

Karst and Assessment:



Elery Hamilton-Smith, AM

Benchmark assessment . . .

- **Good management will be based in in proper assessment of the resource and its values**
- **This should be done on a hierarchical basis – from broad to specific**

The early assessments . . .

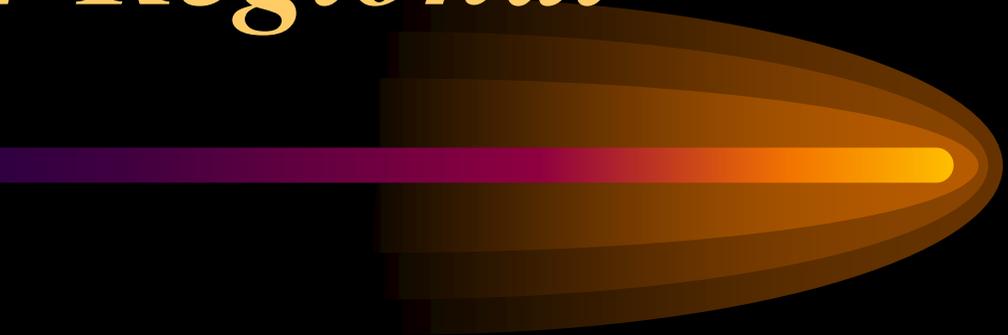


- **Provide the basis for management decisions**
- **Sets the baseline (or benchmark) against which any change can be measured**



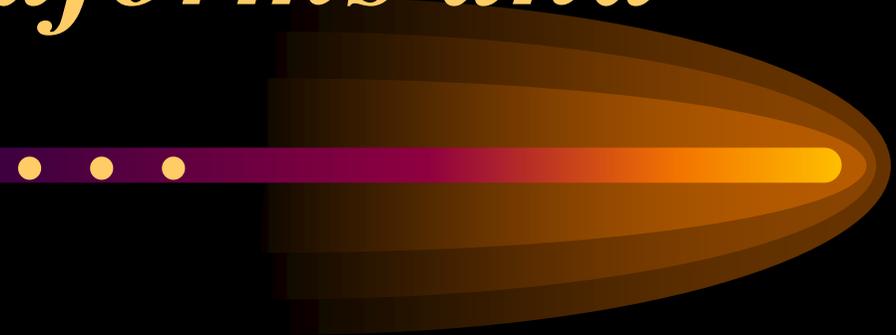
*Firstly, the hierarchy of
assessment must be
established*

National or Regional context . . .



- **Geology, Geography, Hydrology,
Geomorphology**
- **Sets the overall context**

Surface Landforms and Geodiversity . . .



- **Depressions, Hills, Gorges, etc.**
- **Karren**
- **Water – springs, sinks, streams**
- **Deposited landforms and sediments**

Water and Air . . .



- **Flow patterns and levels**
- **Lakes**
- **Climate & Microclimates**

Subterranean Landforms :

- **Caves – types and patterns**
- **Microcaverns, mesocaverns, macrocaverns**
- **Age of caves**
- **Depth and length**
- **Relation to groundwater or streams**

Cave Contents . . .



- **Sediments and stratigraphy**
- **Speleothems**
- **Palaeontology**
- **Archaeology and other Cultural artifacts**

Surface Biodiversity . . .



- **Fauna and Flora, especially if endemic**
- **Invertebrates, Microbiota**
- **Mosses and other lower plants**
- **Patterns of adaptation**

Subterranean Biodiversity

- **Vertebrates, especially bats & swiftlets**
- **Invertebrates – terrestrial and aquatic**
- **Patterns of endemism and adaptation**

Cultural Importance . . .



- **Spiritual or religious sites**
- **Rock Art**
- **Aesthetic Values**
- **Historic values**
- **Recreation, education and research**

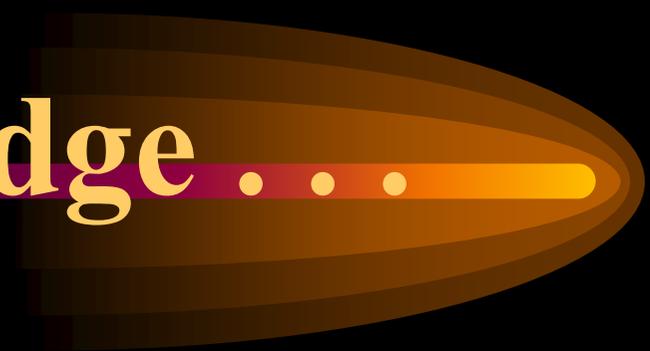
Other Human Benefits . . .

- **Water supply**
- **Food harvesting**
- **Production of food**
- **Shelter or therapy**
- **Recreation and Tourism**



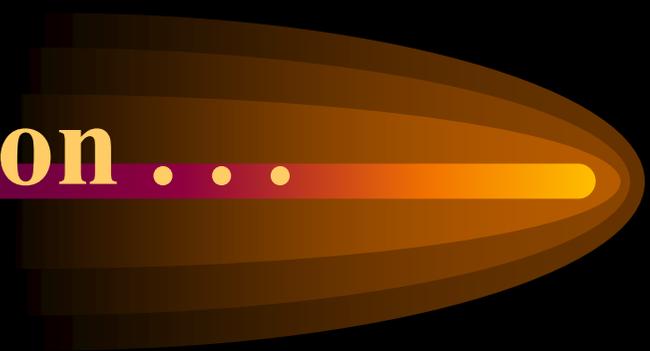
**Now, how do we achieve
this ?**

Existing knowledge . . .



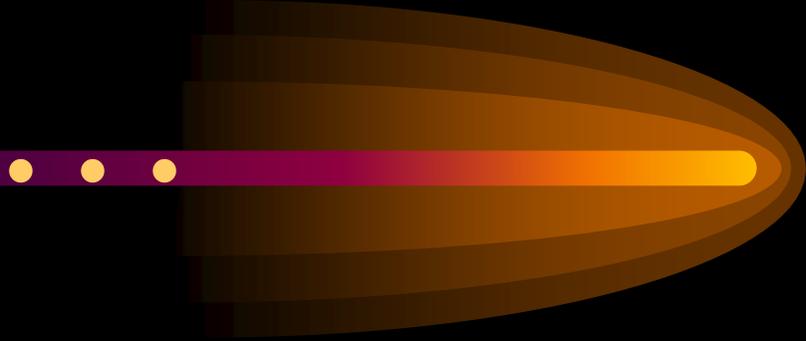
- Talk with local residents
- Examine maps, reports, books
- Inquire from scientists

Personal Investigation . . .



- Walk the whole area throughout the 24 hours of the day and each season of the year
- Document and photograph
- Do preliminary surveys

Set Priorities . . .



- What are the most important things you need to know more about?
- Try to work down the hierarchy – from the broad context to the specific
- Then engage appropriate experts

BUT . . .



- Remember, knowledge in the minds of experts or only in their reports is a waste of money
- The knowledge must be in your minds and the minds of your staff
- And the best way to achieve that is arrange for your staff to work as assistants to, and side-by-side with, the experts