. Prior to this an officer from NT NRETA held the national Athel Pine coordinator position on a part-time basis, focusing on the production and airing of a national TV commercial

and the subsequent formation and support of the NAPMC. The formation of the committee has led to increased control programs nationally, rather than the previous NT focus. The NAPMC has set national priorities based on the *National Athel Pine Strategic Plan 2001* and these are being effectively implemented by the National WoNS Coordinator and stakeholders throughout Australia. In addition committee membership has expanded during 2007 to include key NRM/ CMA representatives in areas where *Tamarix* spp. is a priority. Capacity building of members has resulted in increased understanding, ownership and strategic planning of local and regional control programs, location of new *Tamarix* spp. infestations in QLD, NSW, SA and WA during 2006/ 07 and the subsequent securing of funds for control works during 2007/ 08.

Since December 2006 national networks have been expanded by the NAPMC and the national WoNS coordinator with over 100 stakeholders engaged to date including state and local governments in NT, QLD, NSW, SA and WA, NRM/ CMA regions in NT, QLD, NSW, SA and WA, landcare groups and landholders. This enabled improved searching for and reporting of naturalised infestations, communication and knowledge sharing between states and territories on biology and effective control techniques and increased funding leading to improved on-ground control outcomes and local ownership for all known infestations nationally. Field visits carried out by the coordinator resulted in the development of best practice management strategies for previously untreated infestations in Queensland and improved understanding of adaptive management in WA and NSW.

Targeted education and awareness raising articles and products were disseminated by the national coordinator to key stakeholders and communities throughout Australia and included previously unavailable identification material for the three naturalising *Tamarix* spp. (see Appendix B for further details). This resulted in increased understanding of identification and the risks of *Tamarix* spp. invasion nationally.

### **Progress to Date**

National education and awareness products produced and disseminated including Weed Management Guides, poster, and banner. A TV commercial aired from December 2004 to February 2005 on remote area networks whose combined footprints cover the interior of Australia, resulting in the formation of the National Athel Pine Management Committee.

The majority of known infestations of Athel Pine, *T ramosissima* and *T parviflora* in riparian areas throughout Australia now have active eradication programs. In addition partnerships have been created and funding secured for the majority of new infestations located during 2006/ 07.

Investment in *Tamarix* spp. is being made from a wide variety of sources including the Australian Government (Defeating the Weed Menace, Envirofund and Community Water Grants); NT Dept. of Natural Resources, Environment and The Arts (DNRETA); Dept Primary Industries and Fisheries (DPI&F) Biosecurity Queensland; SA Dept Water Land and Biodiversity Conservation (DWLBC); WA Dept of Environment and Conservation and Dept. of Water, NT Northern Land Council; QLD S Gulf Catchments NRM and Desert Channels NRM; NSW Bourke Shire Council and Country Energy and Water; SA Arid Lands and Alinytjara Wilurara NRM; WA S Rangelands NRM, Toodyay Landcare and York Shire Council. Funding of \$556,800 was received for this reporting period whilst total funding for the national program from 1996/ 97 to 2006/ 07 is \$2,271,000. This has been matched or exceeded by project proponents and stakeholders throughout Australia, resulting in an excellent return on investment and the widespread protection of water resources, biodiversity and pastoral enterprises throughout Australia.

## Goals and achievements in 2006/ 07

### Goal 1. Prevention of new infestations of Athel Pine

#### Assess weed potential of other *Tamarix* spp.

##### National

- Visits made, discussions held with key stakeholders and documentation completed for all known *T ramosissima* and *T parviflora* infestations in Australia (NSW, SA and WA). Final report to be written in 2007/ 08 and forwarded to National Athel Pine Management Committee members as well as Weed Risk Assessment (WRA) officers in each state/ territory for input into existing draft WRAs for NT, QLD, SA, WA and VIC
- Information sourced from Western USA where *Tamarix* spp. (*T ramosissima* and hybrids) are covering 1.5 million riparian acres and expanding at 40,000+ acres/ year
- Information sourced from Western USA where Athel Pine and *T ramosissima* hybrids have been recorded. These hybrids may prove to be more invasive than either of the parent plants

##### *Proposed benefits*

Management of *Tamarix* spp. is improved through understanding where it exists and catchments at risk of future invasion and feeding this into WRAs to guide strategic investment and management.

*Lead* – National WoNS Coordinator

*Cooperating agencies/ land managers*

NSW – Country Energy & Water Broken Hill, Bourke Shire Council, Dept Primary Industries (DPI), Parks & Wildlife;

SA – DWLBC, SA Arid Lands NRM, managers of Teetulpa and Florina stations;

WA – S Rangelands NRM, Toodyay Landcare group, Dept. of Water Northam, York Shire Council.

