

## **Threat Abatement Plans: Bitou bush the first weed TAP**

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The South African coastal shrub bitou bush (*Chrysanthemoides monilifera*: Asteraceae) is one of Australia's 20 worst weeds (a Weed of National Significance). In NSW, bitou bush occupies >80% of the coastline and threatens many native coastal plant communities. The management of such major weeds is difficult due to the scale of the problem (area occupied, the range of habitats invaded, their continued persistence and rate of spread), the limited resources available to control them (financial and human), and an accurate assessment of their impacts. To date, National, State and regional strategies have been developed to combat the problem of bitou bush invasion. These broad management strategies provide little direction for on-ground management. One solution to achieve on-ground outcomes is to focus weed management on specific outcomes, such as plant conservation.

Under the NSW *Threatened Species Conservation Act 1995* weeds can be listed as Key Threatening Processes (KTP), if they threaten at least two species, populations or ecological communities (hereafter entities) that are listed as threatened under the Act, or if they cause species not listed as threatened to become so. Once listed, a Threat Abatement Plan (TAP) must be developed for each KTP which threatens at least two threatened entities – a time frame is not specified for KTPs that only cause entities not threatened to become so. Bitou bush was listed as a KTP in 1999 under the TSC Act. A draft TAP will soon be placed on public exhibition. This draft TAP aims to reduce the threat of bitou bush to threatened entities in NSW.

One of the main hurdles in the development of this draft TAP has been the identification and prioritisation of the threatened entities at risk from invasion. A model has been developed to rank threatened entities, using a range of attributes, including the entities ability to persist, its distribution and its threatened status (i.e. listed as vulnerable or endangered under the TSC Act). The ranking process identified eleven threatened species, two endangered populations and five ecological communities being considered as high priority. A model has also been developed to assess the sites at which these entities occur, independent of land tenure. This model highlighted 60 priority sites where the actions of the TAP can be undertaken. Through this process control measures can be allocated to sites where the biodiversity benefits will be greatest.

The main action in the TAP is the control of bitou bush at priority sites using best practice management guidelines (see Vranjic 2000) in combination with site-specific conditions like topography and access. A subsequent action involves the monitoring of these control programs in order to determine the success of the TAP. The other actions are designed to foster local community participation in the TAP and bitou bush control and awareness in general, through training, participation and education. The draft TAP

also identifies knowledge gaps and research to obtain suitable information. For example, very little is known about the impacts on fauna from bitou bush invasion, or following bitou bush control.

There will be a continued need to undertake bitou bush management and biodiversity conservation independently as bitou bush management still needs to occur in areas where biodiversity conservation is a low priority, and biodiversity conservation must occur where bitou bush control is a low priority.

**Additional reading:**

- Department of Environment and Conservation (2004). *Draft Threat Abatement Plan for Invasion of Native Plant Communities by Bitou bush/Boneseed* (*Chrysanthemoides monilifera*). Department of Environment and Conservation (NSW), Hurstville.  
[ available soon at: <http://www.nationalparks.nsw.gov.au/NPWS.nsf/Content/Home> ]
- Downey, P.O. (2003) Threat abatement plans: weeds and plant conservation. **In:** *The Proceedings of the 12th Biennial Noxious Weeds Conference, Taree, NSW, 1st – 3rd July 2003*. (pages unnumbered), Greater Taree City Council, Taree.
- Downey, P.O. (2003) Invasive species and plant conservation: woody weeds. **In:** Brown, C.L., Hall, F. and Mill, J. (eds) *Plant Conservation: approaches and techniques from an Australian perspective*. Module 4 (pages unnumbered), Australian Network for Plant Conservation, Environment Australia, Canberra.
- Vranjic, J. (2000) *Best Practice Management Guide 3: Bitou bush* *Chrysanthemoides monilifera subsp. rotundata*. Cooperative Research Centre for Weed Management Systems, Adelaide.