

**Not from here:
Plant invasions
on Aboriginal
lands of the Top
End**

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Centre for Indigenous Natural and
Cultural Resource Management**

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Executive Summary

Aboriginal lands constitute nearly 50 per cent of the Northern Territory and continue to provide both a spiritual and socio-economic focus for contemporary Aboriginal life. However northern Australian ecosystems, especially wetland and riparian habitats, are under threat of invasion from a number of weed species which affect both the structure and function of those ecosystems and which may also have a major negative effect on the lives of Aboriginal people.

Aboriginal people own more than 170,000 km² of terrestrial estate yet the capacity to manage rapidly emerging threats to the integrity of that land, such as weeds, is low. Aboriginal landowners and their community-based agencies are often without the physical, financial and technical resources available to control weeds. Traditional land-management skills and ecological knowledge alone do not adequately address new and emerging environmental problems. Aboriginal landowners in the Northern Land Council (NLC) area face poorly understood and serious environmental problems at large landscape scales associated with plant invasions. They have few and poorly focused resources to deal with those problems.

While the concept of developing strategies to address the weed issue on NLC lands is not new, this overview is the first step towards bringing together information which both defines the problems to some degree and provides a strategic framework in which to address those problems in the most effective way.

A total of 223 unwanted exotic plant species have been recorded on Aboriginal land in the NLC region. These include 25 trees, 49 shrubs, 54 annual herbs, 18 perennial herbs, 29 vines or creepers, 28 perennial graminoids and 20 annual graminoids. The families with the highest representation include Poaceae (40 taxa), Fabaceae (27 taxa), Asteraceae (12 taxa), Euphorbiaceae (13 taxa), Amaranthaceae (9 taxa), Malvaceae (8 taxa), Convolvulaceae (8 taxa), Caesalpiniaceae (8 taxa), Mimosaceae (6 taxa), Solanaceae (6 taxa), Verbenaceae (6 taxa), Rubiaceae (6 taxa), Apocynaceae (6 taxa) and Cyperaceae (5 taxa).

A total of 82 species (36.7%) are naturalised exotics, 129 species (58%) are disturbance exotics and 17 species (7.6%) are cultivated plants that have the potential to be weeds or have a demonstrated record as a weed elsewhere in Australia. Eighty-seven species were introduced accidentally (39% of all weeds), 67 species resulted from plants naturalising outside of garden situations (30% of all weeds) where they were introduced as ornamental plants. Fifty-two species were given a high priority, 76 medium priority and 96 a low-priority ranking.

This overview lists 30 recommendations (see the following section) based on the principles that priority should be given to controlling high priority invasive weeds and a greater emphasis be placed on prevention. The strategic approach outlined in this overview involves the long-term planning operations involving capacity building of best practice operations under the following headings.

Legislative requirements for weed control

Recommendations here deal with improving the knowledge in Aboriginal communities about the Northern Territory Weeds Act and the new draft Weeds Bill. An urgent need was identified to get information on both the existing and pending weed legislation to Aboriginal landowners in a culturally appropriate format so that landowners are in a position to make informed decisions about land management on their country.

Weed origins

The recommendations here relate to increasing the awareness of Aboriginal people about the method of introduction and spread of weed species.

Future collection, storage and mapping

This overview indicates the paucity of knowledge we have about weeds on Aboriginal land. Recommendations here deal with obtaining the resources to adequately carry out weed survey work on Aboriginal land, to develop adequate weed management mapping tools and to

Executive Summary

assigning priorities to weed control work—given that resources required for weed control work are always going to be limited.

Weed management

The recommendations here are based on the principal that to prevent weeds becoming established is preferable to reactive responses once this has already occurred. The control of imports, development of preferred species lists for communities, washdown facilities and adoption of best practice policies are some of the recommendations suggested.

Training

Education and training are crucial to sustainable land management outcomes. However this overview revealed some Aboriginal people who wanted to undertake training were not actively undertaking any because of the lack of appropriate methods of delivery. Recommendations here deal with informing Aboriginal people about appropriate types and levels of training available.

Awareness

Awareness of what weeds are and the problems they cause will help land managers and owners to understand why long-term weed management is so important. Recommendations suggest the production of appropriate material about weed issues and an increase in the education and involvement of Aboriginal landowners in weed issues.

Collaboration and Partners

While it is important to build capacity in communities, it is also critical that institutions become aware of their lack of expertise to work in cross-cultural settings. Building capacity within institutions to work and operate in truly collaborative research projects is required. Recommendations suggest that institutions dealing with Aboriginal people in weed management undergo training to help remove the institutional blocks that currently prevent appropriate collaborative or collegial relationships.

