There has been no formal quantitative studies examining global warming in the news and comparing it with the occurrence of carbon sequestration to examine how related the two topics are from the standpoint of media coverage. A longitudinal study was conducted to examine the occurrence of these two topics in several mass media outlets between January 1, 2003 and December 31, 2005. A three-year window was used to overcome noise and illuminate genuine trends in news coverage.

The LexisNexis Guided News Search was used for the actual search process. To supplement the LexisNexis longitudinal study, Google News was used to examine, in detail, all of the articles on the topic of "carbon sequestration" during the months of December 2005 and sequestration during the months of December 2005 and January 2006. Google News monitors a different selection for carbon sequestration. When an individual hears about carbon sequestration in the news, one of news sources than LexisNexis, with a much stronger bias towards online news sources.

Results of this analysis show a continuing increasing interest in global warming with no corresponding increase in interest in carbon sequestration. Media coverage of global warming occurs as short-lived bursts of media coverage centered about major events such as the Kyoto agreement. After the even is over, there is a drop in interest in global warming. Articles on global warming appear to be seasonal with an increase in articles during the summer months; however, interest in carbon sequestration does not always correspond with media coverage of global warming

\_FOREIGN GOV

**Top 100 Google Search Results** 

\_\_NEWS AGENCY

# The Use of Data Mining Methods to Evaluate Public Interest in Carbon Sequestration

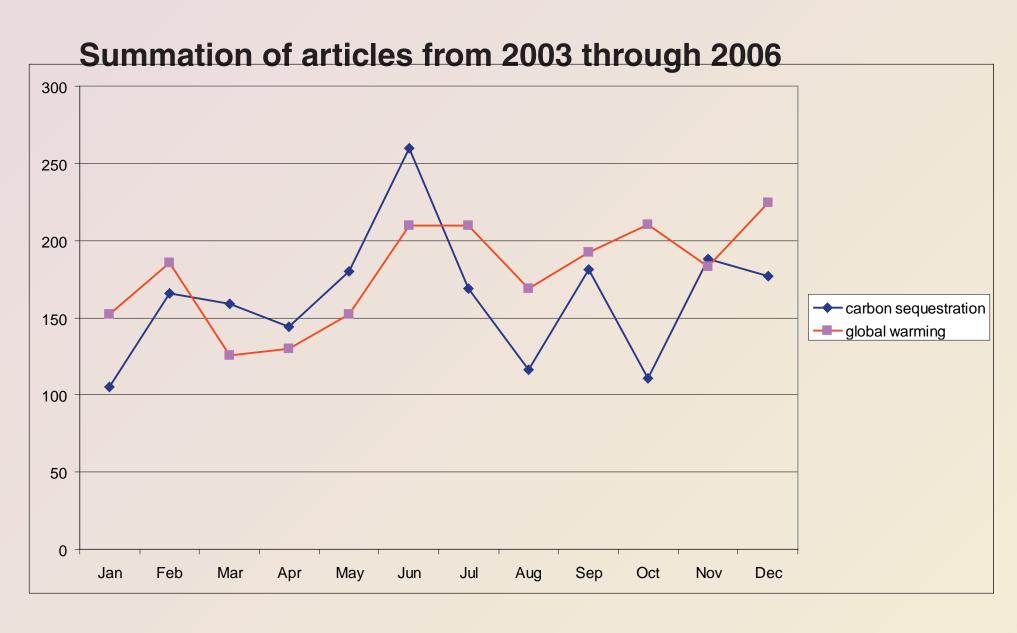
Kalev H. Leetaru<sup>1</sup> and Hannes E. Leetaru<sup>2</sup>

<sup>1</sup> University of Illinois, leetaru@ncsa.uiuc.edu <sup>2</sup> Illinois State Geological Survey, leetaru@isgs.uiuc.edu

## **Lexis Nexis Guided News Search**

This layer provides a longitudinal examination of carbon sequestration versus global warming in the mass media from January 1, 2003 to March 31, 2006. Relationships between carbon sequestration and global warming are explored, as well as specific trends within carbon sequestration.

