



Strategic Analysis and Scoping Study on Human Spread of Weeds

June 2005



Natural Heritage Trust

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An Australian Government Initiative



**Queensland
Government**

**Natural Resources,
Mines and Energy**

This study was sponsored by the National Weeds Program (Natural Heritage Trust) and the Queensland Department of Natural Resources and Mines and endorsed by the Australian Weeds Committee.

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Executive summary

The Strategic Analysis and Scoping Study on Human Spread of Weeds project was funded through the National Heritage Trust 2003–06 National Weeds Program. The Australian Weeds Committee endorsed the project and selected members to the project steering committee.

The intent of this project was to determine through consultation with government, industry and other organisations what activities were effective in minimising (or preventing) weed spread. The project involved Australia-wide input from:

- Local, State, Territory and Australian governments
- Industry organisations
- Community/conservation groups
- Control boards
- Research groups
- Government committees
- Indigenous land managers.

The **major findings** of the study are:

- Government, industry and other organisations are committed to preventing weed spread.
- The lack of objective measures made evaluating existing tools difficult.
- No one tool was seen as effective across Australia and only a few tools were identified at the State/Territory level.
- Participants found it difficult to determine if the effectiveness of tools was genuinely low or whether it was low because of a lack of resources to adequately implement use.
- The most common solution given was to have a consistent approach to weed spread management across all States and Territories and at all levels of government - this was closely followed by developing and maintaining a capacity to detect and eradicate new infestations.

Two **methods** were used to determine what is effective in weed spread prevention, namely:

- i. A workshop of 19 participants representing six State Governments, industry, regional bodies and community groups
- ii. A questionnaire surveying the opinions of organisations involved in weed management across Australia, which resulted in 81 responses.

Both survey methods produced very similar broad results, and both highlighted the need for:

- Dedicated resources and coordination for the effective management of weed spread nationally
- A common and consistent approach for weed management throughout Australia
- The capacity for ongoing detection and eradication of new infestations.

The **workshop** identified a number of **priority needs**, which were:

1. Provide dedicated resources and coordination for the effective management of weeds spread nationally.
2. Promote a common and consistent approach for weed management throughout Australia by:
 - i. Promoting what is effective at different levels e.g. farm biosecurity appears effective for empowering land managers to prevent new incursions and to manage weeds; codes of practice effective at industry level etc.
 - ii. Developing consistency between and within State Governments.
3. Develop a national internal surveillance system that includes dedicated resources to build the capacity of people from a range of backgrounds to identify new incursions and to monitor areas/activities with a high potential for weed introductions.
4. Develop and implement codes of practice for all industries having the capacity to spread weeds.
5.
 - a. Develop a national vendor declaration system.
 - b. Research machinery design to minimise or eliminate their potential to spread weeds.
 - c. Develop and implement an awareness and education program that specifically targets groups with a high potential to spread weeds.
 - d. Ensure current guidelines and procedures for the importation and use of potentially weedy species prevent new weed incursions.

The four needs in priority 5 could not be differentiated, each one as important as the others. All needs, listed above, were also reinforced in comments provided by questionnaire respondents.

The **questionnaire** used a reflective approach, evaluating existing tools, whereas the workshop mainly focussed on identifying future priority activities. The main outcomes of the questionnaire responses were:

- Lack of objective information to assess the effectiveness of tools
- Difficulty in assessing tools' true effectiveness due to the contributing factor of lack of resources to adequately implement most of them
- No single approach or tool was considered effective by most of the participants.

Other findings from the questionnaire were that a lack of resources to implement, communicate and enforce State and Territory legislation caused it to be ineffective and no one piece of legislation was identified as more effective than any other. Some gaps were identified and these were:

- The need for a vendor declaration system if supplying contaminated products and selling or leasing infested land

- The need for a more rigorous system to prevent weeds entering Australia and individual States and Territories.

Resources may also have been the reason behind the high effectiveness rating for species-specific weed programs, with programs such as Victoria's serrated tussock program and the Siam weed program in Queensland being two examples. There were tools that a number of individuals identified as useful, but due to the sample size, they cannot be considered as effective at the state or national levels. These tools included codes of practice or work practice guidelines for organisations. A comment from representatives of extraction organisations showed that these tools are being used effectively in this industry and their main concern was why it wasn't being required for other industries and organisations. Other tools considered effective were:

- Wash-down facilities in Queensland
- Inspection services in Western Australia, Tasmania and New South Wales
- Regional and local government weed management plans in Queensland
- The certification system in South Australia.

Product development and machinery design also received good feedback indicating that in theory these approaches appear useful, but at this stage are only favourable concepts requiring further development.

The **major recommendations from this study** are:

1. States and Territories develop consistent and complementary measures to prevent weed spread.
2. Weed spread prevention measures are adequately resourced to ensure both voluntary and regulatory compliance.
3. A national strategy and implementation plan be formulated to assist States and Territories in developing common, consistent and complementary measures for weed spread prevention.
4. A national coordinator be appointed to facilitate the development of this strategy and to promote the development of other weed spread prevention measures with industry, industry organisations and natural resource management groups.

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Project aim

The project aim was “Address the ‘preventative’ component of the National Weeds Strategy (NWS) and lead to a product for regional NRM organisations to use.”

The preventative components of the NWS pertinent to this project are the following principles:

- Prevention and early intervention are the most cost effective techniques that can be deployed against weeds and
- Successful weed management requires a coordinated national approach that involves all levels of government in establishing appropriate legislative, educational and coordination frameworks in partnership with industry, landholders and the community

And objective 1.3 of the NWS: ‘To reduce weed spread to new areas within Australia’.

Project objectives

1. Summarise the existing literature and expert knowledge on human induced weed spread in Australia to provide guidance in assessing the effectiveness of present strategies.
2. Review existing frameworks used by the States and Commonwealth to minimise human induced weed spread. The components of the frameworks reviewed would include:
 - a. Legislation,
 - b. Policies
 - c. Guidelines
 - d. Extension strategies and material.
3. Develop recommendations in line with the principles of the National Weed Strategy.

Background

The most cost effective technique in the management of weeds is prevention and early intervention. This fact has been embedded as a principle in the National Weed Strategy 1999. Another principle of this strategy is that successful weed management requires a coordinated national approach involving all levels of government. In addressing these principles and associated objectives and goals a coordinated and national approach to minimise human induced weed spread is required.

The cost of weeds to agricultural industries alone in Australia has been estimated at over \$3.3 billion per annum.

A recent economic assessment has shown that:

- Every \$1 spent on pest prevention yielded a return of \$31 in benefits
- Eradication of newly established weeds yielded a benefit cost ratio of 16:1
- Containment of widely established weeds such as prickly acacia and rubber vine had a benefit cost ratio, of about 2:1.

Until recently, most resources have been dedicated to controlling and containing established weed outbreaks with little attention given to preventing weed spread and early intervention in the process of weed establishment.

Presently, individual States and Territories have different strategies for reaching the common goal of minimising weed seed spread. Generally, the mechanism is through individual species management plans, such as those developed for Weeds of National Significance or operational procedures that are implemented at a local level. The need for a broader generic approach that includes practical guidelines based on current best practice has been emphasised by a number of organisations, service providers, contractors and private landholders. The threat of civil action, enhancing services to clients, promotion of hygienic produce and concern for the environment are some of the drivers behind this need.