

# Social Media for Scientists

Are there Apps for that?

David Govoni
U.S. Geological Survey

NARA RACO 2009 Washington, D.C. May 28, 2009

# Web 2.0 and the Science Community

- Popular Social Media (or "Web 2.0") services like MySpace,
   Facebook, YouTube, blogs and Twitter emerged to support mainly informal, recreational socialization among individuals and groups
- Peer networking, self-promotion (often rather narcissistic) and sharing of things like photos and videos were primary goals
- Initial formal applications tended to focus on communication or information sharing with a marketing or promotional flavor
- Increasingly understood that Social Media and other Web 2.0 tools can be repurposed or extended to support narrower professional communities with a need to communicate, collaborate, or share information and ideas at distance

#### Communities of Practice

- Defined as "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Etienne Wenger)
- Informal, self-organizing and regulating, independent of formal organizational governance structures
- Not a new social construct in the sciences:
  - Accademia dei Lincei (Rome, 1603)
  - Royal Society (London, 1660)
  - Lunar Society (Birmingham, 1765)

## **Ecosystem Services Community**

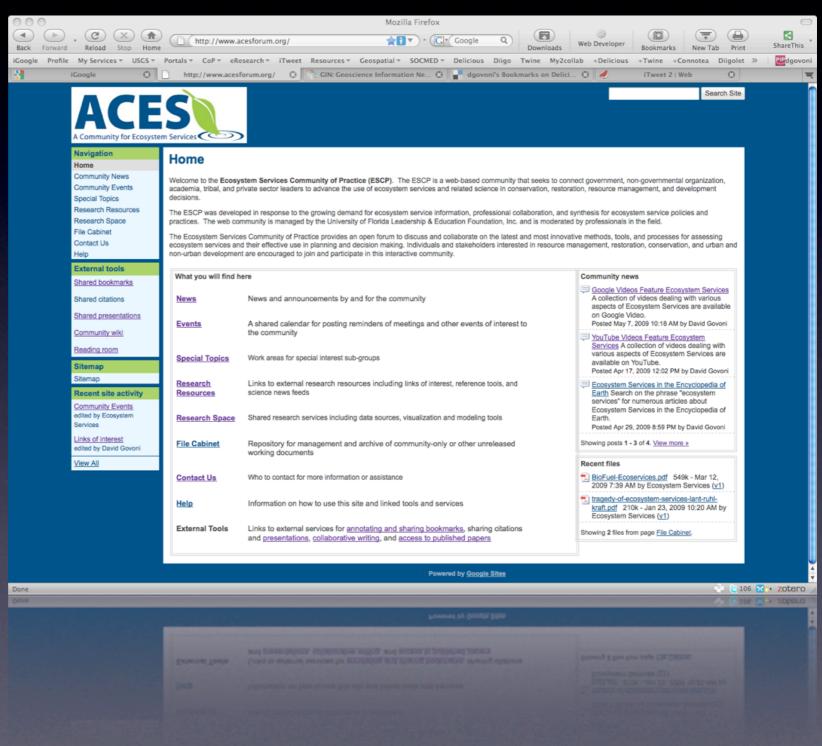
- Ecosystem Services are broadly defined as the benefits (lifesustaining, economic, cultural, aesthetic) that people obtain from ecosystems
- Diverse membership including government, non-governmental organization, academia, tribal, and private sector
  - Scientists (ecologists, wildlife biologists, geographers),
     economists, planners, conservationists and other stakeholders
- Consciously exists outside of formal organizations (and their myriad access and other policy constraints)
- Idea rich, cash poor

