A World Perspective on Cave and Karst Protection: Paradox and Problems

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Abstract

In the last ten years there has been a growing movement for consideration of the special features of karst areas and the establishment of protected areas to protect these. This has been driven in part by a growing recognition of both the values and fragility of karst ecosystems. Although there has been considerable progress in awareness, protection, and quality of management, a number of paradoxes and problems have come more to notice. These demand consideration and discussion and this paper will raise some of the issues in the hope that delegates will make a contribution to that thinking process. So, at least the following will be discussed: National parks—Yellowstone and other models. Values of different environments for example, forests compared with deserts. Role of so-called experts in other cultures. The general failure to recognize much earlier protected areas. The place of indigenous people and their rights in parks. Collaborative management—what does it mean?

The National / Local Level

Protection is essentially based in national or more local—for example, state or provincia—legislation. Any of the levels of world recognition do not, in themselves, confer legal protection, but simply recognize and support the actions of national governments. So, for instance, world heritage status can only be granted once a country has made and undertaken its own protective commitment.

Confusion often arises because each country has its own terminology to describe protected areas and the meaning of any one title may well vary a great deal from one country to another. As the most obvious example, there is little in common between the use of the term national park in the United States on one hand and most European countries on the other. Most European countries use the term to refer to areas of scenic and/or historic value and these have at least medium population densities with a high level of land use for agricultural or other industrial purposes. Some other countries may designate as national parks what are no more than national monuments or habitat management areas.

In order to provide for comparability, UNESCO has approved a hierarchical classification of protected areas. It will be seen that these are ranked in a general order according to the intended rigor of protective control, although as we all know, there may well be a gap between intention and reality in any governmental actions.

- Strict Nature Reserves (limited or no visitor access)
- National Park (providing a high level of nature protection, but also visitor access for appreciation and enjoyment, compare with Yellowstone)
- National Monument (generally small areas to protect a specific feature)
- Habitat/species Management Area (to protect only a specific environmental association or species)
- Protected landscape/seascape (to protect a feature of exceptional beauty or scientific interest, for example, the protected coastlines of Great Britain)
- Managed resource protected area (often areas which combine and integrate conservation and development)

The summary descriptions in brackets are in my own words—for a full understanding of the classification, the manual on protected area classification, published by IUCN and also available on the Web, should be consulted.

Dilemmas and Debates About the "Yellowstone Model"

For many years, the "Yellowstone model" has been seen as the benchmark and standard for national park management. It has been presented to other countries as establishing the correct pattern for national parks. I am sorry to be critical, but I can only say that this is really no longer a valid position.

Firstly, even in the United States, the underlying assumptions have been very seriously challenged (see, for instance, Alston Chase's *Playing God in Yellowstone*). Similarly, the resulting organizational and staffing arrangements are sadly outdated, based as they still are in the traditions inherited from the many years of the parks being managed by the U.S. Army.

Much more seriously, the model is often totally inappropriate in other countries. The imposition of one somewhat abnormal form of United States culture upon other totally different cultures may well have tragic results, particularly for the ethnic minorities whose land has been placed within a so-called national park. Fortunately, some of the great parks of the world are still managed according to their own cultural traditions. One has only to visit some of the major parks in those countries that have inherited the cultural and philosophical traditions of the Austro-Hungarian to see a quality of management that puts the U.S. National Park Service to shame.

So, we have to rethink issues like the place of indigenous peoples in parks, the possibility of expertise transfer between cultures, and the patterns of management and visitor relations that we might build. There is, of course, no question that expertise can be transferred between cultures. One of my U.S. colleagues tells me that he learned more in a six-month advisory mission to Bulgaria than in the previous 25 years of his professional career. Personally, I have certainly learned much of my current thinking from Eastern European and Asian or Pacific countries.

There is also the myth that Yellowstone was the world's first-ever national park. It may well be the first to use the English language words but nothing more. Let me just note two of what could be hundreds of other examples. When the first humans arrived on Niue, they decided that the Havalu Forest was so beautiful that they would maintain it in its pristine state and never use it for housing, food, or timber gathering. It remains in place to this day. But that is relatively young, having been established somewhere between one and two thousand years ago. For what is probably the world's longest standing park, we should look to the Buskett Gardens of Malta, where there is good evidence that this has been a continuing and important park, possibly since the Neolithic, and certainly since the Bronze Age.

Problems About Specific Features in Conservation

In general, the places and organisms that attract most attention from the conservation movement have fur, feathers, or leaves. And even when one is concerned about animals, that usually means creatures with a spine, and largely ignores the existence of invertebrates, or even the bacteria and nanobia that are the most vital life forms.

So karst conservation has to convince the conservation movement that rocks are also important. With the current passion for protection of biodiversity, we can at least argue that the basis of most biodiversity comes from the underlying geodiversity. In fact, the current passion for biodiversity serves karst protection reasonably well. Most karst areas have a great variety of micro-habitats, each with its own micro-climatic conditions and hence some of the most remarkable demonstrations of biodiversity in the world.

The International Support Systems

There are three major systems for international recognition and support of conservation through protected areas.