List of Abbreviations

ALEP	Aboriginal Landcare Education Program (Greening Australia NT Ltd.)
ALRA	Aboriginal Land Right Act
ATCV	Australian Trust for Conservation Volunteers
BFCNT	Bushfires Council of Northern Territory
CDEP	Community Development Employment Program
CFCU	Caring for Country Unit (Northern Land Council)
CINCRM	Centre for Indigenous Natural and Cultural Resource Management (Northern Territory University)
CSIRO	Commonwealth Scientific and Industrial Research Organisation
EA	Environment Australia
FATSIS	Faculty of Aboriginal and Torres Strait Islander Studies (Northern Territory University)
GA	Greening Australia
GIS	Geographical Information System
GPS	Global Positioning System
IBK	Indigenous Botanical Knowledge
ILC	Indigenous Land Corporation
ILMF	Indigenous Land Management Facilitator
IWM	Integrated Weed Management
NAQS	Northern Australian Quarantine Service
NHT	Natural Heritage Trust
NLC	Northern Land Council
NTDPIF	Northern Territory Department of Primary Industry and Fisheries
NTG	Northern Territory Government
NTRC	Northern Territory Rural College
NTU	Northern Territory University
PWCNT	Parks and Wildlife Commission of the Northern Territory
SHLS	School of Horticulture & Landcare Studies (Northern Territory University)
TAFE	Technical and Further Education
TBK	Traditional Botanical Knowledge
TEK	Traditional Ecological Knowledge
TS-CRC	Tropical Savannas CRC
VET	Vocational Education and Training
VRDCA	Victoria River District Conservation Association
Weeds CRC	CRC for Weed Management Systems
WONS	Weeds of National Significance
WWF	World Wide Fund for Nature

Glossary

Aboriginal land management	Generally refers to the management of land by Aboriginal people.
Aboriginal land	Aboriginal land refers to land to which Aboriginal people have inalienable freehold title under the Aboriginal Land Rights (NT) Act 1976. It also refers to other situations where Aboriginal people hold secure title under a lesser form of tenure, such as NT Pastoral Lease or NT Freehold. See also Native Title
Action research	A style of research which is not linear from hypothesis formulation; data collection; results and interpretations but rather, follows an interactive and cyclical research process involving successive cycles of thinking, acting, observing and reflecting
Alien plant	A plant growing outside its natural range
Country	The term country refers to land that has religious and spiritual significance to Indigenous people
Declared Weeds	Plants that have been declared under the Noxious Weeds of the Northern Territory Act 1980
Disturbance Exotics	Exotic plant species that are naturalised on disturbed ground
Environmental weeds	Plants that invade communities or ecosystems and are undesirable from an ecological perspective
Established	Widespread over large areas of the Northern Territory or locally abundant in one area
Exotic weed	Describes an invasive unwanted non-native plant
Feral	The term feral refers to a plant which was introduced to Australia or which has escaped from domestication to become established as wild populations
Graminoid	A plant from the family Poaceae, Restionaceae or Cyperaceae
Invasive weed	Weeds that infest large areas or cause economic and ecological damage to an area
Native Title Interest	A native title interest is a right or interest in accordance with Aboriginal law and recognised by Australian Common Law under the Native Title Amendment Act 1993
Naturalised alien plant	A naturalised alien plant is one that has become established and has reproduced for several generations
Naturalised exotics	As for naturalised Alien plants however the species has originated from overseas
Northern Land Council	The NLC is a statutory authority established under the Aboriginal Land Rights (NT) Act 1976 representing the owners of Aboriginal land in the Top End of the Northern Territory. The Land Council has 78 elected members from communities throughout the Land Council's region
Participatory planning	An approach to resource-use planning which advocates local community involvement to optimise ecosystem management
Participatory rural appraisal/Rapid rural appraisal	A specific approach and set of tools often used by research teams during participatory planning
Pest	Any species that interferes with the quality of water, food native ecosystems, forestry, agriculture, buildings or animals etc. It can be a native or introduced plant
Noxious weeds	Species of plants that have been declared 'noxious' under the Noxious Weeds Act 1980

Introduction

1.1 The urgent need to build local capacity for weed management

Aboriginal lands constitute nearly 50 per cent of the Northern Territory and continue to provide both a spiritual and socio-economic focus for contemporary Aboriginal life. However northern Australian ecosystems, especially wetland and riparian habitats, are under threat of invasion from a number of weed species which affect both the structure and function of those ecosystems and which may also have a major negative effect on the lives of Aboriginal people.

The concept of developing strategies to address the weed issue on Northern Land Council (NLC) lands has been discussed for some time (Storrs et. al. 1996). This overview is the first step towards bringing together information that both defines the problems to some degree and provides a strategic framework in which to address those problems in the most effective way possible with available resources.

