

**Karstology, the Science of unlimited multi-discipline approaches
(Processes, Environmental impacts, Economic Potentialities)**

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Karst is a very important natural process yielding fascinating features in and on the earth's crust caused by solution and leaching of limestone, dolomite, gypsum, halite and other soluble rocks, under particular geographic, topographic and climatic conditions. Karst phenomenon represents a significant economic, environmental and scientific value that has a direct impact on the surrounding environment and sustainable development programs. Accordingly, we are strongly encouraged researchers from all fields of research and pertinent authorities to study these phenomena in order to benefit from it in supporting the national economy and to face their scientific and environmental problems. Karst is traditionally considered as a sub discipline of geography, although the recent applicable term Karstology for the investigation of the different aspects of karst and karstification processes (paleo- or recent karstification), includes relevant different disciplines, such as the geomorphology, geography, topography, climatology geology, sequence stratigraphy, economic geology, petrology, hydrogeology, hydrochemistry, paleontology, speleology, biospéologie, practical geology, petroleum geology, land use mapping and civil engineering, archeology, pedology and soilification, environments, engineering geology, land use planning, landscape scenery, heritages (geo-sites & geo-morphsites, geo-parks, protected areas),... among others.. Karst features studies must be considered in every land use planning and urban development side by side with the Natural Hazards Assessment (NHA). In this respect, the general bases of these very important scientific, environmental and economic features and the related processes as well as their wide spectrum applications are shortly addressed. This will be done through very short reviewing and discussing the following related headings and sub-headings:

- A. Definitions
- B. Karst history (chronological history (ages), Geo-archeology, Paleo-climate, Paleo-geography, Paleo-topography.
- C. Karst features (surface and fossilized karst)
 - i. Surface (exposed) Karst
 - Karst environments, active karst processes and environmental karst hydrology

- Surface (exposed) karst geomorphology and karst landform classification (input, output and residual landforms, rivers (allogenic, autogenic), depressions, karren, cones, towers, thermal features)
 - karst geohazards (damaging of infrastructures) and humans impacts
 - Environmental assessment of karst terrains
 - Biodiversity and conservation of karst ecosystems (unique biological life)
 - Mapping of the surface karst landforms, morphological analyses, quantitative physiographic methods (morphometry), Quantitative morphometric identification of karst landforms
- ii. Paleo-karst (fossilized Karst)
- Paleo-karst (drowned, buried or fossilized) as stratigraphic markers (break in sedimentation, sequence boundary)
 - Syn-sedimentary karst features
 - Paleo-karst finding fossils
- iii. Karst resources
- Karst water resources
 - Karst oil and gas resources
 - karst economic mineral deposits
 - Scientific and socio-economic importance of karst
 - Karst outreach and education
- iv. Inventory and assessment of the karst geo-morphosites
- v. Synonyms of karst terminologies