#### Declaration of *Tamarix* spp.

For *Tamarix* spp. only Athel Pine is declared in all states and territories, however both *T ramosissima* and *T parviflora* are well recognised as high-risk weeds in SA, WA and NSW. In addition the widespread planting of Athel Pine throughout all arid and semi-arid areas of Australia has resulted in weak state and territory legislation, with the majority of declarations being restricted to sale and trade only.

##### SA

- South Australian legislation is currently under review to enable NRM authorised officers to require land holder to control Athel Pines deemed to be threatening watercourses. The changes have been presented to NRM boards for comment. Proposed changes will be submitted to Ministers office for appropriate approvals
- Once national report on invasiveness of other *Tamarix* spp. is received by DWLBC, SA will consider declaring additional *Tamarix* species

##### *Proposed benefits*

Legislative mechanisms for Athel Pine control in riparian areas improving in SA.

*Lead agency* – SA DWLBC

*Cooperating agencies/ land managers*

All seven NRM regions in SA.

## **Increase public awareness**

### National

- Eight articles published on *Tamarix* spp. throughout Australia; one national, two in NT, three in WA, one in Qld and one in NSW. See Appendix B for further details
- *Tamarix* spp identification poster developed
- National Strategies (25) and Weed Management Guides (110) distributed to key stakeholders throughout Australia
- 9<sup>th</sup> QLD Weeds Symposium attended, poster, WoNS banner, National Strategies and Weed Management Guides displayed

### *Resulting benefits*

Increasing awareness on identification, risks and impacts of Athel pine, *T ramosissima* and *T parviflora* leading to increased surveillance, reporting and control nationally.

*Lead* – National WoNS Coordinator

### *Cooperating agencies/ land managers*

National – NLWR Audit, NT – Dept Natural Resources, Environment & The Arts Weed Management Branch, QLD – Flinders Shire Council, Weed Society of Queensland, NSW – 13<sup>th</sup> NSW Weeds Conference, Country Energy & Water, Lower Murray Darling CMA, WA – Northern Agricultural Catchments Council, Saltland Pastures Association, S Rangelands NRM, West Midlands Natural Resource Group, Dept of Water.

### NT

- Staff set-up and attended weeds display at Alice Springs Show including Athel Pine banner and brochures (July 2006)

### *Resulting benefits*

Community, including pastoralists reminded of the risks associated with Athel Pine in southern NT leading to more awareness and support for on-ground control.

*Lead agency* – NT Dept Natural Resources, Environment & The Arts (DNRETA)

### SA

- Information provided to land managers as part of the northern SA Athel Pine reduction program.

### *Resulting benefits*

Increasing the capacity of land managers to effectively identify and control *Tamarix* spp. in northern SA.

*Lead agency* – SA Arid Lands NRM

### WA

- Information available at the Goldfields Nullarbor NRM group Environmental Forum
- Goldfields Environmental Management Group meeting recommendation that Athel Pine not be used in further mine rehabilitation programs based on infestation examples from QLD

### *Resulting benefits*

Athel Pine no longer recommended for use in mine rehabilitate works in the Goldfields Nullarbor area, WA protecting local water resources and biodiversity.

*Lead agency* – S Rangelands NRM, WA

## **Monitor for new *Tamarix* spp. invasions and protect clean areas**

### NT

- Follow-up control of Athel Pine in the upper 400 km managed section of the Finke River including Henbury, Idracowra, Maryvale and Horseshoe Bend Stations
- Follow-up control of Athel Pine seedlings on Ross River

*Lead agency* – NT DNRETA

- New infestations found at Walker Creek on the Palmer River/ Finke catchment
- Follow-up control of Athel Pine on Rundalls and Ellery Creek in the upper Finke catchment

*Lead agency* – Northern Land Council/ Tjuwanpa Rangers

### *Resulting benefits*

Clean status of the upper 400 kms of the Finke River maintained enabling future monitoring and minimal follow-up to be undertaken by leaseholders along the catchment.

Clean status of the Ross River maintained.



## **Goal 2. Eradication of all Athel Pine occurrences in riparian areas**

### **Survey and mapping**

#### SA

- SA Arid Lands NRM is developing infestation maps for *Tamarix* spp., via aerial and ground surveys, in the arid lands region of SA including Alinytjara Wilurara NRM as part of their \$73,000 Defeating the Weed Menace project

#### *Resulting benefits*

*Tamarix* spp. mapped in northern SA enabling development of property management plans to effectively control infestations.