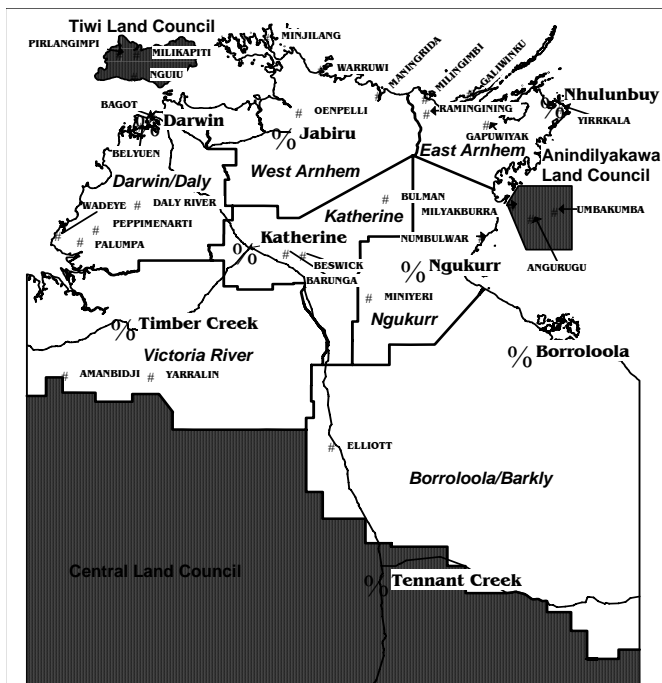


Figure 1: The Northern Land Council region

Weeds located on Aboriginal land in the wet-dry tropics pose unique management problems. In the NLC region (see Figure 1), Aboriginal people own more than 170,000 km² of terrestrial estate yet the capacity to manage rapidly emerging threats to the integrity of that land, such as weeds, is low. Aboriginal landowners and their community-based agencies are often without the physical, financial and technical resources available to control weeds.

Traditional land management skills and ecological knowledge alone do not adequately address new and emerging environmental problems. In pre-colonial Aboriginal Australia there was no need for the concept of a weed as it is widely understood today. Land management practices developed over millennia generally ensured that all plants grew in the places where they belonged and where they contributed to ecological suites of species which were relatively stable under traditional management, particularly local prescriptions for use of fire.

Many Aboriginal landowners today still have difficulty appreciating the potential environmental impact of ignoring the spread of weeds, as we must presume the settlers, who brought these foreign species, did in their time.

Introduction

In summary, Aboriginal landowners in the NLC area face poorly understood but serious environmental problems at large landscape scales associated with plant invasions and have few and poorly focused resources to deal with those problems.

As the peak representative body for Aboriginal landowners in its area and with statutory functions on their behalf, the NLC has a key role to play in assisting landowners to secure appropriate resources and focus them on urgent needs. The Aboriginal Land Rights (Northern Territory) Act 1976 imposes a primary and extensive statutory role for the Northern Land Council including:

- to ascertain and express the wishes and the opinions of the Aboriginal people living in the area of the Land Council as to the management of Aboriginal land in that area; and
- to protect the interests of traditional Aboriginal owners of, and other Aboriginal people interested in, Aboriginal land in the area of the Land Council.

The NLC established the Caring for Country Unit (CFCU) in 1995 to assist landowners with environmental management of their lands. The CFCU seeks to assist landowners in developing strategies that are effective at a number of levels: local (family, clan community), regional (catchment, administrative, bioregion) and across the NLC region of responsibility.

Participatory planning approaches, adapted to local situations, are seen as essential to local ownership of, and commitment to, these strategies. CFCU seeks to increase its own capacity to facilitate participatory planning and to train others in the techniques. Recognising that some critical environmental problems may require urgent action (e.g. mimosa) and that social disputes may sometimes inhibit early action, the CFCU seeks also to develop its own capacity to facilitate mediation in land disputes which inhibit necessary land management.

Collaboration is recognised as essential in areas of research and action because of the scale of environmental problems, the novelty (to Aboriginal people) of environmental problems and the background of broader socio-economic factors which currently inhibit landowners' capacity to adequately address problems.

CFCU has an important role in facilitating equity and effectiveness in collaboration among Aboriginal landowners and other landowners, scientists, government agencies, NGOs, local government bodies and land councils. The approaches, expectations and desired outcomes of all parties in collaboration need to be transparent to all parties at the commencement of collaboration. The CFCU has a major role in both facilitating, and to a degree mediating, the activities of these agencies working on Aboriginal land under Territory legislation. (This is only so far as Northern Territory legislation in areas such as fire and weeds and other environmental controls apply to Aboriginal land to the degree that they are compatible with the Aboriginal Land Rights Act.)