# Ecosystem Services Community Support Website

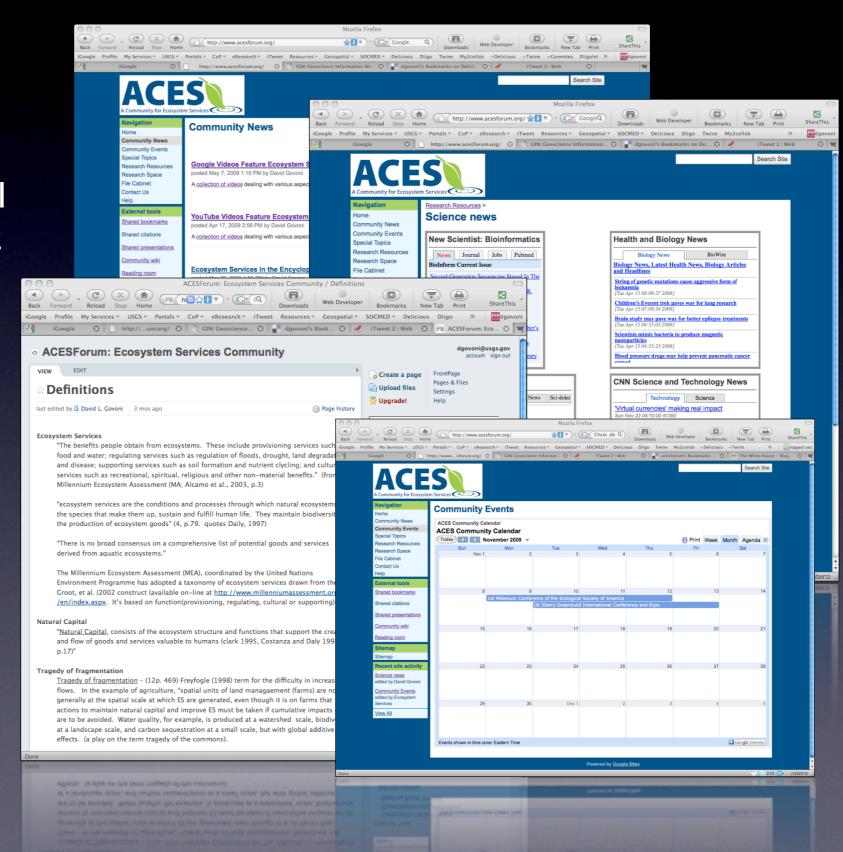
- Proof-of-concept
- Goal to provide centralized source for topic-specific
  - News and communication
  - Collaboration support
  - Peer professional interaction (networking)
  - Knowledge management and sharing (learning)
  - Research support
- Testbed for evaluating existing and emerging Web 2.0-based tools and services' adaptability and usefulness

# Community Access Portal

- Google Sites
- Central point of entry to "native" (embedded) and external tools, services and content
- Managed under MOU with Univ. Florida at Gainesville
- www.acesforum.org

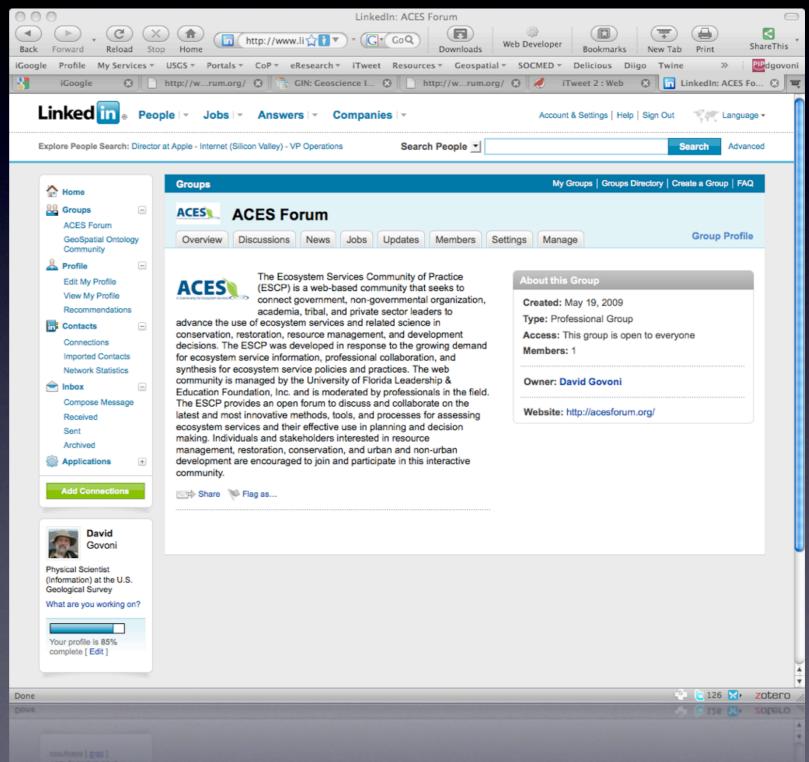


- News &
   Communication (topical news feeds, chat, instant messaging)
- Collaboration (shared events calendar, wiki, word processing, spreadsheet)