# Relationship of Articles on Carbon Sequestration Compared with Global Warming Articles



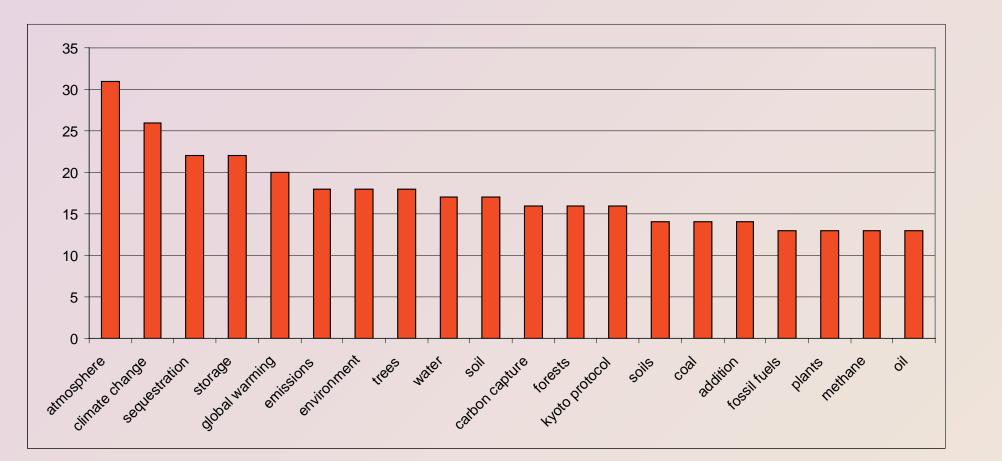
Increase in Interest in Global Warming

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Key patterns show a rise from January to February, followed by a decline over the spring months and a sharp increase from spring through early summer, with sharp decrease in late summer. Carbon sequestration has bursts in September and November, while global warming rises during the fall months before declining in November and rising again in while global warming slowly increases towards the later months (if you

to be very bursty with strong upswings and downswings, while global warming coverage tends to be much smoother, and during the summer that same peak again later in October. Global warming has smooth insequestration tends to have very sharp ascensions to peaks and sharp drops away from them.

# Phrases Most Commonly Associated with Carbon Sequestration in Google Web Search Results



monly used source of information on a subject. Therefore, this project used the 100 top Google search results for "carbon sequestration" on January 3, 2006 and applied data mining methods to analyze the results.

Google Web Search Results

tion searches are presented with on Google, the top 100 search results for carbon sequestration (most users never look at more than the first 100 search results) were downloaded and pro-

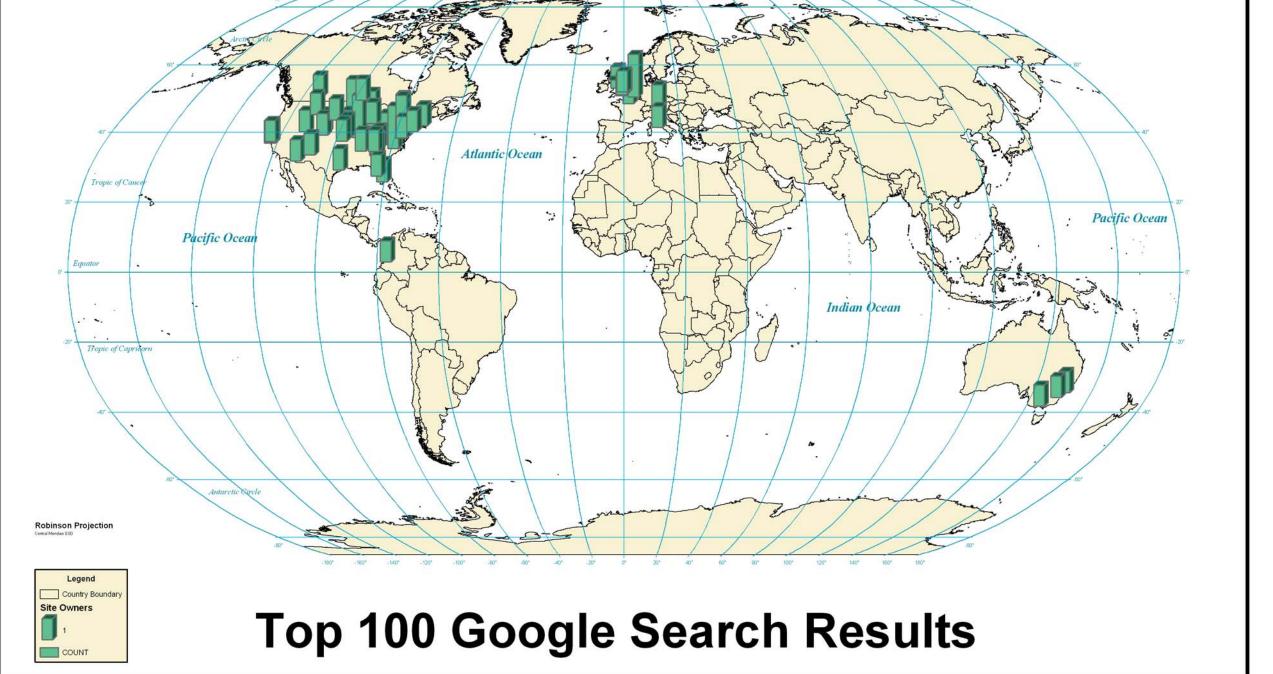
Organizations Most Commonly Associated with Carbon

Sequestration in Google Web Search Results

cessed using the same techniques as the Google News articles.