There is a growing culture and practice of collaboration developing between Aboriginal landowners, community based agencies, the NLC and agencies such as the Bushfires Council NT, NTDPIF, PWCNT and other instrumentalities in the Territory. Given the political background to Aboriginal land rights, developing a culture of collaboration is not to any degree a "natural" process. It requires sensitivity—not just to cultural issues—but also to the reality of political issues. Nevertheless there are many and increasing examples of where strong collaborative networks are being established at officer level and in some cases at higher levels.

A key element in building strong collaboration is shared recognition that for vegetation management to be effective in the longer term it is essential that policy and action be directed to capacity building at the local level. Recognising that "the land needs its people", CFCU activities focus on increasing the capacity of people and institutions in meeting self-defined goals in undertaking on-ground land management work. Capacity building is intended to be effective from the level of the individual upwards in addressing needs of skills, institutional arrangements and resourcing.

The CFCU aims to provide Aboriginal land managers with access to western scientific land management training and assist community organisations to resource and coordinate land management at a scale larger than clan estates. The appropriate analogy is to assist land owners

Introduction

and managers to have access to two ‘toolboxes’ of knowledge: a toolbox of traditional ecological knowledge (TEK) acquired from elders and a toolbox produced from the mainstream of science-based approaches to land management. This contrasts with the call to “bring traditional knowledge and western science together” which we might refer to as the “blender approach”. The danger in such an approach is that the combination may be more superficial than real and that elements of each system of knowledge may suffer from being separated from intrinsic underpinning principles within each system. Recognising the particular strengths within each toolbox for particular applications, in their own right, may be safer than the blender approach.

In addition to a need for knowledge about weeds and their control, Aboriginal land owners need other resources to deal effectively with weed invasion. Where there are Community Development Employment Program (CDEP) projects operating within Aboriginal councils or resource centres there is an opportunity to build land management capability as discrete sub-projects within a range of projects. Such sub-projects can be a focus for research into existing and pending environmental threats, for developing appropriate local strategies through participatory planning and collaborative arrangements and implementing such strategies with local labour. Where communities have no access to CDEP there are much greater difficulties in getting started towards increased management capacity. The importance of maintaining and extending the availability of CDEP to communities cannot be overstated.

Experience in Arnhem Land, and particularly from Maningrida and Ramingining suggests that a “Community Ranger” approach to land management does have some popularity. However, it is important that local land management structures or arrangements are developed by local people to suit their local circumstances. Increasingly serious weed problems provide a focus for development of such arrangements. At Maningrida and Ramingining the arrival of satellite incursions of mimosa was the catalyst and incentive that led to increasingly formal local land management arrangements as people realised the catastrophic threats to land and lifestyle which such aggressive invaders posed. It is also important that strategies and resourcing are developed within realistic timeframes. While some works are of absolute urgency, longer-term strategic arrangements are essential to an appropriate movement of responsibility from external agencies to local landowners linked to development of capacity.

In late 1998 the NLC signed an agreement with the Indigenous Land Corporation (ILC) and the NT Department of Primary Industry and Fisheries (NTDPIF) to enhance mimosa management operations on key portions of Aboriginal land within the NLC area. The five-year agreement has the potential to greatly enhance the management of mimosa on Aboriginal lands, keeping large areas free of the weed and minimising its impact in currently infested areas. The NLC input into that agreement is to enhance community participation in the program, ensuring the long-term management of the weed. The five-year time line gives the opportunity to swing the emphasis from the NTDPIF undertaking the work toward the community undertaking the work themselves.

Although the agreement is specific to mimosa, mimosa is the incentive and catalyst to develop more broad-based land management programs throughout the NLC region and to raise awareness of the threats posed by other foreign invaders. It is reasonable to predict that addressing the management of mimosa in its extensive range across the Top End will result in a wide geographic range of land management programs based in the sub-coastal areas of the NLC region. In other areas there may be other difficulties to achieving sustainable and effective land management. Just as some areas have no CDEP, there are some large areas that for historical and logistic reasons are unpopulated and where, as a result, management is minimal. There is a clear correlation between these depopulated areas and the decline in vegetation quality through outbreaks of large, hot and destructive wildfires in the late dry season. Lack of management also fails to address strategic control of incursions of weeds, feral animals etc. Novel strategies are needed for the management of these areas.

Aboriginal pastoral properties within the NLC area are also generally without access to CDEP. In most cases these properties are economically marginal. They do not have the financial resources to develop the same kind of environmental management labour force as can areas with access to CDEP. This is a major issue for the future.