

Caring for country: community-based management of *Mimosa pigra* on Aboriginal lands in the Northern Territory, Australia

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Abstract

The community-based mimosa, *Mimosa pigra* L., management program on Aboriginal lands of the Top End of the Northern Territory emerged in 1998 and has been successful in controlling 7,000 hectares of mimosa. The program, implemented and maintained by Aboriginal people and facilitated by the Northern Land Council's Caring for Country Unit, has established strong partnerships with an array of government and non-government organisations.

After operating strongly for five years, Aboriginal land-management groups are broadening the focus of their mimosa management programs to tackle other land-management issues. Many Aboriginal groups are developing land-management enterprises to contribute to ongoing mimosa-management programs. The challenge is to further develop these enterprises and explore additional land-management enterprise options.

A participatory program evaluation process is now required to identify critical program issues (both positive and negative), devise operational responses to those issues, and incorporate alterations into the program-management framework. Aboriginal people have achieved remarkable mimosa-management outcomes and a community-driven evaluation process will ensure the program continues to achieve environmental and social benefits in the future.

Keywords: mimosa, participatory evaluation.

Introduction

In Australia, Aboriginal people constitute 2.1% of the total population and own 14% of the landmass, while in the Northern Territory (NT) Aboriginal people constitute 28.5% of the population and own over 40% of the landmass, with a further 10% under claim.

The Northern Land Council (NLC) is the principal representative body for Aboriginal people in the Top End (northern portion) of the NT. In the NLC region about half of the 28,000 Aboriginal people have retained or regained ownership of traditional lands — an area of land totalling about 170,000 km². These lands remain some of the most intact and biologically diverse landscapes in Australia. Aboriginal people live in approximately 200 communities ranging in size from small family groups at outstations up to townships of over 2,000 people.

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The NLC instituted the Caring for Country Unit (CFCU) in 1995 to assist Traditional Owners

(Aborigines with land-ownership rights) to increase their capacity to manage environmental problems such as feral animals, inappropriate fire regimes, and invasive weed species. Smith (2001) recorded 223 species of unwanted exotic plants on Aboriginal land. Of these, 52 species were classified as high-priority weed species. Included in the high-priority classification is mimosa, *Mimosa pigra* L., which has been identified as a key land-management issue by many Aboriginal people, particularly in wetland areas where it establishes and spreads rapidly. This desire to control mimosa has led to the development of seven community-based ranger programs with a further three programs, while not specifically created to manage mimosa, now involved in mimosa control as a component of broader land-management programs.

Social and environmental impacts of mimosa

Mimosa infestations can have dramatic impacts upon the lives of Aboriginal people. They have the potential to form large, dense monocultures that out-compete and displace wetland fauna and flora, which in turn can limit Aboriginal cultural activities and economic land uses. The development of community-based land-management programs has emerged as the most effective method of managing mimosa on Aboriginal land and will continue to expand as Aboriginal people assert their rights of land ownership and work towards realising their land-use and enterprise-development aspirations.

Program emergence

The Indigenous Land Corporation (ILC) is an independent Commonwealth statutory authority whose two main functions are to assist Indigenous peoples in Australia to acquire land and to manage Indigenous-held land in a sustainable way to provide cultural, social, and economic or environmental benefits. In 1998, the ILC signed a Mimosa Control Agreement to fund wet season aerial mimosa control operations on Aboriginal land with the NT Department of Primary Industry and Fisheries (DPIF), the NLC, and the White Eagle Aboriginal Corporation (WEAC). The five-year agreement provided operational resources for the hire of helicopters and purchase of herbicides to treat mimosa on inundated floodplains during the wet season. The Agreement provided a high-technology solution to an ecological problem but, for control to be sustainable in the longer term, the provision of ground control was required. The Agreement was successful in

treating many large mimosa infestations, encouraging communication and cooperation between key organisations and local Aboriginal communities, but was not successful in increasing the capacity of Aboriginal people to undertake mimosa ground control.