*Lead agency* – SA Arid Lands NRM/ Rural Solutions

*Cooperating agencies/ land managers* - All affected land managers in northern SA

#### WA

- Aerial survey of Ponton Creek leading into Lake Boonderoo
- Mapping of *T parviflora* infestations along the Avon River from Northam to York is underway

#### *Resulting benefits*

Ponton Creek in the Nullarbor area, WA free of *T ramosissima* infestations.

The extent of *T parviflora* along the Avon River, WA determined enabling future strategic management of infestations.

*Lead agency* – S Rangelands NRM and York Shire Council Greencorp team, WA

### **Herbicide trials**

There are no herbicides formally registered to control *Tamarix* spp.. This is a major concern for the National Athel Pine Management Committee. Investigations are underway to rectify this.

#### NT

- Comparative field trials conducted for Garlon® and Starane® including the effectiveness of using Pulse® as a wetting agent as part of their \$420,000 Defeating the Weed Menace project
- Discussions underway to trial the effectiveness of aerial spraying to control Athel Pine

#### *Resulting benefits*

Starane® and Pulse® are the most effective herbicide for Athel Pine control with results publicised through national networks enabling more effective treatment of Athel Pine infestations throughout Australia.

*Lead agency* – NT DNRETA

*Cooperating agencies/ land managers*

P&L Morphet, Horseshoe Bend station.

#### NSW

- Proposed herbicide trials have been delayed due to severe drought conditions. These will be progressed during 2007/ 08

#### *Proposed benefits*

Herbicides formally registered for the control of Athel Pine for the first time in Australia.

*Lead agency* – Bourke Shire Council, NSW

*Cooperating agencies/ land managers*

Dow AgroSciences and Macspread Australia

#### WA

- Discussions underway to conduct chemical trials on *T ramosissima* at Lake Boonderoo on edge of the Nullarbor using Arsenal Xpress™ as a foliar spray commencing in early 2007/ 08. This chemical has been trialled on Athel Pine in the United States and achieved a 95% success rate

#### *Proposed benefits*

The effectiveness of Arsenal Xpress™ on *T ramosissima* is tested and may add to best practice management of *Tamarix* spp. throughout Australia.

*Lead agency* – S Rangelands NRM, WA

### **Biocontrol investigations**

#### National

- An appraisal of biocontrol options for Athel Pine has begun
- A native stem borer (*Maroga melanostigma*) has been found affecting Athel Pine along parts of the Finke River in some years
- Athel Pine dieback recorded along a section of the Finke River with samples to be collected for identification during 2007/ 08

#### *Resulting benefits:*

Native pests and diseases are being investigated for the potential biocontrol of large-scale Athel Pine infestations in Australia. In addition, discussions are underway on the feasibility of initiating a formal national Athel Pine biocontrol project.

*Lead agency* – National Athel Pine Management Committee

*Cooperating agencies/ land managers*

NT DNRETA

### **New reports of *Tamarix* spp. infestations**

New occurrences of *Tamarix* spp. were reported during 2006/ 07 and have been recorded by the National WoNS Coordinator as well as relevant stakeholders. The Coordinator provided assistance in sourcing additional funds to control the majority of these infestations during 2007/ 08. Outbreaks to be controlled –

#### NT

- Renner Springs dam and Helen Springs in the Tennant Creek region
- Walker Creek (a tributary of Palmer River, Finke Catchment)

High risk plantings have been identified at

- Tobermorey, Lucy Creek and Anburla Stations and MacDonald Downs Outstation (2005)
- Mt Ebenezer, Glen Helen, Henbury, Ross River (*T ramosissima*) and Idracowra homesteads (*T ramosissima*)(historic)

#### *Proposed action*

Future action for these infestations and high-risk plantings will be included in the NT Weed Management Plan for Athel Pine which will be finalised during 2007/ 08 and the issue highlighted with the NT NRM by the National WoNS Coordinator. A funding proposal may be submitted to the NT NRM board during 2007/ 08.

#### QLD

- Unconfirmed report of an infestation at Glendalough on the Flinders River downstream of Hughenden

#### *Proposed action*

A S Gulf Catchments officer will visit site during 2007/ 08 to evaluate the situation.

#### NSW

- Menindee Lakes system – large-scale amenity plantings observed adjacent to several lakes. In addition several naturalised plants have been observed along connecting channels and below the weir in Kinchega National Park

#### *Proposed action*

The National WoNS Coordinator has contacted the Lower Murray Darling CMA requesting funds for an aerial survey under their \$613,000 Defeating the Weed Menace project. Once surveying

and mapping has been completed, and the extent of plantings and naturalisation determined, a management plan will be developed.