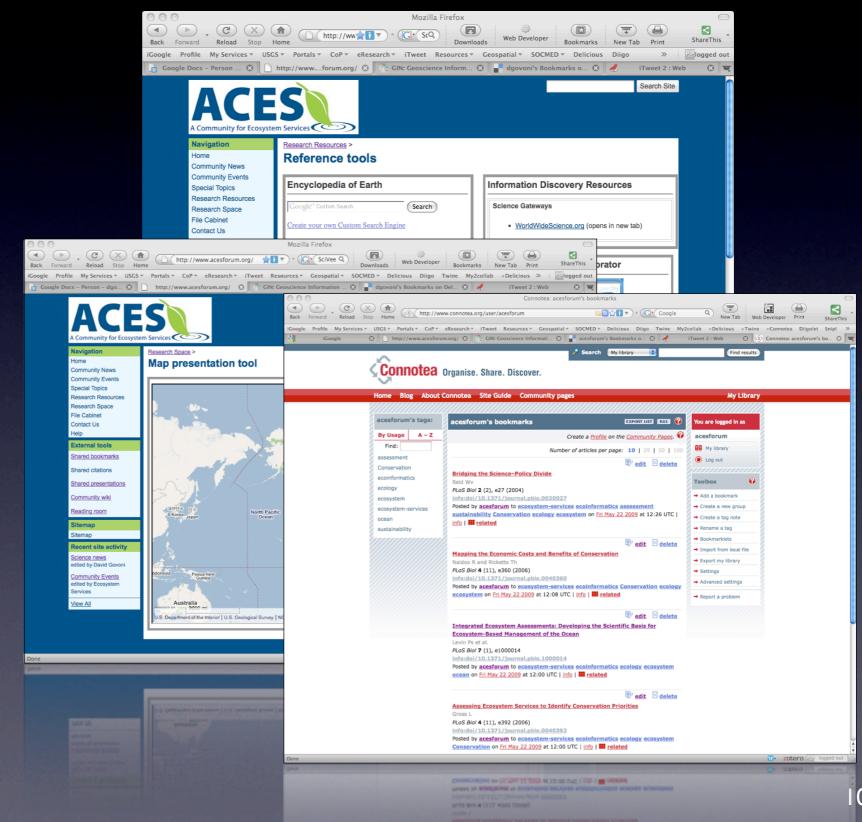


Ecosystem services derived from wetland conservation practices in the United States Prairie Pothole Region with an emphasis on the U.S. Departmen.. A A + 1 http://www.scribd.com/doc/14777379/Ecosystem-services-derived-fron RSS & Qx Google Apple (106) v News (507) v USGS TLA iWiki iTweet MobileMe iGoogle T&A My Delicious Add to Connotea Add to Delicious Diigolet All | Books | Business | Academic | More v Search All Documents. Search Hello acesforum | M 0 | Account | Log Out | Help 1 Upload Partners Knowledge Management Ecosystem services derived from practices in the United States Prai ▲ ▶ ຜ A A + 좋http://www.slideshare.net/acesforum/suburban-land-use-stormwater-b ເടോ ৫ Q▼ Google & Sharing (journal Gleason, R.A., Laubhan, M.K., and Euliss, N.H., Jr., eds Apple (106) v News (507) v USGS TLA iWiki iTweet MobileMe iGoogle T&A My Delicious Add to Connotea Add to Delicious Diigolet derived from wetland conservation practices in the United acesforum Logout All Languages Share This ▼ Send This ▼ ☆ Add to Favorites Like Slideshare Home Browse My Slidespace Upload Community Widgets articles and documents, UScribd More ▼ Q, - + ≈USGS webex presentations, Apple (107) v News (511) v USGS TLA iWiki iTweet MobileMe iGoogle T&A My Delicious Add to Connotea Add to Delicious Diigolet Ecosystem Services Derived from Suburban Land Use, Storm Veb Images Video Maps News Shopping Gmail more ▼ acesforum@gmail.com | Web History | My Account | Sign out bookmarks, photos, Google Ecosystem Services an Emphasis on the U.S. Departr Conservation Reserve and Wetla videos, data) All Source Sites Suburban of the Ecosystems Services Review discusses the rapidly changing landscape for business and proactive solutions to manage risks and opportunities arising from environmental change ... cosystem Service Based Watershed Management in Hawai'i (Kate Brauman) formation about ecosystem effects on water quantity, quality, timing, and location, and formation about the value of land in relation to its effects on water supply or water ... Google Profile My Services + USGS + Portals + CoP + eResearch + iTweet Resources + Geospatial + SOCMED + Delicious Diigo Twine My2collah >> 🔞 📗 http://www.acesforum.org/ 😢 🎏 GIN: Geoscience Informati... 🔾 🥒 iTweet 2 : Web 🔞 🚅 acesforum's Bookmarks o... 🔇 💘 Paying for Ecosystem Services in Hawaii (Josh Goldstein) ■ delicious Home Bookmarks → People → Tags → ways to integrate conservation and economic production practices on private, working lands lands that are an important complement to public lands in supplying ecosystem services ... ACESForum: a Community on Ecosystem Services's Bookmarks Bookmarks | Network | Tags | Subscriptions See more bookmarks in Popular or Recent. 24:26 - 11 months ago mounts of greenhouse gases. Forests, in particular, old-growth forests in complex ecosyste equester large amounts of carbon compared to replanted seedlings in a clearcut. ... Bookmarks 15 Sorted Alphabetically ▼ Top 10 Tags ₩atch video here ecology 29 APR 09 The value of the world's ecosystem services and natural capital SAVE ne Ecosystem Services Review and the Business Case www.uvm.edu/giee/publications/Nature Paper.pdf acesforum biodiversity ecoservices ecosystems environment natural-capital ecosystem-services and Ecosystems Program and lead author of the ESR discusses the future of business in a rapidly changing world. ... business strategy World Resources Institute ecosystem services