The need for resources for community-based ground control therefore emerged as a priority issue. A number of Aboriginal communities, the CFCU, and DPIF staff developed the Top End Aboriginal Land Management and Employment Strategy (TEALMES) to address this issue and provide operational resources for ground control. In August 2000, the TEALMES was funded with support from various agencies including:

- Aboriginal community organizations
- Indigenous Land Corporation
- Northern Land Council
- NT Department of Primary Industries and Fisheries
- Aboriginal and Torres Strait Islander Commission (ATSIC) Community Development and Employment Program
- Department of Employment and Workplace Relations and Small Business
- NT Employment and Training Authority
- Natural Heritage Trust.

The TEALMES does not aim to drive the land-management agenda on areas of Aboriginal land, rather the programs are driven by community members and encompass a diverse range of land-management activities. Mimosa management is a single component of these programs and, although continued control is essential to protect valuable wetland habitats, it is essential that the programs are as diverse as community aspirations. The four-year program timeline gives an opportunity to swing the emphasis away from external agencies coordinating and undertaking strategic control work towards the community controlling and undertaking the work independently. Ultimately, the TEALMES may also be a mechanism to assist Aboriginal landowners develop enterprises that may partially or fully fund land-management activities in the longer term.

As the TEALMES is not a generic model for establishing community mimosa-management programs, it does not encompass all mimosa-management programs on Aboriginal land. Several Aboriginal communities have independently developed mimosa ground-control programs. Presently ten community land management programs are actively engaged in mimosa management. The scope of control works varies from treatment of strategically important satellite infestations to the management of extensive infestations to facilitate the development of broad-scale

pastoral enterprises. The common thread is the community management approach from initial issue identification and project development to project implementation.

The importance of people

Historically, the techniques to control mimosa have existed since the late 1980s, but unfortunately adoption of these control techniques by the broader community was limited and *ad hoc* in its approach, and mimosa continued to expand its range across northern Australia. Much of this expansion occurred on areas of Aboriginal land and can be credited to the lack of community-based land-management programs at the time. It is not adequate to rely solely upon technology to achieve effective management of mimosa; community capacity-building is also integral to achieving sustainable long-term control. Storrs *et al.* (2002) describe the process of land-management capacity-building in greater detail, but it is worth noting that capacity-building is more than traditional extension methodologies or the raising of public awareness. It is a process that engages people and increases their capacity to deal with land-management issues. It includes components of traditional extension techniques, and incorporates social and economic factors. These factors must be addressed if mimosa management is to be sustainable in the longer term; the key success of the community-based mimosa-management program is that it focuses upon people and not solely upon mimosa.

On-ground outcomes

The nature of the community-based mimosa-management programs vary significantly between Aboriginal communities, from broad-scale extensive control, to control of regionally and nationally significant satellite mimosa infestations. To date, the community-based mimosa management program has treated 7,000 hectares of mimosa and is contributing to limiting the spread of this weed.

Monitoring process

The implementation of the community-based mimosa-management programs is largely monitored by the reporting requirements of particular funding organisations. Although this monitoring regime is externally driven, it provides a mechanism to review the status of specific on-ground control activities against project expenditure. Geographic information system (GIS) software is used to map mimosa and quantify the infestations

across particular landscapes. GIS software is then employed to assist:

- develop control strategies based upon strategic weed management principles
- develop strategies to prevent mimosa invasion into susceptible habitats and other mimosa-free environments
- quantify the management resource requirements given the extent of mimosa distribution
- illustrate where mimosa has been reduced across large geographic areas
- explore environmental disturbance factors such as fire, soil removal, and vector movement upon mimosa distribution.

This type of monitoring quantifies the effectiveness of on-ground mimosa-management activities but, if used in isolation, ignores social and economic considerations.