## SA

As part of the SA Arid Lands NRM \$73,000 Defeating the Weed Menace project, several new infestations and high-risk plantings have been found at –

- Muloorina, Frome Downs, Mt Fitton and Mt Searle (IPA) stations and around Leigh Creek in the central north east
- Lake Callabonna Fossil Reserve and Bollards Lagoon/ Lindon stations (unconfirmed reports)
- Tepco and Cowarie stations (high-risk plantings)

### *Proposed action*

SA Arid Lands NRM is aware of these infestations and reports and the National WoNS Coordinator will continue discussions as to the best way to fund future surveys and control works.

## **Current control programs**

### NT

- Finke River – program started in 1990 and by 2006 400km had been treated upstream of Horseshoe Bend station including Rundalls Ck, Roe Ck, Jay Ck, Hugh River, Ellery Ck
- An additional 20.4 km of core infestation, downstream of Horseshoe Bend homestead, was treated using bulldozers under a \$420,000 Defeating the Weed Menace funded project

### *Resulting benefits*

Finke River, NT Athel Pine eradication program extended further downstream enabling additional benefits for biodiversity conservation, water conservation and station management.

*Lead agency* – NT DNRETA

*Cooperating agencies/ land managers*

P&L Morphett Horseshoe Bend station

### QLD

- Queensland Government “Blueprint for the Bush” funding of \$59,730 for 2006 – 09 was obtained for three naturalised infestations and two high-risk plantings enabling control during 2007/ 08 at –
  - Mt Isa (Kings Creek tributary of Leichhardt River and Whiteblow Creek tributary of Templeton River on mining lease; Breakaway Creek near confluence with Leichhardt River and an unnamed tributary of Leichhardt River)
  - Flinders River, Hughenden
  - Gemfields near Emerald
- Discussions and field visit from the National WoNS Coordinator provided advice on best practice management and project planning for Hughenden and Mt Isa infestations
- Discussions and project planning underway with stakeholders at Mt Isa and Hughenden

### *Resulting benefits*

The Mt Isa, Hughenden and Gemfields, QLD infestations have been assessed and project planning is underway. Xstrata will now co-fund survey and primary control of mine infestation at Mt Isa.

*Lead agency* – Southern Gulf Catchments NRM, QLD

*Cooperating agencies/ land managers*

Xstrata Mt Isa Mines, Flinders Shire Council, QLD DPI&F Biosecurity

### NSW

- An \$81,000 Defeating the Weed Menace project is underway at Imperial Lake, Broken Hill controlling a *T ramosissima* infestation in a town reservoir
- The infestation has spread ‘downstream’ into Williama Common owned by the Broken Hill Council

#### *Proposed action*

National WoNS Coordinator will contact stakeholders to engage Broken Hill Council as a partner to the project.

#### *Resulting benefits*

Control of a strategic *Tamarix ramosissima* infestation is reducing the potential for further invasions in the Broken Hill area of NSW protecting vital water resources.

*Lead agencies* – Country Energy & Water and Lower Murray Darling CMA, NSW

#### SA

- Control work, funded through the NRM board in conjunction with local landholders, was undertaken on isolated but strategically important *T ramosissima* stands on Teetulpa, Paratoo and Florina stations in the north east
- *Tamarix* spp. stands are under a WoNS eradication project on Kangaroo Island as part of an \$80,000 Defeating the Weed Menace program. The Kangaroo Island NRM board is undertaking management
- A \$40,000 Defeating the Weed Menace project is currently being developed jointly by DWLBC and SA Arid Lands NRM to tackle a large infestation on Quinyambie station in the north east of the State. Development of a full project will proceed on receipt of a contractors report detailing the extent of the infestation
- A \$25,000 Defeating the Weed Menace and \$41,000 Envirofund project is underway in the Pukatja (Ernabella) region controlling strategically situated Athel Pine infestations in watercourses and revegetation. The Alinytjara Wilurara NRM Board is managing the project in conjunction with the local community and DWLBC

#### *Resulting benefits*

The current and planned control of strategic *Tamarix* spp. infestations in northern SA is reducing the potential for further invasions in northern SA and protecting vital water resources and biodiversity.

*Lead agency* – SA Arid Lands NRM, Kangaroo Island NRM, Alinytjara Wilurara NRM

*Cooperating agencies/ land managers*

SA DWLBC, Teetulpa, Florina, Paratoo and Quinyambie station managers, Pukatja community.