ecosystem-services ecosystems 15 MAY 09 The UVM Ecoinformatics Collaboratory SAVE environment ecoinformatics.uvm.edu/ research ARIES: ARtificial Intelligence for Ecosystem Services "Ecoinformatics Collaboratory, part of the Gund Institute for Ecological Economics at the Univ. of Vermont, is committed to unifying the sustainability inderstand, quantify and value the services that natural ecosystems provide to humankind. ... science and management of the natural and human environment in a new synthesis inspired by the latest developments of information ecoinformatics science uvm research ecology modeling ecosystem-services ecoinformatics economics ▶ All Tags ecoservices collaboratory biodiversity science modelling Policy Dimensions of the Ecosystem Services Approach in Hawai'i (Mark Fox) 29 APR 09 Science Environment for Ecological Knowledge (SEEK) SAVE systimg laws and regulations can create perverse incentives that actually hasten the destruction of ecosystems. Policies can be changed to promote the valuation of, and ... seek.ecoinformatics.org/Wiki.isp?page=WelcomeToSEEK e-research e-science grid grid-computing informatics portal ecology ₩atch video here bioinformatics biology ecoinformatics ecoservices seek science research cyberinfrastructure acesforum National Wetlands Inventory I FWS SAVE

<u>Peer Professional</u>
 <u>Networking</u> (identity, trust, communication)



Research Support
 (reference tools for personal and shared digital library and citation management, library search, special purpose "gadgets" for mapping, modeling, data analysis, etc.)



### The Web 2.0 Toolbox

<u>Function</u>	<u>Current Tools</u>	Possible Additions or Alternatives
Access (Portal)	Google Sites	SciLink, ResearchGATE
News & Communication	News feeds & aggregators (in/outbound), Twitter	
Collaboration	PBworks (wiki), Google Docs, Google Calendar	ZoHo, Wikispaces
Knowledge Management & Sharing	SlideShare, Scribd, Delicious, SciVee	YouTube, Google Video, ResearchChannel, LiveScience, Twine, Diigo, Docstoc, Mendeley
Peer Professional Networking	LinkedIn	Facebook
Research Support	Connotea, various "gadgets" for search, visualization, data storage	Zotero, CiteuLike, Drop.io, Amazon S3

### Lessons Learned - Negative

- Convenience low compared to "all-in-one" systems due to need to maintain multiple accounts, sign-ons
- Services blocked by some organizations; blocking inconsistent
- Learning curve fairly steep overall; multiple, sometimes advertisement-riddled interfaces may be difficult to master
- "Free" services often limited in capacity, features; easily outgrown
- Complex site and content management issues:
  - Technology (e.g., customization, integration, backup)
  - Content (e.g., copyright, records management)
  - Users (e.g., access, participation rights, help)

#### Lessons Learned - Positive

- Many tools and services geared toward (or easily adapted to) scientific professional community needs exist and are improving
- Relatively low cost of entry for small to moderate size communities (most services offer limited "free" versions)
- Relatively quick set-up (days, not weeks)
  - Google Sites is a sufficient framework for organizing and providing access to the "à la carte" set of tools and services
- Further extension possible by linking to additional existing services or developing new capabilities with customized "gadgets"
- Emerging standards for identity, single sign-on, interlinking, etc.

# Thank you.

dgovoni@usgs.gov