The requirement for participatory evaluation

Participatory evaluation is a tool that can provide an understanding of social and economic issues that impact upon the ultimate success of the community-based mimosa-management program. These impacts can be significant and, to date, have been largely ignored in the monitoring process. Participatory evaluation can be described as a process of self-assessment, where individuals or groups define the evaluation methodology, undertake the evaluation, document the project issues (both positive and negative), define solutions, and implement those solutions. This ownership of the evaluation process prevents suspicions associated with external or unfamiliar evaluators, allows people to discuss cultural and social issues that would be inappropriate in company of non-community members, and will ultimately enhance the adoption of evaluation recommendations.

The requirement for broader evaluation

To build upon a community-based participatory evaluation process it is desirable to undertake a broader evaluation incorporating all stakeholders in the community-based mimosa-management program, not just the community members responsible for implementing on-ground control activities. Coutts (1997) suggests an evaluation methodology that encompasses all program stakeholders that is termed the "three ringed" approach. The methodology describes program evaluation in terms of the groups, or rings of stakeholders, that either directly or indirectly impact upon the success of community programs.

The methodology incorporates analysis of the following “rings” of stakeholders, the **inner or core ring** termed the internal project level, the **secondary support ring** termed the direct project impact level, and the **external ring** termed the overall community or societal level.

The **core ring** of stakeholders includes Aboriginal people who are responsible for the implementation of on-ground mimosa control. This stakeholder group is the key to the ultimate success of the program and, as such, should drive the evaluation process. The evaluation can be as informal as the groups discussing their perceptions of the success, or otherwise, of the mimosa-management program, identifying alterations to the program, and feeding this information back into the work programs. If the particular community desires, the evaluation can be more formal and incorporate an “outside” facilitator to assist the group to determine the evaluation methodology and feedback mechanisms. It is important that the inner or core ring of stakeholders drive the evaluation, and do not feel threatened by the outcomes. Stakeholders must be confident enough with the process to provide full and frank discussion without the threat of external judgement.

The **secondary support ring** encompasses the array of agencies that provide assistance and facilitation to the community-based mimosa-management programs. It includes the Aboriginal organisations that host the administration components of the program, the funding agencies mentioned previously in this paper, the training partners, and facilitation organisations. The evaluation methodology employed with this group of stakeholders can be interview-based and concentrate upon key individuals within those organisations. The aim of the evaluation is to identify administrative and project-management issues that may impact upon participants within the inner core group of stakeholders. The evaluation would also explore issues associated with the linkages to the inner core stakeholders and the effectiveness of communication and information flows between these two groups.

The **external ring** incorporates evaluation of the wider community and society. Logistically, the evaluation would target landholders in areas adjacent to the on-ground mimosa activities. Mimosa can spread rapidly through catchment areas and coordinated management is the key to achieving sustainable long-term control. An evaluation across catchments would explore these issues and identify opportunities for additional collaboration among landholders and to raise awareness of the program in the wider community. For cost efficiency, the evaluation would employ methodologies such as phone interviews or mail-out surveys.

Opportunities for evaluation case studies

An evaluation of this scope requires considerable resources to complete, but savings can be achieved by stratified targeting of individual groups within the broader community-based mimosa-management program. Results of the evaluation with individual groups will provide insights into the community mimosa-management program that may prove useful for other groups. While it is difficult to comment on the extent of the transferability of results, given the considerable resources currently committed to the mimosa-management programs, the evaluation is justified and overdue.

Conclusion

The community-based mimosa-management program has achieved significant environmental outcomes through on-ground control activities, and significant social outcomes in terms of developing participants’ employment skills, and increasing the capacity of Aboriginal landholders to manage their country.

The challenge for the community-based mimosa-management program is to sustain control activities in the longer term. If the programs are to continue, medium-term, flexible funding arrangements are required, income generation through enterprise development must contribute to the programs, program participants must continue to drive the mimosa and broader land-management agenda, and an appropriate evaluation process is required. A people focus, combined with an appropriate evaluation, will ensure the mimosa-management program continues to achieve environmental and economic outcomes that benefit Aboriginal people of the Top End and the nation as a whole.

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