#### WA

- With collaborative funding of \$153,000 from Dept Environment & Conservation and S Rangelands NRM, control of *T ramosissima* at Lake Boonderoo, on the western edge of the Nullarbor is underway with primary control nearly complete
- Under a \$24,000 Envirofund project mechanical control of Athel Pine and revegetation on the Gascoyne River, Carnarvon is underway. Works are being conducted in a chequerboard fashion to ensure riverbank stability throughout the revegetation process
- *T parviflora* infestations along the Avon River controlled at Toodyay under a Community Water grant

#### *Resulting benefits*

Control works enhance the proposed listing of Lake Boonderoo, WA in the Directory of Important Wetlands in Australia and protect its unique biodiversity.

The Carnarvon project, WA will protect a significant riparian system, while maintaining the stability of the river bank to ensure effective revegetation of native species.

Avon River at Toodyay, WA protected from further invasion by *T parviflora*.

*Lead agency* – Southern Rangelands NRM, WA; Toodyay Landcare Group

*Cooperating agencies/ land managers*

Dept Environment & Conservation, M&K Forrester Kanandah station, Carnarvon Land Conservation District Committee, Toodyay Shire Council, York Shire Council Greencorp Team, WA Dept of Water.

*Publications, articles, media coverage* - Kalgoorlie Miner (see Appendix B for details).

### **Goal 3. Management of Athel Pine in non-riparian areas**

#### **Control in non-riparian areas**

*Tamarix* spp. were planted as ornamentals from the 1930s until recently. This has resulted in widespread plantings throughout arid and semi-arid Australia. Many of these plantings are near to water sources and present a risk for the future invasion of these adjacent waterways. In addition Athel Pine has been used in mine revegetation programs until relatively recently. This is an emerging national issue as trees have started to naturalise in adjacent riparian areas.

#### NT

- Amenity plantings removed from Willowra Aboriginal community on the Lander River north of Alice Springs. Additional trees to be removed under a Commonwealth Development & Employment Program (CDEP) employing local community members

#### *Resulting benefits*

The Lander River, NT is protected from invasion by Athel Pine.

*Lead agency* – NT DNRETA

*Cooperating agencies/ land managers* - Willowra Aboriginal community and CDEP

#### QLD

- High-risk plantings removed from Glengyle and Old Cork homesteads, QLD

#### *Resulting benefits*

Sections of the Eyre Creek in the Lake Eyre Basin protected from invasion by Athel Pine.

*Lead agency* – Desert Channels NRM, QLD

- Naturalised infestations on two tailings dams and one inactive pit with some works carried out due to EPA concern that infestations would spread into the adjacent Dawson catchment. Further works may not be undertaken until mine closure and rehabilitation

#### *Resulting benefits*

The headwaters of the Dawson catchment, QLD protected from invasion by Athel Pine.

*Lead agency* – Cracow Gold Mine, Newcrest Mining Limited QLD (south of Rockhampton), QLD

#### NSW

- Bourke Shire Council has begun to implement a five year Athel Pine Management Plan
- Negotiations underway with two properties near Bourke for removal of amenity plantings

#### *Resulting benefits*

The Darling River near Bourke, NSW protected from invasion by Athel Pine.

*Lead agency* – Bourke Shire Council, NSW

#### SA

- High-risk amenity plantings removed from the Barrier Highway between Cockburn and Yunta
- High-risk plantings removed from Teetulpah homestead
- High-risk plantings removed from Innamincka and Nappa Merri homesteads

#### *Resulting benefits*

Northern SA Tamarisk reduction program enhanced. Yunta and Cooper Creeks, SA protected from invasion by Athel Pine.

*Lead agency* – SA Arid Lands NRM

*Cooperating agencies/ land managers* - Rural Solutions, S Kidman & Co

#### WA

- Amenity plantings of Athel Pine removed from Kanandah station near Lake Boonderoo
- Discussions held with current leaseholders of mines in the Laverton area where Athel Pine was used to rehabilitate mine sites. There are two significant infestations on mines naturalising in nearby Beasley Creek, with one occurring near a dry salt lake. It is anticipated that eradication works will begin in 2007/08

*Lead agency* – Southern Rangelands, WA

*Cooperating agencies/ land managers* - WA Dept of Environment & Conservation,

Dept Industry & Resources, Laverton Shire Council, Metex Resources Ltd, BHP Billiton

## **Goal 4. Coordination of strategic Athel Pine management**

### **National Coordination**

Increased stakeholder engagement is enabling improved searching for and reporting of naturalised infestations, communication and knowledge sharing between states and territories on biology and effective control techniques and increased funding leading to improved on-ground control outcomes and local ownership for all known *Tamarix* spp. infestations nationally. Field visits carried out by the coordinator are resulting in the development of best practice management strategies for previously untreated infestations in Queensland and improving understanding of adaptive management in WA and NSW.

