

Highlights from the June 5-6 Environmental Data Summit

Summary: This report discusses the recent Environmental Data Summit (a key action in the Delta Science Plan (section 4.3)), including common themes and ideas developed at this event, and the expected next steps. The purpose of the Summit was to improve the ways in which the science community can transform data into relevant and credible information to assist complex decision-making and adaptive management, as required by the Delta Plan. The 2014 Data Summit will result in a peer-reviewed white paper that will recommend actions to improve data management and accessibility and these recommendations will in turn inform the Interim Science Action Agenda.

Background

The Delta Plan recommends the development of a Delta Science Plan (GR1). One objective of Delta Science Plan (section 4.3) is to build on existing and emerging data management systems through hosting a data summit (section 4.3.1) that will bring scientists, resource managers, decision makers, academia, stakeholders and interested citizens together to discuss a new era in information management, knowledge discovery, and application of this knowledge in the Delta's complex environmental policy and management decisions.

Pressing matters, such as climate change, an aging water infrastructure, and a deep drought, force all Californians to recognize the fragile balance between our natural resources and their competing uses across the state - but nowhere more so than in the Delta. There, natural resource decisions must accommodate the rate of environmental change. The status quo of not being able to evaluate tradeoffs among alternative actions is no longer an option. To be effective, agencies, organizations, and public interests must adopt technological innovations that can turn data into the foundation for increasingly tough decisions.

The 2014 Environmental Data Summit was held June 5-6 to shed light on and find solutions to the great challenges associated with the use of large data sets from a multitude of sources. These data could support complex decisions, but they are often difficult to find, access, integrate, and use for exploring "what if..." scenarios. Data Summit products will be a white paper and a practical strategy to leverage existing data initiatives and sustain data integration.



The summit consisted of an all-day event held at UC Davis (June 5) that included plenary talks by the speakers listed below, and a panel discussion moderated by the State Geographic Information officer, Scott Gregory. That evening, technology companies, research institutions and agencies exhibited new data visualization and management tools. The following half-day event (June 6) focused on synthesizing knowledge and insights about data libraries, data integration, business models, visualization/analysis, and development of the white paper. The attached document, “Enhancing the Vision for Managing California’s Environmental Information” describes the purpose and needs for the summit while serving as a guidance document for the second day breakout sessions.

Plenary speakers provided a balance of technical details and high-level vision to demonstrate the potential of improved data management today and in the near future.

- **Jennifer Schopf** - Director of International Networking, Indiana University. Schopf brings a wealth of expertise in high performance computing, distributed systems international networking and cyber infrastructure planning.
- **Patricia Cruse**- Director UC Curation Center - California Digital Library. Cruse works collaboratively across all UC campuses to develop sustainable data strategies that support UC research, teaching, and learning missions.
- **Paul Ramsey** – Ramsey is an international leader in technology development and advisor to organizations ranging from Fortune 500 firms to large government agencies and NGOs.
- **Tyler Erickson** - Developer advocate for Google’s Earth Engine geospatial analysis platform. Erickson helps institutions and individual partners understand and utilize the capabilities of Earth Engine and related geospatial tools.
- **Lindsay Irving** – Program Manager - Center for Applied Biodiversity Informatics. Irving leads the integration of CalAcademy research and digital media through multimedia presentation and public programs.

Attendance - One hundred eighty six people pre-registered for the event, and more than 1,000 others watched the webcast from California (~ 850), Oregon, Nevada, Alaska, Washington, Indiana, Michigan, Virginia, and Colorado and internationally - Canada, Australia, Germany, Denmark, Ireland and Netherlands.

Common Themes and Needs Identified during the Second Day Breakout Sessions

- Data users, their technical and data needs and desired outputs are diverse.
- Sustained funding and support of institutions and governments is critical to ensure continuity and information reliability. Data are an essential support for management and decision making. In today’s world, good data management is an infrastructure as essential as roadways, railways and energy distribution and water systems.

- New data scientists/librarians are needed to provide outreach, integration and information management services. This will be necessary core capacity moving forward.
- Data integration and sustained community cooperation will reduce redundancy of regulatory monitoring and scientific data generation. Increased transparency will lead to innovation and knowledge discovery.
- Minimum data standards and open data formats support interoperability and help facilitate information exchange through low-cost technologies and commonly available resources.
- The California Digital Library should be a central component moving forward.

Next Steps

A white paper written by a group of agency and industry experts will be generated that captures the ideas and recommendations of the summit's workgroups, plenary talks, and evening session. This document will contain a strategic vision and a compelling articulation of the complex data management and analysis needs faced in the Delta. It will also provide a roadmap that provides a practical approach for achieving the goals.

List of Attachments

Attachment 1: Data Summit Framework Document – “Enhancing the Vision for Managing California’s Environmental Information”

Contact

George Isaac
Senior Environmental Scientist

Phone: (916) 445-0533