

# Draft Caves And Karst Policy

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## Abstract

The Western Australian Department of Environment and Conservation (DEC) has a specific role in the conservation and protection of caves and karst under three main legislative instruments:

- The *Conservation and Land Management Act (1984)* – relating to the management of protected areas such as national parks, nature reserves and State forests
- The *Wildlife Conservation Act (1950)* under which wildlife (flora and fauna) is protected State-wide (hence including stygofauna and troglifauna)
- The *Environmental Protection Act (1986)* which also applies State-wide and addresses environmental pollution, consideration of statutory land use planning processes and assessment of major development proposals, all of which may involve potential impacts upon caves and karst

The draft *Caves and Karst Policy* has been developed to a near final stage through consultation both internally (DEC staff) and externally (a number of karst and speleological experts including several ACKMA members).

This presentation will provide:

- an update of progress with the draft policy,
- an indication of some of the major strategies proposed and
- an outline of the steps required for its finalization towards release for more general public comment

## Introduction

My interest in cave management spans some 30 years having been the inaugural Regional Superintendent of Southern National Parks (1978) and then the South Coast Regional

Manager of the Department of Conservation & Land Management (CALM) and its successor, the Department of Environment & Conservation (DEC), until deciding to step aside as Regional Manager in late 2007. Since then I have been working part time on DEC Land Use Planning work in Albany and part time drafting a State-wide *Draft DEC Caves & Karst Policy*.

I am also lead convener of the 4<sup>th</sup> Conference (Yallingup), an inaugural member of ACKMA and the inaugural convener of the IUCN (World Conservation Union) Task Force on Caves and Karst 1992-1997. I am also very interested in the management and protection of mountains being a member of the IUCN/WCPA Mountain Theme Group since 1991. But today my story focuses on caves and karst...

As humans we have had a very long association with caves and yet to many of us they remain frightening and dangerous places... a bit too far out of our comfort zone for most people... This does have bearing on the subject of my talk because whereas we here today may be comfortable with the subterranean environment many, possibly most people are not. Hence it can be a real challenge for decision makers including policy makers to fully understand the values and complexities of caves and karst.

Although issues associated with caves and karst are well known to most of you, there are some people who have only joined the conference this morning and so I will very quickly start with a few reminders of some of the values and issues associated with caves and karst...

- Anthropological value as windows into early human civilizations through cave paintings and artifacts.
- In historical times many caves have been significant tourism draw-cards. For example, at one time in the early 20th Century, there were over a dozen

tourist caves in the Leeuwin-Naturaliste area.

- Yanchep, which some of you visited last weekend, was one of Western Australia's first national parks. Indeed from 1900 to around 1912 the 'Caves Board' managing Yanchep, Yallingup and the Margaret River Caves was essentially a one man 'protected area agency' of the day.
- Western Australia's south west is world renowned for its spectacular calcite speleothems including some remarkable helictites. Unfortunately you will not be able to see the feature known as *The Halo* as it has long since disappeared due to accidental damage – a sobering reminder of the fragility of many cave environments.
- Land use planning in karst areas requires care, not only because of the impacts on karst and caves but also because of the economic ramifications of surface collapse and subsidence which can be quite dramatic where buildings and infrastructure are destroyed.
- In terms of landscape, karst can be quite spectacular such as the classic tower-karst of China and Vietnam.
- And at the other end of the scale there are many examples of stygofauna (subterranean creatures which live entirely in water). Stygofauna and troglofauna in general are increasingly recognised as critical components of the karst subterranean environment. The Western Australian Pilbara is now known to be a global hotspot in this regard.

### **Legislative and information base for the draft policy**

DEC was established in July 2006 by amalgamating CALM and the former Department of Environment, hence there are 3 main acts affecting DEC's interests and responsibilities for karst.

- The CALM Act (1984) is the primary instrument for the protection and management of protected areas (*i.e.*

national parks and nature reserves), including provisions for the preparation of statutory management plans.

- The Environmental Protection Act (1986) provides the primary mechanism through which land use, pollution and drainage impacts upon karst can be addressed outside protected areas through environmental protection and assessment of proposals that may impact on karst values.
- The Wildlife Conservation Act (1950) provides State-wide protection to wildlife (flora and fauna) and hence includes protection of stygofauna and troglofauna.