Capacity building of members has resulted in the location of new *Tamarix* spp. infestations in QLD, NSW, SA and WA during 2006/ 07 and the subsequent securing of funds for control works to be carried out during 2007/ 08.

- See Appendix A for a list of current National Athel Pine Management Committee (NAPMC) members
- Four NAPMC teleconferences held (13 July & 13 December 2006, 27 March & 26 June 2007)
- NAPMC has set national priorities and these are now being effectively implemented by the National WoNS Coordinator and stakeholders throughout Australia
- A full time National WoNS Coordinator was appointed in December 2006
- Since December 2006 national networks have been expanded with over 100 stakeholders engaged to date including state and local governments in Northern Territory (NT), Queensland (QLD), New South Wales (NSW), South Australia (SA) and Western Australia (WA), NRM/ CMA regions in NT, QLD, NSW, SA and WA, landcare groups and landholders
- Committee membership expanded to include key state representatives for NSW and WA
- Committee membership expanded to include NRM/ CMA representatives in areas where *Tamarix* spp. have naturalised and there are active control programs
- Three articles on the NAPMC published (see Appendix B for details)
- Defeating the Weed Menace funding of \$156,000 received to develop the Athel Pine National Best Practice Manual and DVD
- SA DWLBC is coordinating a *Tamarix* spp. project for the control of strategic stands in the arid regions of SA. The project which combines control of Athel Pine and Prickle bushes is valued at \$94,000. Delivery of the project is through the regional NRM boards

### **Resulting benefits**

Increasing member understanding, ownership and strategic planning of local and regional control programs is leading to improved capacity to implement the national strategy. Improving stakeholder engagement and capacity is improving surveillance and reporting of *Tamarix* spp. leading to on-ground control works for existing and new infestations throughout Australia.

**Lead agency** – National Athel Pine Management Committee

**Cooperating agencies/ land managers**

DEW, NT DNRETA, QLD DPI&F, S Gulf Catchments NRM, Bourke Shire Council, NSW DPI, SA DWLBC, SA Arid Lands NRM, SA Rural Solutions, WA DEC and S Rangelands NRM.

### **Monitor and evaluate strategy implementation**

- The National Athel Pine Strategic Plan is scheduled for review during 2008/ 09 (in the third batch of WoNS)

