

Major Sites

Sustainability Science

- <http://www.sustainabilityscience.org/> - is the AAAS sponsored site
- <http://sustainability.nationalacademies.org/> - is the US National Academy of Science site

Collaboration Methods for Protect Ecosystem Services: (some linked in SD resources & practice pages)

- <http://www.iita.org/> - Research to Nourish Africa; The apparent 'keys' to successful partnerships for complex culture/environment interaction problems were good science and community organizing, but more a committed and directly involved funding source and having able 'boundary spanning' individuals.
- <http://www.indiana.edu/~ifri/crcs.htm> - Univ of Indiana Intl. Forestry Research Institute, 11 collaborating national research centers, 5 process concepts for collaboration, sharing complex information with complex communities, developing 'hybrid knowledge', overcoming resistance to new thinking & increasing use of diminishing resources.

Whole World Data Imaging:

- http://servirtest.nsstc.nasa.gov/geoss_decision_support.html - the NASA 'SERVIR' Mesoamerica project, an immensely detailed view of one small part of the world as a model for systematic learning about natural systems from space.
- <http://www.epa.gov/geoss/> - NASA 'GEOSS' Global Earth Observation System of Systems
- http://www.ogcnetwork.net/pub/ogcnetwork/GEOSS/AI_Pilot_Demo/index.html audio into to GEOSS Global Earth Observing System of Systems

More Maps:

- <http://www.ncgc.nrcs.usda.gov/products/datasets/ssurgo/> - Soil Survey Geographic (SSURGO) Database is a product of the NRCS, US National Resources Conservation Service which is also taking lead in organizing the global data network, ESRI which integrates
- http://www.uen.org/lessonplan/upload/10115-6-14002-SSURGO_Data_in_ArcView.pdf - Clear but extended info on SSURGO soils data
- <http://www.isric.org/> - world soils information
- <http://eusoiils.jrc.it/projects/soter/index.htm> - EU (SOTER) Soil Terraine Database
- <http://www.sandia.gov/energy-water/> - the Energy/Water nexus - SANDIA Labs overview
- <http://www.ciesin.org/> - Columbia Univ CIESIN Center for Earth Science Information

Recent Conferences

NetSci 07 - May/Queens Science Center NY

Two threads, the mathematical 'topology' of networks, and what people are finding as they project the working networks of complex natural systems. Main emphasis is on the densely connected 'hubs' of 'boundary spanning' nodes. Main oversight is not recognizing the 'hives' of uniformly connected nodes (discrete communities) where the innovations of living system networks seem to arise.

- best among many: [Product Space Ricardo Housman](#) on how economic development follows the learning pathways of a nation's product knowledge communities - [news story](#)

SASO 07 - July/MIT Cambridge, MA

Mainly software engineers talking about how to make self-organizing and self-adapting software with predictable results. Diverse serious attempts to emulate the creativity and stability of natural systems, exposing the real difficulty of the task...

- best among many: [Gerald Jay Sussman](#)'s pieces of unstudied problems, giving me more ways to discuss my PICS method of extracting and studying '[cybernetic body parts](#)' from natural systems. Even further off the chart may be Valvassori Moise's [amorphous computers](#) ([video](#)) that begin life with no organization or even internal connections.

EcoBuild 07 - Dec.07/Washington, DC

The Fed's version of GreenBuild, more focused on general methods and metrics for sustainable design with Green Globes beating LEED to the punch by adopting legitimate impact metrics and BIM people discussing the various new strategies for coordinating the work and analysis, and the Fed's Whole Building Design Guide for US Government sustainability tools and regulations and the [National Institute of Buildings](#)

- best among many: Wayne Trusty's [Athena Life Cycle Impact Assessment tools](#) and Patrick MacLeamy's plenary speech on the [BuildingSMART](#) and [IAI alliance](#) for inter-operability and using BIM concepts for 'getting the problem right' through early discovery and coordination of diverse stakeholders needs.

Future of Professional Practice Dec.07/AIA Conference in D.C.

Connection - SD Science

- Next generation of Integrated Delivery, Emerging Technology & Practice Management
- Members and colleagues can access the resources of the conference. These resources include: articles from the press; PDFs of the majority of the PowerPoint presentations from the individual sessions, Flash movies combining recorded audio and PPT slides, and three podcasts from our speakers. This page will be updated periodically as further materials are developed. Please share this resource with your colleagues and fellow AIA members. questions about the materials or missing sessions, please contact [Katherine Gupman](#)

[AGS 08](#) - Jan.08/MIT Cambridge, MA

Alliance for Global Sustainability, meeting of sustainability departments of engineering schools, MIT, Chalmers Sweden, U. Tokyo & ETH Switzerland. Leading with IPCC Chairman R.K. Pachauri (link to [webcast](#)) and sessions from IPCC authors followed my numerous faculty discussions of the hopeful models and deep problems, with numerous high quality student research posters. Focus "on time & at scale" & "is it too late"
- best among many: John Sterman "[Why bad things happen to good technologies](#)", just scratching the ice on the problem of writing 'change orders' for civilization with all the unexpected layers of infrastructure that nature built to get in the way... and Richard Sears' [SHELL Oil Future Scenarios](#) 'blueprint' & 'scramble' showing that slower change results in larger change.

[AAAS 08](#) - Feb.08/Boston, MA

Because it's a life and death matter, all the disciplines of science are having, by necessity, to become functional tools for resolving conflicts with complex natural systems, and now finding out their usual way of explaining things does not show how to run things. It seems to mean we've finally seen the problem, a wonderful discovery, even if the immediate circumstance is made to seem worse by it. There were many marvelous presentations, with some of the resources linked above.

- best among many: a symposium on "[Finding Sustainability Without Stability: New Goals for a World in Flux](#)" with Jane Lubchenco's historical context of sustainability science and Ann Kinzig's balance of resilience and vulnerability in nature, but still oddly missing the need to avoid increasing investment in diminishing resources, i.e. basic instructions book, instruction #1. Maybe next year...

[Energy Summit 08](#) The National Academies Summit on America's Energy Future Mar 13-14/08

All the lectures and data should all be available online. The two days were packed with brilliant and highly detailed solutions for our double dilemma of running out of energy and needing ever more. That nearly all solutions involve increasing interdependency and increasing risk, along with science, government and societies cooperating in a way they never have before, was mentioned in passing as 'highly challenging', 'high risk' and 'jumping scope'. There were a couple aside mentions, but no discussion of how we've defined the problem, or how any of the many solutions would interact with the many other resource conflict and environmental problems we have. Maybe next year...