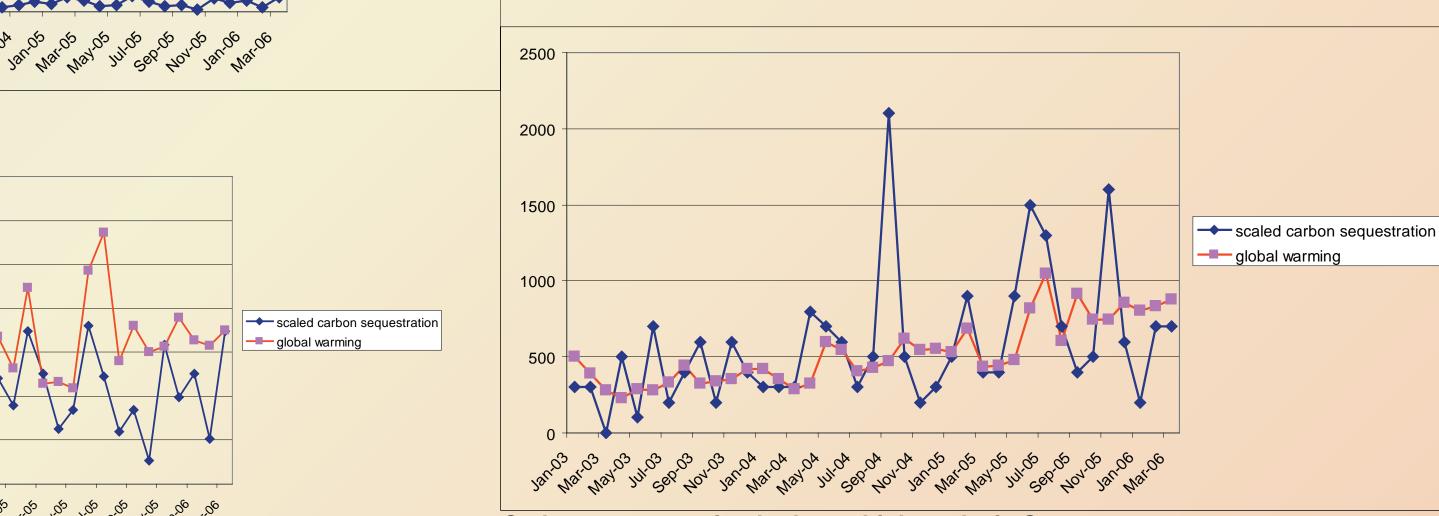
The results showed that 79% of the top Google "hits" come from US-owned sites. Of those US-owned sites, 22% (16 sites) of those are owned by organizations in DC (suggesting US goverment and lobbying firms, etc), 13% (9 sites) are in California, and Tennessee and Virginia both have 8% (6 sites).

> es to find the locations of the domain owner and the host compu er network and normalizes and geocodes these addresses to plot them on a map. This is an especially insightful technique when dealing with "hot" or controversial topics where web sites may not make their affiliations clear in their page text, but using their regis try information, a clearer picture of the hidden influences of each site may be obtained.



# **Interest with Time**

There is increasing interest in global warming over time. However, no in global warming occurs as short-lived burst centered around major events such as Kyoto. Once the event takes place there is a drop in interest in