**Cooperating agencies/ land managers**

Australian Weeds Committee

## Appendix A - National Athel Pine Management Committee members

### Members

### Corresponding Members

#### Chair

Vacant

#### National WoNS Coordinator – *Mimosa pigra* & Athel Pine

Sandy Leighton

#### WA Department of Environment and Conservation

Kellie Agar

A/ Program Coordinator – Environmental Weeds

#### NSW Bourke Shire Council

Don Mackenzie

Senior Weeds Officer

#### SA Department of Water, Land & Biodiversity Conservation

SA Dennis Gannaway

SA WoNS Coordinator

#### Southern Rangelands NRM

Tim Thompson

NRM Regional Facilitator

#### NT Dept Natural Resources, Environment & the Arts

Chris Brown

Regional Weeds Officer

#### NT Dept Natural Resources, Environment & the Arts

Steve Wingrave

Principal Weeds Officer

#### South Australia Arid Lands NRM Board

John Gavin

General Manager

#### Southern Gulf Catchments NRM

Charles Curry

Senior Projects Officer

#### Department of the Environment & Water Resources

Robyne Leven

Vegetation Management Policy Officer

#### QLD Department of Primary Industries & Fisheries

vacant

#### National Weeds Management Facilitator

John Thorp

#### Indigenous Land Management Facilitator

Vacant for WA and NT

#### NSW DPI

Edward Joshua

Regional Weed Control Coordinator

#### QLD Department of Primary Industries & Fisheries

Phil Maher

Operations Manager

Invasive Plants and Animals

#### SA Rural Solutions

John Pitt

Manager

#### NT Dept Natural Resources, Environment & the Arts

Alice Beilby

A/ Director Weed Management Branch

## Appendix B – Publications for 2006/ 07

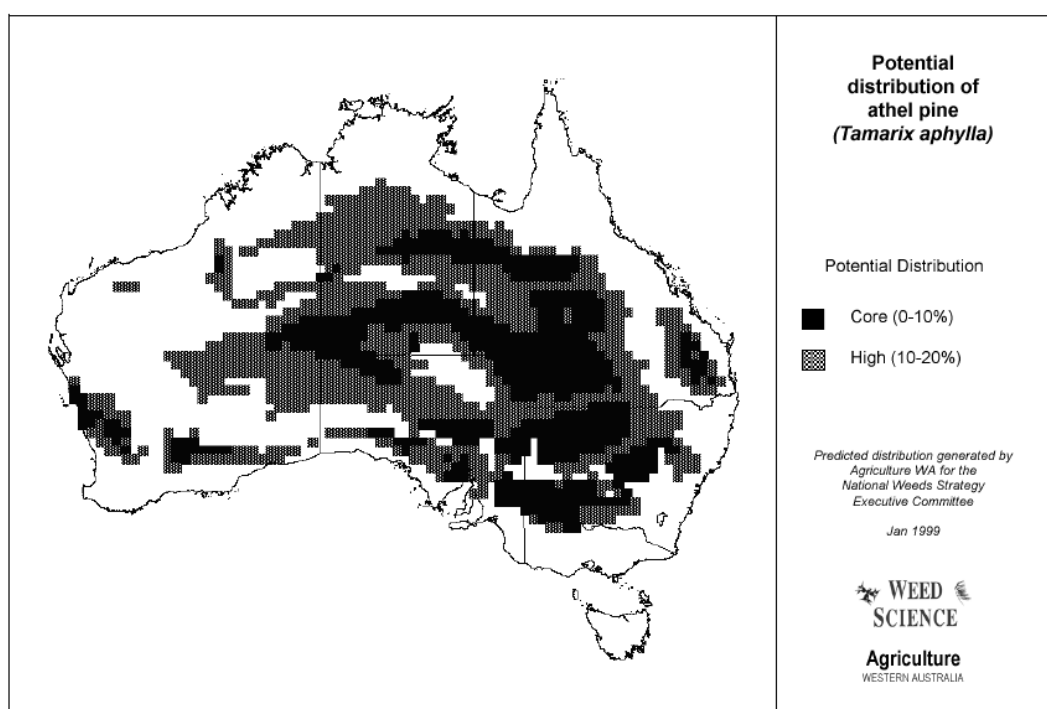
- Brown, C & Grace, B (2007). Athel pine in the Northern Territory: a strategic approach to eradication. Proceedings of the 15<sup>th</sup> Australian Weeds Conference, eds C Preston, JH Watts and ND Crossman (Weed Management Society of South Australia, Adelaide, pp 649-652.
- Leighton, S (in press). Controlling the Finke – an Athel Pine success story from the NT. National Land and Water Resources Audit weeds report, Canberra, ACT.
- Leighton, S (2007a). National Athel Pine Management Committee update. Weed All About It, NRETA Weed Management Branch, Darwin, Northern Territory.
- Leighton, S (2007b). Introducing the new National Coordinator for Athel Pine and Mimosa. Weed All About It, NRETA Weed Management Branch, Darwin, Northern Territory.
- Leighton, S (2007c). Tamarisk – a real threat for WA. Bush Notes, Northern Agricultural Region, Geraldton, Western Australia.
- Leighton, S (2007d). Tamarisk plantings becoming a weedy problem. Saltlands Pastures, Western Australia.
- Leighton, S (2007e). Tamarisk – a real threat for WA. West Midlands News, West Midlands Natural Resource Group, Western Australia.
- Leighton, S (2007f). Athel Pine – a real risk for Queensland. Proceedings of the 9<sup>th</sup> Queensland Weeds Symposium, Gold Coast, Queensland.
- Leighton, S (in press). Tamarisk – a real risk for New South Wales. Proceedings of the 14<sup>th</sup> Biennial NSW Weeds Conference, Wollongong, New South Wales.
- Rural Solutions (2006). Program attacks national weed menace in SA. Across the Outback, Outback SA, South Australia.
- Southern Rangelands NRM (2007). Battle against weed continues. Kalgoorlie Miner, Kalgoorlie, Western Australia (14 April).



