

PERTEMUAN PERSATUAN Meetings of the Society

Ceramah Teknik (Technical Talk)

Developing the IUCN Guidelines for cave and karst protection

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Laporan (Report)

Dr. David Shaw Gillieson, senior lecturer, School of Geography and Oceanography, University College, Australian Defence Academy, Canberra, Australia, gave the above talk on 20th January 1997 at the Conference Room, Geological Survey Department, Ipoh. Dr. Gillieson's research interests include karst (limestone) landscape processes, management and rehabilitation and he is a member of the International Geographical Union Commission on sustainable development and management of karst terrains (1996–1999).

Abstrak (Abstract)

IUCN is the World Conservation Union with members in every country. Its World Commission on Protected Areas has a working group on cave and karst protection which has recently produced a set of guidelines for cave and karst management. This was drafted by a small group of experts and feedback obtained by maintaining all Internet site for six months. Over 120 responses were gained with a global coverage. The document has been drafted in a similar style to the "Guidelines for Mountain Protected Areas" published by IUCN in 1992. Initially Spanish and French translations of only the key issues and guidelines will be included in the volume. At a later date full translations in those languages may be published. We believe that these guidelines will make a significant contribution to our knowledge of the special management considerations essential for protection of caves and karst. They are a "first step" and the challenge now is for the national and site specific strategies to be developed in karst areas around the world.

Effective planning for karst regions demands a full appreciation of all their economic, scientific and human values within the local cultural and political content. The integrity of any karst system depends upon an interactive relationship between land, water and air. Any interference with this relationship is likely to have undesirable impacts, and should be subjected to thorough environmental assessment. Land managers should identify the total catchment area of any karst lands, and be sensitive to the potential impact of any activities within the catchment, even if not located on the karst itself. Destructive actions in karst, such as quarrying or dam construction, should be located so as to minimise conflict with other resource or intrinsic values. Pollution of groundwater poses special problems in karst and should always be minimised and monitored. All other human uses of karst areas should be planned to minimise undesirable impacts, and monitored in order to provide information for future decision-making. Management in karst and caves should aim to maintain natural flows and cycles of air and water through the landscape in balance with prevailing climatic and biotic regimes. Managers should recognise that in karst, surface actions may be sooner or later translated into impacts directly underground or further downstream.

While recognising the non-renewable nature of many karst features, particularly within caves, good management demands that damaged features be restored as far as is practicable. The development of caves for tourism purposes demands careful planning, including consideration of sustainability. Where appropriate, restoration of damaged caves should be

undertaken, rather than opening new caves for tourism. Governments should ensure that a representative selection of karst sites is declared as protected areas under legislation which provides secure tenure and active management. Priority in protection should be given to areas or sites having high natural, social or cultural value; possessing a wide range of values within the one site; which have suffered minimal environmental degradation; and/or of a type not already represented in the protected areas system at their country. Where possible, a protected area should include the total catchment area of the karst. Where such coverage is not possible, environmental controls or total catchment management agreements under planning, water management or other legislation should be used to safeguard the quantity and quality of water inputs to the karst system.

International, regional and national organisations concerned with aspects of karst protection and management should recognise the importance of international co-operation and do what they can to disseminate and share expertise. The documentation of cave and karst protection/management policies should be encouraged, and such policies made widely available to other management authorities. Data bases should be prepared listing cave and karst areas included within protected areas, but also identifying major unprotected areas which deserve recognition. Karst values of existing and potential World Heritage sites should be similarly recorded.



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P. Loganathan introducing the speaker.

