Developing weed management strategies

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Summary Documented ‘Strategies’ are important in weed management because they allow the land manager to clearly set out a plan for ‘on-ground’ actions, monitoring, evaluation and reporting of these actions, and create a clear ‘business plan’ to encourage potential funding bodies to become partners in the planned endeavours. Unfortunately, Strategies are often prepared without essential components to adequately support these functions.

This paper suggests a layout and attendant hierarchy for a successful weed Strategy document, and points out the components that should be included. It also poses the questions that need to be asked during the development phase.

Keywords Stakeholder, strategy, weed management.

BACKGROUND Effective weed management requires coordinated work by all stakeholders and land managers in each individual region, and adjacent catchments, or regions.

A well thought-out Strategy (used with a capital S refers here to a document), backed by community commitment, will help in the long-term management of weeds. As more Strategies are written nationwide, it is important to develop and produce them in a consistent manner.

No weed species should be managed in isolation from other weeds. When one weed is removed from an area, another weed is likely to replace it if rehabilitation is not integrated into the weed management process. Follow-up treatments are a fundamental component of any management program.

Weed management should be seen as a long-term investment. The funding needs to be secured for short-term projects that lead towards long-term goals.

STRATEGY DEVELOPMENT A clear plan-of-attack is critical to increase the likelihood of achieving results, regardless of the type of weed management being undertaken. A good Strategy document allows the land manager to plan the program of work, set goals, allow for monitoring, and produce a ‘business plan’ to submit to potential investors.

Regardless of the level of detail, from a glossy national Strategy, to a one-page plan for a local flora reserve, Strategy documents need to be developed consistently. A suggested means for producing Strategies is set out below, the hierarchical order being based on those of The National Weeds Strategy (1999) and the Weeds of National Significance Strategic Plans (ARMCANZ 2001–2003).

In order to present a clear and unambiguous document, the Strategy developer must address several questions.

- What do you want to protect?
- Why produce a Strategy?
- Who will be the target audience?
- Who will be responsible for the work and who are potential investors (the stakeholders)?
- How are you going to create and publish the document?
- How will you structure, fund, monitor and evaluate the Strategy and its resultant actions?

What do you want to protect? The first decision that needs to be made is whether the Strategy is to be ‘species-led’ or ‘site-led’. ‘Species-led’ alludes to the management of a specific weed (do you want to reduce a particular weed to allow the ‘preferred’ flora to flourish?), as opposed to ‘site-led’ where the strategy is to care for a site, or region, of significance (e.g. Keel 1999, Keel et al. 2001).

It is very important that any weed species should not be managed in isolation from all other weeds, even in a species-specific Strategy. Follow-up treatments and rehabilitation are fundamental components of any management program. A ‘new’ weed is likely to replace the weed that is removed if rehabilitation is not integrated into the weed management process.

Local management goals should be clearly defined first, so that strategies, and ‘on-ground’ actions are devised to achieve these goals.

Why produce a Strategy? In answering this question, the author/s will need to identify the overall ‘Vision’ for the Strategy.

It may be helpful to remember that the primary aim of weed management work is not simply weed removal, but rather rehabilitation, i.e. protecting either ‘natural’ or production land values.
Who will be the target audience? It is important to identify who will read and use the Strategy.

It is important not to use jargon with which the audience is unfamiliar. The language needs to be pitched appropriately so that readers are not alienated. The more understandable a document is, the more likely it is to be implemented. If the readers are likely to come from all knowledge levels, the language should be aimed at the base level.

Who will be responsible? Do you need a workshop to get all the stakeholders together to draft a realistic outline for the Strategy?

It is important to include representatives of all people actively involved in the local weed management when starting to devise a Strategy; co-operation and dialogue at this stage should minimise conflicts later. If there is only a single stakeholder, a workshop will not be needed. However, this is often not the case. When a number of stakeholders will be affected by, or be asked to resource the actions of, the Strategy, it is a good idea to hold a workshop early in the planning stage to engage all of these disparate groups. Inviting input and feedback from stakeholders is likely to increase the levels of ‘ownership’ of the goals and actions, and ultimately encourage wide implementation of the Strategy’s Vision.

How are you going to publish the document? Early on in the planning phase a decision should be made as to the means of making the Strategy available to the stakeholders. This may be in book, CD, website or poster form, or a combination of these.

How will you structure, fund and monitor the Strategy? A suggested Strategy hierarchy is laid out below. It is not always necessary that all documents have all components, however, the order of these should not be altered as this could lead to confusion by those already familiar with some Strategies i.e. Actions should not be ranked higher than Goals.

This suggested outline allows for planning ‘on-ground’ actions, as well as for comments regarding components of the Strategy, such as monitoring, resourcing and stakeholder responsibilities.

DOCUMENT LAYOUT

Executive summary The summary may be the only page of the document that some people intend to read. A skillfully crafted executive summary may encourage further reading of the Strategy.

The Executive Summary should be no more than one page. Located at the front of the document, the summary is to be just that – a summary. It should give the reader a clear, concise overview of the Strategy, highlighting the Vision and listing the Goals. It is helpful if the ‘life span’ of the document is clearly stated here.

The challenge The challenge section should be a page that summarises the weed impacts, regional significance, the current and potential weed distributions, and key management factors.

