

# Australia's Tropical Savannas

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The Tropical Savannas CRC has taken up this research challenge by bringing together researchers from different disciplines, sectors and regions.

Australia's tropical savannas are the landscapes of dense grass and scattered trees that cover almost one-quarter of the continent ranging from Rockhampton on the East Coast, across the Gulf, Top End and over to the Kimberley in Western Australia. The Tropical Savannas CRC (TS-CRC) was established in 1995 under the Commonwealth Government's CRC Program. The Centre was granted another seven years funding in early 2001 and in mid-2001 will become the Tropical Savannas Management CRC.

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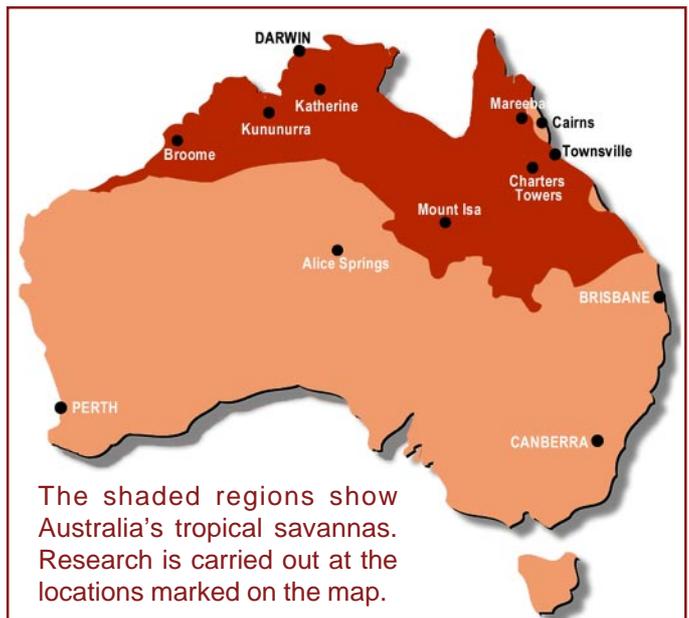
These researchers are drawn from our partner agencies who are the major providers of research and information in northern Australia, as well as the major policy-makers (see list on next page). Working together they can tackle some of the big-picture issues in tropical savannas not easily dealt with by single organisations.

Their purpose has been to provide the science and information necessary for the wise management, sustainable use and considered conservation of this region of relatively intact country. In so doing, the Centre has aimed to bring benefits to the region's people, economy, infrastructure and ecology, while avoiding the overuse of natural resources evident in other areas of Australia and in many tropical savannas throughout the world.

## Importance of tropical savannas

The tropical savannas These landscapes are very important for a number of reasons.

- They are home to a pastoral industry that includes some of the most extensive operations in Australia and that manages the largest area of land of any group in the north.
- The tropical savannas are also harbour an extraor-



dinary variety of plants and animals. Many factors contribute to this richness, not least of which is the fact that the tropical areas of the world tend to harbour high levels of biodiversity and that north Australia still retains substantial natural habitat.

- The tropical savannas have a rich Aboriginal culture. Aboriginal land covers substantial parts of the region such as Arnhem Land in the Top End of the NT. Aboriginal people have a long association with the land and much traditional knowledge of land management.
- These three factors—the cattle station lifestyle, the natural environment and Aboriginal culture—are major attractions for an increasing tourist trade to the savanna country. Such visitors are often Australians who have retired on extended self-drive trips.
- The largest generator of money in the tropical savannas region, however, is mining, with some of the world's largest mineral ore bodies and mining operations in the region. Mining activities generate the bulk of the \$13.5 billion a year in income of the tropical savannas.

## Climate and geology in the savannas

Climate and geology are two important factors that shape the landscapes of the tropical savannas. The combination of extreme weather conditions and infertile soils has meant that land use in much of northern Australia has been restricted to low-density cattle grazing.

Geologically, northern Australia is very ancient. The entire continent has been drifting slowly northwards since the super continent of Gondwanaland broke up around 100 million years ago. For all this time there has been little major geological activity like mountain building.

*Introduction to Australia's tropical savannas*





## Tropical Savannas Management CRC Partner Agencies

### Universities

- Northern Territory University
- James Cook University
- University of Queensland\*

### Commonwealth

- Environment Australia, Biodiversity Group;
- CSIRO Sustainable Ecosystems; Land & Water;

### State

- Northern Territory Parks & Wildlife Commission;
- Northern Territory Department of Primary Industries & Fisheries;
- Northern Territory Department of Lands Planning & Environment;
- Northern Territory Power & Water Authority;
- Queensland Department of Natural Resources;
- Queensland Environmental Protection Agency;
- Queensland Department of Primary Industries;
- Agriculture Western Australia;
- Western Australia Department of Conservation & Land Management.

### Industry Sector

- The Caring for Country Indigenous Land Management Forum\*
- North Australia Beef Council: Meat and Livestock Australia\*

\*New core partners for the Tropical Savannas Management CRC, beginning in July 2001.

Consequently the geology is relatively old and weathered, with less fertile soils than those areas with more recent geological activity. The fertility of the soil has enormous impact over entire ecology of the savannas, and has means the capacity for agricultural development is limited.

The northward drift of Australia took it into the mid-latitudes where it came under the influence of the El-Nino Southern Oscillation (ENSO) system of weather. This system has resulted in extremely variable rainfall patterns over much of the continent, particularly the inland regions. As a result many areas suffer from prolonged droughts.

Those areas of the tropical savannas nearer to the coast however tend to have a more predictable monsoon climate with a shorter, intense wet season and a longer dry season. As one moves further inland the climate becomes generally less predictable and drier.

### Land-management issues

Three of the most important land-management issues are the management of fire, weeds and grazing. Some of these issues are covered within our section on the Prime Notes CD ROM.

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For more information about land-management issues in northern Australia, go to the Savanna Explorer section of our website at <http://savanna.ntu.edu.au>

For more information about the Centre's extensive research program go to our research section.

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