The first is the Man and Biosphere program, with its recognition of Biosphere Reserves. Essentially the biosphere reserve brings together a range of lands from protected areas through to highly developed and utilised lands, and a nomination currently under consideration even includes a major urban sector. The central concept of the biosphere reserve is to foster conjoint sustainability of use and protection of natural values across the range of lands represented in the reserve. It demands a broad-ranging commitment to the principles from all land owners and managers within the reserve.

I believe this concept has a very important role in karst is often under pressure from wine growers and others, yet they can truly play an important part in maintaining the integrity of the karst and its groundwater systems. Some of the very excellent work being done in the U.S. by the karst conservancy movement is based upon very similar principles. It is even possible that some such areas might gain international recognition under the Man and Biosphere program.

Interestingly, a related and important new direction in conservation through protected areas is the Integrated Conservation and Development Projects, where two or more partners work together to achieve safeguarding of a protected area in close association with an adjacent development program. A successful Integrated Conservation and Development Project demands a shared vision, genuine partnership between the major stakeholders, and appropriate co-operation and joint policies within governmental authorities. At least several of the major examples on karst lands are based in partnership between protected area authorities or NGOs and cement companies. In fact, one of the first projects of this kind, established at Bamburi in Kenya over 20 years ago (long before the idea had a name of its own) grew out of partnerships initiated by a cement company operating in a karst area.

The best-known mechanism for international recognition is the World Heritage Convention, providing for recognition of both natural and cultural sites. Here there are two inter-related central concepts of protection and maintenance of integrity on one hand, and accessibility for the peoples of the world on the other. As this is more widely recognized, and currently covers some 42 karst areas, I will discuss the special issues involved below. Finally, the RAMSAR convention on the protection of wetlands is now becoming a significant opportunity for recognition of important karst aquifers. Although originally established to provide for international recognition of the need for multi-national co-operation in the protection of migratory water birds, it rapidly developed a wide-ranging concern for major water bodies. A resolution several years ago provided for the recognition of "subterranean wetlands," at least in part because of concerns about the protection of the remarkable biota of karst wetlands, but in effect expressing recognition of the great importance of karst waters as mega-reservoirs of very considerable practical importance in water supply. A small group in Europe has developed policies and procedures for its implementation, and nominations are now welcome.

The IUCN / WCPA Cave and Karst Task Force, with its responsibilities for assessment and monitoring of karst world heritage sites, is now working together with the subterranean wetlands committee of RAMSAR. We trust this will enable more effective and appropriate recognition than might be achieved by either one alone.

Some World Heritage Issues

There are various common misunderstandings that demand clarification. The World Heritage Convention is administered by its own Council and Executive Committee, comprising elected delegates from signatory nations. It receives administrative and logistic support from the UNESCO World Heritage Bureau, with scientific and technical support from IUCN (natural heritage) and ICOMOS (cultural heritage).

Any nominated site is assessed against a rigorous set of criteria to confirm that the site is genuinely of "outstanding universal value" and is managed in such a way that its integrity will be maintained. There is also both opportunistic and systematic monitoring of existing sites to ensure that proper standards of management are maintained, and regular state of environment reports are submitted to the Council.

One might well ask what purpose does World Heritage recognition serve. My personal experience suggests that the recognition of a site in itself provides a powerful incentive for better management; that the recognition also carries an international obligation for support in the continuing protection of a threatened site and this has proved invaluable in assisting countries in crisis; and where the standards of management in any one country or at any one site fall short of what is desirable, it provides an invaluable avenue for dialogue and negotiation to resolve problems.

Thus one question that is sometimes raised concerns the extent to which World Heritage recognition may be claimed by a country to indicate international approval of their management practices. Alternatively, it may be seen by others as an improper support of management practices which might, for instance, be inherently and improperly racist or discriminatory. This is a common issue in any international agency—and, in the case of World Heritage, it may be important to recognize the importance of a site while still continuing dialogue with the host state about its management standards. In other words, recognition may provide the opportunity for dialogue which otherwise might not occur.

Another concern is the extent to which the tourism industry clearly benefits from World Heritage recognition.This may well result in considerable pressure to recognize a site for the sake of the economic benefits that are anticipated, rather than for its continuing protection and integrity. Certainly this is one of the issues sometimes raised in reviews of the state of environment and most countries fully accept the importance of controlling any adverse impacts from excessive tourism. But the issue of tourism impacts certainly demands more thorough attention and research. A extremely valu-

able international workshop on monitoring of karst sites has been held in Slovenia since this symposium and the report will shortly be available.

Then we also face a gaggle of special problems to do with the dispossession of ethnic minority peoples, despite the very real efforts by a special group within IUCN aiming to achieve more inclusive and collaborative management in such situations. There are some major problems of law enforcement including poaching of rare fauna or of swiftlet nests ("white gold") and stealing of major timber trees for the specialist furniture market. Finally, corruption serves to divert a remarkable amount of funding to other purposes.

So, the World Heritage Convention provides an important and valuable tool, but its fully effective implementation is sometimes difficult and demands both vigilance and skilled negotiation to achieve the necessary action by the host states.

Speleologists, particularly in their own local activism either through karst conservancies or in other ways, may find it valuable to invoke international support for their efforts. Even more importantly, it is often expedition speleologists who discover and provide the evidence of the karst values which identify potential, and a number of actual World Heritage Sites. Their role is of fundamental importance in protection of the world's great karst areas.