A null hypothesis should be included here. This means setting out what would hypothetically occur if the proposed management Strategy was not undertaken e.g. the possible future costs (economic, biological and social). Many Strategies fail to include this important factor. A good example of a null hypothesis can be found in the ‘Regional Weed Management Plan: Blackberry – Rubus fruticosus L. agg.’ (North Coast Weeds Advisory Committee 2003).

Background The background can be quite short, as it need only refer the reader to easily obtainable information on the weed’s biology, history, control methods to date, quarantine and legislative controls, and socio-economic factors affecting management. It may be advisable to cross-reference the reader to the ‘Additional Reading’ list, and give several sources.

The document should be related to other publications, by showing its relevance to other Strategies. For example, a regional blackberry Strategy would sit directly under the ‘National Blackberry Strategic Plan’ (ARMCANZ 2001) and ‘Victorian Blackberry Strategy’ (Keel et al. 2001), whilst it would aim to complement the ‘Victorian Pest Management – A Framework for Action’ Strategy (Department of Natural Resources and Environment 2002) and sit alongside other regional blackberry Strategies. The region may already have weed management Strategies for other locally important weeds. In this case, your regional Strategy should complement these too.

Principles of weed management should be based on recognition of related national, state and local Strategies.

Strategy hierarchy This section is the crux of the document.

Achieving the Vision The order of Vision, Goals, Objectives, Management Strategies, and Actions (including Performance Indicators) should be presented to the reader. Cross-referencing to the glossary is advisable to provide a concise definition (including timeframes) for each term.

The Vision This should be a sentence outlining the main aim of the Strategy that should inspire people to become involved in the actions espoused. The Vision
should be consistent with those in related Strategies. The Vision should span the life of the Strategy.

**The Goals** These should be stated and set out clearly, with their associated Objectives, Management Strategies and Actions. Goals would usually have two or three Objectives.

Goals should be high level results to be achieved by the Strategy, consistent with those in related documents. They should also span the life of the document.

**The Objectives** Objectives sit under Goals; they are targets or policies that the projects must reach in order for the Goals to be achieved. They should each remain current for approximately half the life of the document (or up to a maximum of ten years).

**Management Strategies** A plan that will be completed in order to achieve the Objectives. They should span up to five years.

**The Actions** Actions are usually planned to span short-terms, one to two years in length. Each Action should be followed up by at least one Performance Indicator (e.g. Keel *et al.* 2001). These Performance Indicators should be ‘SMART’, i.e.

- **S**pecific to the Action
- **M**easurable
- **A**ction focused
- **R**ealistic
- **T**ime bound

Actions must be prioritised and responsibilities should also be clearly assigned by the workshop participants (or, if there is no need for a workshop, by the author of the Strategy). Three levels are usually sufficient:

1. for those Actions that *must* be done to achieve the Goal;
2. for those Actions that *should* be done; and
3. for those Actions that *could* be done.

Priority 1 Actions would usually be implemented before those with a lower priority, and form the foundations on which lower priority Actions are based.

**Monitoring and evaluation** Programs should be developed that allow for monitoring and evaluation of the Actions and the Strategy itself, in order to show how much progress is being made.

Monitoring can be costly. Allowing 10% of the budget for these purposes is not unreasonable. Often the costs of evaluation can be minimised by planning for it in the initial stages of the project. Data can then be collected progressively throughout the project, rather than as a separate activity towards the end. This approach allows any necessary fine-tuning of the project during its implementation, and on presenting these data, shows stakeholders the current benefits of the work being undertaken.

Funding organisations often expect monitoring and evaluation against desired outcomes, as one of the key performance measures of any weed management program.

**Stakeholder responsibilities** Early agreement on the roles and responsibilities of all parties concerned may avoid unnecessary duplication of roles, and overlooking work required to achieve the goals.

It will be necessary to gain written agreement from major stakeholders on their input, funding and commitment to the Strategy.

**Resourcing the strategy** An overall budget that shows the required funds to complete each goal is needed. It is important to fully fund any incentives mentioned in the Actions. Additional resources should be identified and secured. This should include lists of as many external sources as possible, and the proposed amounts applied for over set time periods.

It is important to remember that ‘Resources’ include people and information, as well as funding.

**Additional reading** An additional reading list should include all source information used in preparing the Strategy, as well as any additional material deemed important for the reader. It may be useful to sub-divide these two lists to aid the reader in discerning the relative importance to any additional reading.

**Glossary** An alphabetical list is needed to explain headings and technical terms, the use of which could not be avoided in the text.

**Appendices** Appendices are very useful, providing the reader with levels of detail that would otherwise clutter the document. Tables or Figures may be included, but they are better situated next to the text they support, unless they run to more than a page in length.

**CHECKLIST**

In conclusion, use this list to ensure that the key Strategy sections have been addressed.

1. Executive Summary ........................................... [ ]
   - The Vision .................................................. [ ]
2. The Challenge ................................................ [ ]
   - Null Hypothesis ........................................ [ ]
3. Background ................................................ [ ]
   - Relationship to other Strategies .................... [ ]
4. Achieving the Vision ....................................... [ ]
5. Monitoring and Evaluation .............................. [ ]
6. Stakeholder Responsibilities ........................... [ ]
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REFERENCES


Department of Natural Resources and Environment. (2002). Victorian Pest Management – A Framework for Action. (Department of Natural Resources and Environment, Melbourne).

