

The Evolution of the Karst Information Portal Initiative

www.karstportal.org

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The Karst Information Portal (KIP) launched in June 2007 and today contains 4,756 metadata records describing 28 distinct document types including monographs, serials, images, maps, grey literature works, peer-reviewed journal articles, and raw data organized into databases. Access is freely available to the public; however, registration is required to take advantage of some features. Individuals from 12 different countries, with specializations in 30 different areas of karst research, have registered.

What is Karst?



Karst is a globally distributed terrain resulting from the dissolution of soluble rocks such as limestone and dolomite. The dissolution occurs when rain water infused with carbon dioxide passes through layers of soil and bedrock. Karst regions contain aquifers and geological structures, such as sinkholes, springs, and caves; many rare and endangered species; and significant archaeological and paleontological resources.

(Image: Natural Resources Canada <http://geoscape.nrcan.gc.ca/>)

Globally, approximately 1.6 billion people depend upon the health of karst terrains and aquifers for drinking water. Geologic hazards in karst cost billions of dollars each year, yet karst is the least studied and most vulnerable type of terrestrial landscape. The full potential of karst for benefit or hazard to the global ecosystem remains poorly understood.

The KIP Content Collection

The KIP collection emphasizes grey information and retrospectively digitized content from both the grey and white information realms. This strategy alleviates problems that are often the direct result of important karst literature's inaccessibility. In 2009 KIP managers used citation analysis, institutional research intensity (USF), and estimates of potential community impact to identify three areas of collection emphasis: karst hydrology, paleoclimate, and policy innovation and development.

New Directions

Since the 2007 "soft-launch," collection building has focused on online serials, bibliographies, oral histories, and databases.

Serials

The USF Libraries digital collections unit has digitized entire runs of the *NSS News* (1958 to present), the *Bulletin to the National Speleological Society* (1940-1958), and select issues of *SpeleoDigest*. Contributed digital serial content includes the Association for Mexican Cave Studies newsletters (3), *Espeleo Informe Costa Rica*, the *Proceedings of the National Cave and Karst Management Symposia*, and *Studia Universitatis Babes-Bolyai Geologia*. In-process titles include *GEO2*, *Helictite: Journal of Australasian*

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Speleological Research (in negotiation), and the *Proceedings of the International Symposium on Vulcanospeleology*. Negotiations to host the *International Journal of Speleology* and the *Journal of Cave and Karst Studies* as open-access journals are in the final stages. Established scientific journals have become components of the collection because of their value to karst researchers and the potential benefits created by joining forces to limit costs and raise visibility.

Bibliographies

In 2008, KIP project managers initiated “merger” discussions with the creators of three important international bibliographic resources concerning karst. The goal is a relationship wherein KIP provides an organizational and technical infrastructure “umbrella” to alleviate pressures that could endanger their survival – sky-rocketing printing costs, technology migration pressures, and long-term preservation needs. KIP was established to manage these functions within the workflows of an academic library.

Karst Oral Histories

In conjunction with the USF Libraries’ Oral History Program, KIP managers conducted oral history interviews with leading names in a variety of karst science fields, including exploration, cave mapping, and applied ecology. The complete audio recordings of these interviews are available for download via KIP, along with a written transcript for each.

Database Development

Karst researchers require increased capacity to create databases relevant to their areas of study. Specific examples of current projects include:

- *The Cave Mineral Database (CAMIDA)*, an open-access collection of geological, mineralogical, crystallographical, and protection/conservation information on all minerals discovered in caves around the world;
- *The Bibliography of Speleothem Research*, an archive of peer-reviewed speleothem research papers specifically intended to be searchable by geographic and/or geochronological parameters; and
- a web-accessible database and repository of all known information on sea caves and dissolution caves in coastal settings.

Next Steps

The initiative’s strategic plan includes developing public programs, facilitating scholarly communication, and developing instructional collaborations as a means of improving collection visibility and use. In the long-term, the health of karst environments is dependent on enhancing understanding of karst environments among scientists and members of the public outside of the formal karst research community.

Following extensive evaluation during the summer of 2009, USF Libraries’ personnel began to migrate existing content to the National Science Digital Library’s Collection Workflow Integration System (CWIS). The previous architecture was visually appealing, and the content management system supported most basic metadata requirements, but refinements were needed. At the time of the infrastructure evaluation, a decision was made to cease the resource’s forums and other community aspects and to focus on KIP’s digital library characteristics. The migration will conclude in early 2010.