

INTRODUCTION

If you leave the Wet Tropics around Cairns, and head west by car for an hour or so, the road goes up and over the mountains that lie behind the coast. On the other side, the rainfall drops off quickly, and you enter the great 'sea' of savanna that stretches across Northern Australia. Still heading west, several long days of driving later, you will reach Broome on the edge of the Indian Ocean.

For all this time, for all the 3000 or more kilometres of travel, you will have been among vast areas of eucalypt savannas and native grasslands, broken only by an occasional cleared paddock, a scattering of small towns, and the rivers and wetlands that give life to the country.

This landscape of savanna and rainforest, rivers and wetlands, is of great significance. On a global scale, such large natural areas are now very rare. Northern Australia stands out as one of the few very large natural areas remaining on Earth: alongside such global treasures as the Amazon rainforests, the boreal conifer forests of Alaska, and the polar wilderness of Antarctica.

Unlike much of southern and eastern Australia, nature remains in abundance in the North.

Great flocks of birds still move over the land searching for nectar, seeds and fruit. Rivers still flow naturally. Floods come and go. In fertile billabongs, thousands of Magpie Geese, brolgas, egrets and other water birds still congregate.

The intact nature of the North provides a basis for much of the economic activity and the general quality of life for residents of the area. Most of the major industries – tourism, pastoralism, Indigenous economies – rely on productive, functioning and healthy natural ecosystems. Across the North, recreational activities such as fishing, four-wheel driving and visiting beautiful country depend on the opportunities provided by a largely intact and natural landscape. Being in and among nature remains a normal part of life for people in the North, in contrast to the situation for those living in the now highly transformed, cleared and urbanised areas of southern Australia.

For the high proportion of Northern Australian residents who are Indigenous, country is part of the essence of life. Knowledge of and links to the land remain strong, and there remains an enduring responsibility to look after the land, and its plants and animals.



❶ (Previous page) Starcke Falls, Cape York Peninsula. Photo by Kerry Trapnell

❷ Alligator River Floodplains, Kakadu National Park, Top End. Photo by Glenn Walker

However, there are increasing signs that much of the country in Northern Australia is not healthy. Some native plants and animals are declining, and many non-native plants and animals are increasing. Many people in the North live in communities with poor physical, social and economic health. There is increasing debate and conflict over the best use of natural resources.

WHAT IS A BIOREGION?

A bioregion is an area defined by a mixture of biological and geographical factors (Thackway and Cresswell 1995). For example the Central Kimberley Ranges are often defined as a distinct bioregion. The region has characteristic rocky sandstone ranges that have scattered trees and spinifex grass. The ranges are separated by valleys that support eucalypt savanna on deeper alluvial soils. The climate is monsoonal, with low annual rainfall tending towards semi-arid.

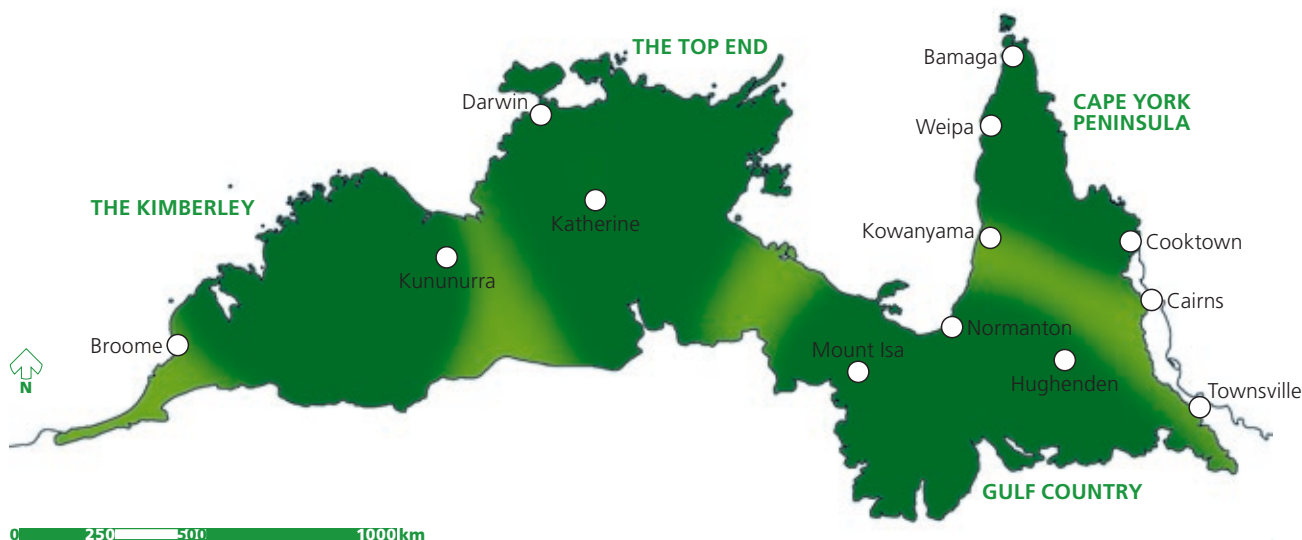
OBJECTIVES OF THIS STUDY

This study arose because of the authors' concern about the future of the North's natural values. A comprehensive account of these values is long overdue. Over the last decade there have been great advances in understanding the ecological workings of the North. But for most Australians, the North remains a strange and somewhat foreign land, stereotyped by myth and tourist advertisements. Planning for the future of the North, or indeed of Australia as a nation, cannot rest on such a shallow base.

We have written this report for all those concerned with the long-term future of the North.

We share the view that given the significance of its natural values, the desirable future we should consider for Northern Australia is one that looks after the country, its people and its wildlife.