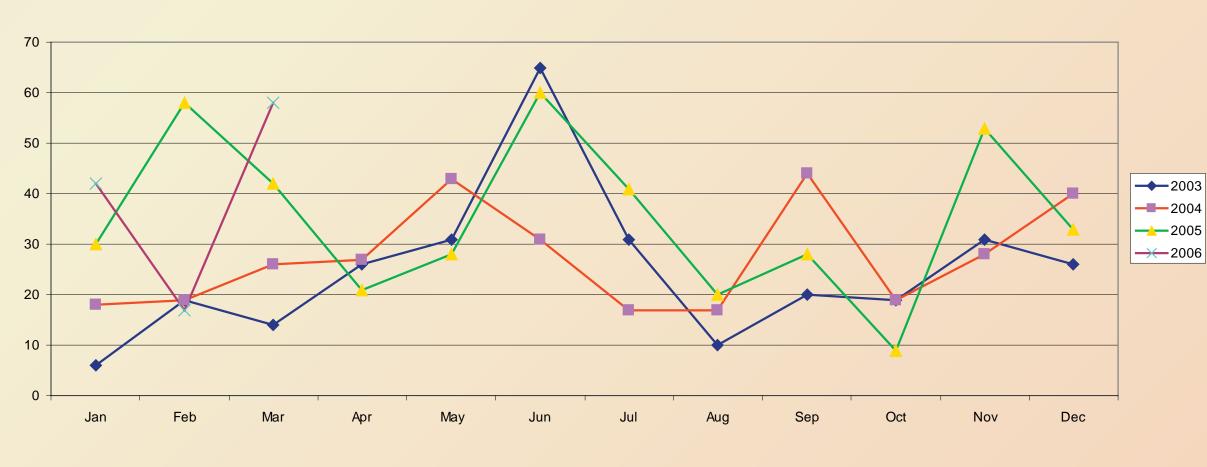


ber, 2004 and November, 2005. There was no (or only slight) corresponding increase in global warming ar-

Very steady increase in global warming articles, small but steady increase in carbon sequestration articles.

### Frequency of Articles on Carbon Sequestration through Time

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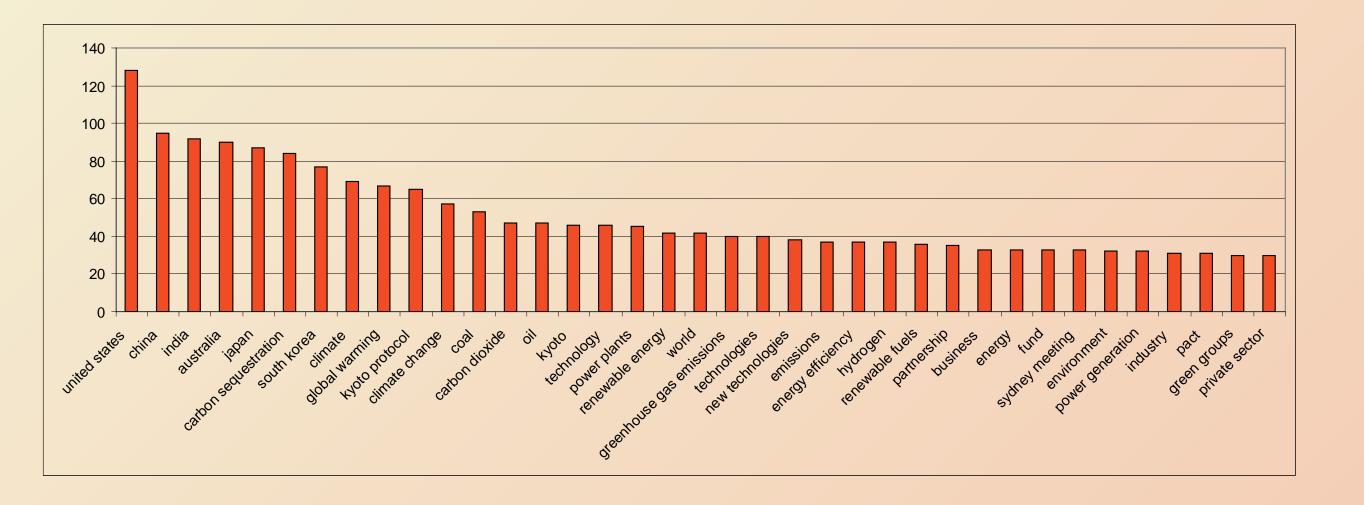


Graph shows monthly articles by year. Overall years track fairly closely, but there are: a single large peak in 2003, smaller, dual peaks in 2004, and triple large peaks in 2005. Also interesting is that 2006 is the first year that there has been a sharp decline in February coverage with a peak in

#### **Google News**

Google News coverage of carbon sequestration articles from January 1, 2006 to April 26, 2006. Google News coverage is not as comprehensive as Lexis Nexis coverage due to its online emphasis, but it does include a wide variety of US and foreign news sources. The fulltext of each article found by Google News was downloaded and key people, terms, and organizations were evaluated. In addition, the location of the news outlet publishing the article was also recorded. This information was combined to generate a detailed view of carbon sequestration media coverage during this 4-month time period.

#### Phrases Most Commonly Associated with Carbon Sequestration



#### Organizations That Are Associated With Carbon Sequestration