## Appendix C – Athel Pine distribution

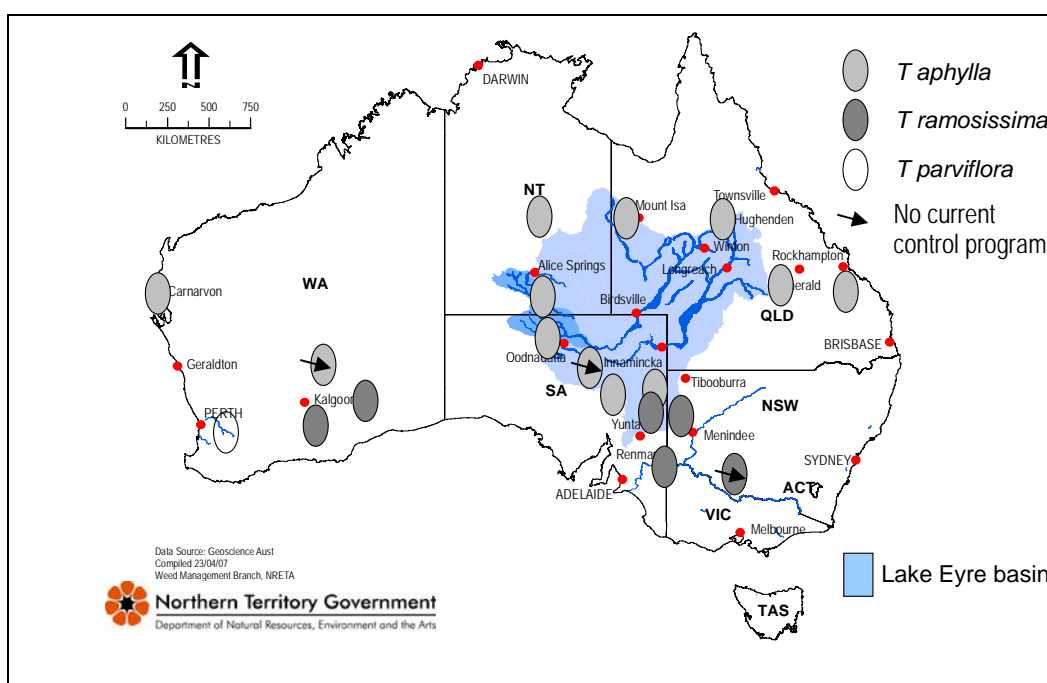
### National distribution

#### Potential distribution



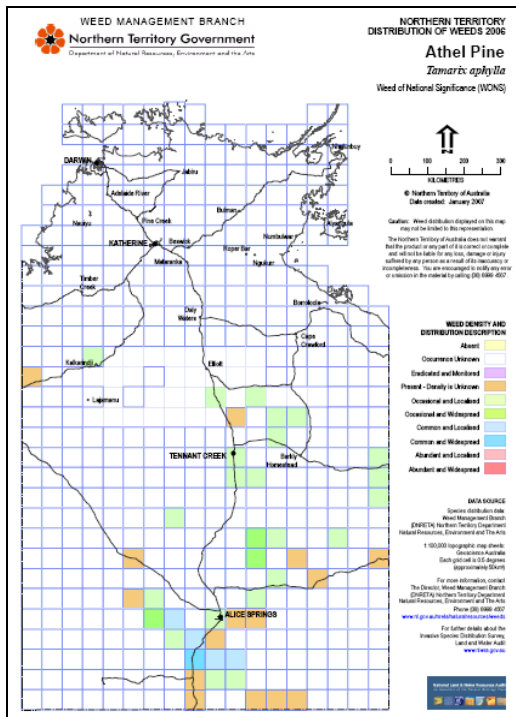
#### Known naturalised infestations

*Note: all infestations are under active management unless indicated by an arrow.*

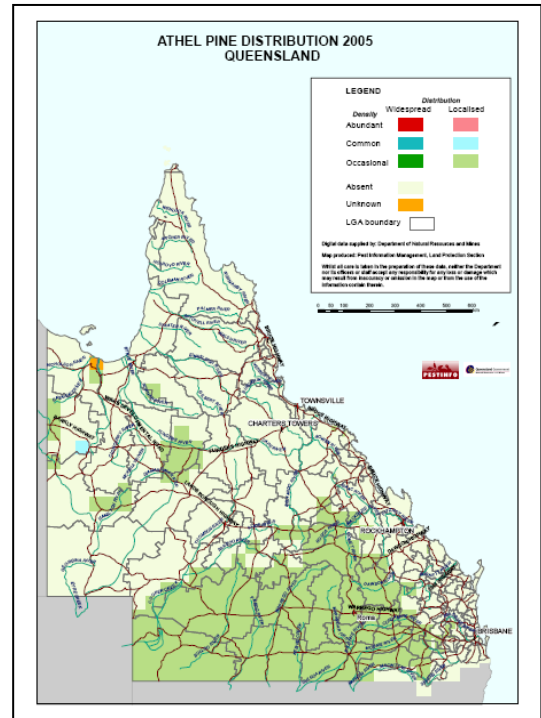


# Athel Pine distribution

## Northern Territory –



## Queensland



## South Australia