FIGURE 1.1 MAJOR REGIONS OF NORTHERN AUSTRALIA



In this study, we report on three specific sets of knowledge and analysis:

- An evaluation of the natural values of Northern Australia, drawing on contemporary environmental, ecological and conservation science;
- An assessment of 'how the country works'; that is, the ecological processes that maintain country, wildlife and people in Northern Australia;
- Building on the first two points, an analysis, set of recommendations and advice on how best to protect country and wildlife, and to lay the foundation for healthy communities and people in Northern Australia for the long term.

THE REGION

Northern Australia is not a political entity (although there have been occasional attempts to establish such a state), nor is it a rigidly demarked environmental unit. Across much of the North there is a gradual transition from high-rainfall coastal areas (with denser vegetation) to semi-arid and arid inland Australia (with more open vegetation). Hence, any bounds to the region are partly artificial. Historically, there have been a range of attempts to delineate 'Northern Australia'. One commonly used boundary is that of the Tropical Savannas Cooperative Research Centre (CRC); this was largely based on a conventionally accepted national mapping of bioregions.

This study broadly follows the CRC definition and boundaries, except that we exclude from most considerations the Central Mackay Coast, part of the Mitchell Grass Downs, Wet Tropics and the Brigalow Belt North bioregions, along the southern and eastern flanks of the area defined by the CRC. We also deliberately exclude the Wet Tropics bioregion – Australia's tropical rainforest core, around Cairns – because its climate, topography and environments are notably different, and because it has received relatively intensive study elsewhere.

Thus, our study region comprises those areas generally known as the Kimberley, Top End of the Northern Territory, the Gulf Country and Cape York Peninsula, extending south into north-central Queensland, around and including the Einasleigh Uplands (Figure 1.1). This covers an area of more than 1.5 million square kilometres. As so defined, Northern Australia includes all of the catchments of rivers flowing into the northern tropical seas – the Indian Ocean, Joseph Bonaparte Gulf, Timor Sea, Arafura Sea and Coral Sea, and includes lands most exposed to a monsoonal climate.

Not included in this study are the marine ecosystems of the North. These range from the Great Barrier Reef in Queensland to the seas around the Buccaneer Archipelago on the Kimberley Coast. Ideally, this study would have included as much information on marine ecosystems as on terrestrial systems. However, the information available on most

marine systems in Northern Australia remains scant and patchy. There are still major gaps in knowledge on the ecological connections and processes that operate in northern seas, and of the processes and patterns that link the marine and terrestrial environments. We therefore leave marine issues for a future study. Our study of Northern Australia extends to the estuaries and mangroves, but no further.

people, and there remain strong attachments of Indigenous people across the entire landscape.

Much of the fate of the North's environments is inexorably linked to the cultural integrity and prosperity of Indigenous societies. Many Indigenous communities are beset by poor standards of health and education, by poverty and by cultural decay; and this is reflected in and further fuelled by deterioration of Indigenous-owned lands and their natural values.

Environmental management is one area that offers hope, employment and cultural respect for Indigenous communities. As evident in some examples in this book, the North is at the forefront of such management, and there are an increasing number of successful cases – of joint management of conservation reserves, of Indigenous Protected Areas, of Indigenous ranger groups, of use of traditional fire management for carbon trading – each demonstrating some connection between healthy lands and healthy communities. While such examples fit readily into the theme of this book, we recognise that we do not speak for Indigenous aspirations, and that at least some Indigenous peoples will have very different perspectives on the natural values in Northern Australia.



1 Aboriginal stockman, Glen Garland Station, Cape York Peninsula. Photo by Kerry Trapnell

2 Open savanna with fallen tree, Cape York Peninsula. Photo by Kerry Trapnell

INDIGENOUS KNOWLEDGE AND VALUES

This study reflects the perspective of western-trained conservation scientists. It does not present an Indigenous perspective, nor Indigenous ecological knowledge of the North. As such, we acknowledge that this story remains incomplete.

Indigenous laws and customary practices have shaped the environments of Northern Australia for thousands of generations, and change from this traditional management has contributed to the ecological problems now facing many parts of the North.

In considering the future of Northern Australia's biodiversity and associated natural values, Indigenous ecological knowledge, both traditional and contemporary, and Indigenous land management have an essential and distinctive role. A large proportion of Northern Australia is owned and managed by Indigenous

THE STRUCTURE OF THIS STUDY

In the study we begin with describing the North and how its environment works, and finish with a framework for the future. The specific chapters are:

- A general description of features of Northern Australia, the country and its people (Chapter 2);
- An account of the ecological processes and connections that maintain the area's natural values (Chapter 3);
- A summary of specific natural values of the North, where possible within a national and international context (Chapter 4);
- An assessment of factors that may threaten the natural values and ecological processes of the North (Chapter 5); and
- A framework that provides for the ongoing maintenance of the values of Northern Australia (Chapter 6).

Where relevant, we have supplemented the text with boxes that expand on particular themes.



THE AUTHORS

The authors are members of the WildCountry Science Council, an independent volunteer group of leading scientists who provide advice on the large-scale, long-term requirements for biodiversity conservation in Australia. The Science Council identified Northern Australia as a priority issue and decided it would be timely to bring together current knowledge about the region's natural values and the underlying ecological processes.

The chief authors of this study are all ecological and environmental scientists who have worked on and in Northern Australia for many years. Our perspectives and expertise reflect our backgrounds in research into ecological issues and our work on projects that have sought conservation outcomes that work for people and country. We all support priority being given to protecting and maintaining natural ecosystems as the basis for a sustainable Australia. The organisations and institutions we work for are

diverse and include the Australian National University, Northern Territory Department of Natural Resources, Environment and the Arts, the Tropical Savannas CRC and The Wilderness Society. The views expressed here are entirely those of the authors and are not necessarily the views of these organisations.