There already is a partial DEC caves and karst policy relevant to caves and karst (DEC Policy Statement 18, 2006) containing some three pages dedicated to *Caving* and *Cave Diving* but only in the context of recreational activities requiring management by DEC within protected areas.

However, when commencing the draft policy it was obvious that in the context of DEC as opposed to CALM the policy could apply Statewide and address wider aspects of cave and karst protection and management under the broader provisions of the Environmental Protection Act and Wildlife Conservation Act. Indeed the EPA Guidance Statement 33 (2008) has an excellent section (Chapter B9) on karst as part of the broad ranging advice offered in the context of land use planning.

This chapter contains three very useful checklists to remind planners of some of the key issues to consider in the context of karst. One checklist describes possible threats to the cave and karst environment, another lists some of the issues and values associated with karst and a third lists potential measures that might be taken to protect karst.

A number of other resource documents were invaluable in developing the DEC draft policy, in particular the IUCN Guidelines for Cave and Karst Protection (*Watson et al*, 1997) and the recent review of World Heritage Caves and Karst (*Williams*, 2008).

Hence we already have an excellent platform both locally and more broadly on which to develop the new draft caves and karst strategy.

### Development of the Draft Policy

Using various existing sources, especially those referred to above, a preliminary draft document was prepared which was then circulated to a number of departmental and external 'experts' in order to identify any significant omissions and necessary improvements to the existing text. The external consultation included a number of ACKMA members and protected area agency personnel around Australia. A second draft was then prepared and circulated more widely within DEC and again to the external advisors. This resulted in some 140 substantive comments on the preliminary draft from some 25 people.

The main thrust of the comments was as follows:-

- There was strong support for the drafting of a policy and there were mostly very positive comments on the bulk of the draft.
- Wider inclusion of karst was suggested *e.g.* the Pilbara/Rangelands calcrete aquifers.
- There was a need for improved scientific research permit procedures and collecting protocols.
- A separate policy might be required for stygofauna and troglofauna.
- There was strong support for a karst officer or karst unit within DEC.
- A DEC karst data base was required.
- Indigenous interests should be expanded upon.

### References

Department of Environment and Conservation, Policy Statement No 18, *Recreation, Tourism and Visitor Services*, October 2006.

Environmental Protection Authority (2008). Guidance Statement No 33, *Environmental Guidance for Planning and Development*, Chapter B9 Karst, subterranean wetlands and fauna, May 2008.

Watson, John, Hamilton-Smith, Elery, Gillieson, David, and Kiernan, Kevin (Eds.), (1997). *Guidelines for Cave and Karst Protection*, IUCN, Gland, Switzerland and Cambridge, UK. 63pp.

Williams, Paul (2008). *World Heritage Caves and Karst – A Thematic Study. A global review of karst World Heritage properties : present situation, future prospects and management requirements*, IUCN World Heritage Studies No 2, Gland, Switzerland.

- Urban housing growth and industrial development should be identified more clearly as key threatening processes in some karst areas.
- The draft policy should be publicly available for general comment prior to its finalisation.

The current version of the draft policy prepared in response to the comments received contains a set of broad policy objectives which address issues within the State's protected area system, issues outside the protected area system, and issues which apply generally within Western Australia (*i.e.* both within and outside the protected area system).

For each policy objective there is a short background and descriptive text and then a series of proposed 'Implementation Strategies'. Within the State protected area system both the consolidation of karst protection and subsequent management by DEC in response to threats are addressed. The issues outside the protected area system focus around the existing EPA Guidance Statement No 33 and the objectives applying State-wide include issues such as advocacy for caves and karst, staff training and general awareness raising. There is also reference to liaison with other agencies and with bodies such as ACKMA, the ASF and speleological groups.

In summary, DEC is in the process of finalising a draft policy for caves and karst in Western Australia. This draft will be released for general public comment. The help and comment already given by a number of ACKMA members and other experts has been invaluable and is gratefully acknowledged. We look forward to receiving additional input from you all in due course.