

Tourism in central Australia

Tourism is a major industry in Australia. It currently generates a significant proportion of our Gross Domestic Product and brings in a substantial amount of our total export earnings. The total number of tourists to Australia is projected to increase from 4.8 to 6 million overseas and 260 to 300 million domestic visits by the end of this decade.

One of the attractions for tourists in Australia is its natural environment. Yet, one of the paradoxes of tourism in natural areas is that, as a place increases in popularity, the concentration of tourism can cause detectable environmental degradation. This in turn may degrade the quality of the visitor's experience. Environments may be damaged by other uses as well: grazing, physical impacts such as erosion, and weed and feral animal establishment.

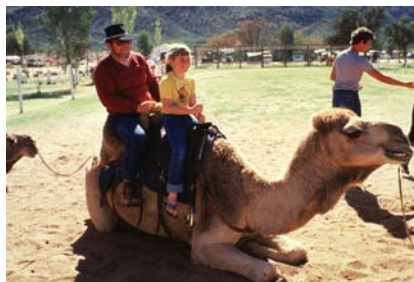
Impact of Tourism Infrastructure on Environmental Processes at Uluru



Uluru-Kata Tjuta National Park was gazetted in 1958. In the following decade tourist numbers increased so dramatically that in 1968 rehabilitation was attempted to reduce the impact of erosion in sensitive areas. Structures to hold back water flow were built and exotic perennials were introduced in the hope of stabilising the soil quickly. Unfortunately, some of these

exotics were more successful than anticipated, and a few, particularly buffel grass (*Cenchrus ciliaris*), now dominate the most popular gorges at Uluru as well as the edges of roads and tracks. In addition, patches of trees and shrubs have died in some areas and it has been suggested that tourist activity is responsible.

The project which was led by Dr Margaret Friedel (CSIRO), in collaboration with Des Nelson (CSIRO consultant), Jake Gillen (ANCA), and traditional owners of Uluru, was funded by the National Ecotourism Program, Department of Industry, Science and Tourism. The project was designed to demonstrate the relationships amongst vegetation (including weeds), landscape and soils, and tourist activity. Recommendations were to be developed for rehabilitation, management and visitor education.



Results and Conclusions

The results of the project and comments by many contributors suggest that soil erosion and the spread of buffel grass is enhanced in heavily visited areas. However, these areas are also naturally unstable, so that tourism impact is only a secondary influence. Old eroded tracks channelled water away from trees like bloodwood in the past, hastening their death in drought. Current tourist activity has contributed very little to the death of these overstorey species. Much tree death is due to large natural events including drought and fire. Indiscriminate fire by tourists probably contributes more significantly to the present loss of trees and shrubs, than disruption caused by old tracks and roads.

A great deal of damage was caused through uncontrolled access during the 1950s and 1960s. However, current park management has limited further disruptions and has led to the recovery of many areas. Considering that about 300,000 people visit the park annually in comparison to 4500 in 1960, success of present management is notable. A monitoring program has been recommended which will provide information on outcomes of management and, at

the same time, enhance knowledge of the influence of natural events. Such a program will give good insights into what drives environmental change, and will also involve Park staff in the hands-on learning they need to be effective resource managers.



Tourism in the MacDonnells

In the mountain ranges of central Australia we have undertaken studies supported by CSIRO tourism research funding and supported by Parks and

Wildlife Commission of the Northern Territory and many local tour operators. Here we have studied the perceptions that visitors have about environments and impacts where those impacts occur.

The areas of natural resources being affected by tourism in central Australia continues to grow as the National Park estate increases and infrastructure (roads, services) develops. Tourists are expanding their interests from scenic experiences to include other aspects of the biological and physical environment, and environmental management. The number of international tourists to Australia is growing dramatically from the Asia-Pacific region. Shifts in the composition of the tourist population and their interests place pressure on our information systems, natural resources, infrastructure and host communities.

How tourists perceive the environment and our management of it depends largely on their own cultural and social background, their understanding of the environment, their interaction with host communities and with other tourists, and accessibility of infrastructure resources.

Destinations for tourists range from infrequently visited remote sites to sites of high density visitation. High-density sites are both developed for and affected by tourism impacts. Our initial studies on tourist perceptions of the environment and their impacts on it indicate that there are detectable impacts, and that visitors do perceive and react to them.



Tourists' perceptions of impacts

We found that environmental change due to tourism in the western MacDonnell ranges is present but relatively limited at present. Sites with higher visitor numbers tended to have a greater level of environmental change, however. An impact that increased with visitor numbers and could present a significant management problem in the future was informal track spreading (with associated ground plant damage and soil compaction).

Visitors to the area demonstrated a general awareness of the impact of tourism, even in an area that has experienced little change. This ranged from a majority of visitors who were aware of the major environmental issues in the area and knowledgeable about management options to address specific problems, though to a significant minority who distinguished extreme sites on the basis of specific impacts. A significant proportion of visitors noticed subtle environmental change in some areas, including damage to plants, soil erosion, weeds and the spread of side-tracks.



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