

Welcome to the Quantifying the Value of EO Data via Socioeconomics Session

ESIP Summer Meeting, Thursday July 19th, 9:30 AM - 11:00 AM

Short Link to this google doc: <https://goo.gl/CevrFo>

You are invited to share your thoughts, questions, or insights here.

To get started, below are some larger questions & themes across all the presentations; below in the document are abstracts for the presentations in case you want to add ideas specific to those.

Discussion Questions/Themes (add yours)

- Which areas could socio-economic data variables best help scientists ascertain and communicate value and worth of their data work?
- How are factors for determining value of research related? What are low-hanging fruits for researchers?
- How does the intended audience affect how a scientist communicates the value/worth of one's research?
- How does ESIP collectively improve how we understand and convey the value of our research and its impacts?
- Can ESIP discover user community vocabularies so that we can find relevant data sets to support their applications and present those data sets in relevant context to aid their understanding and ability to evaluate 'fitness for purpose'?
- Ethnographic study approach - you can ask a user what they need, but they might not know to ask for what they could really use. How do you communicate options, listen, not-bias the question, etc?

Presentation Abstracts

Talk I: *What's the Value of Integrating Socioeconomic and Earth Observations Data?* - Robert R. Downs, (CIESIN), Karen Moe (NASA GSFC), and Robert S. Chen, (CIESIN)

Socioeconomic data are often key to making Earth Observations data relevant to applied and policy users, for example by linking understanding of hazards and extremes, resource locations, land use change, and other phenomena to human settlements and activities, and to human decision making. With better data on who may be affected and how, decision makers should be able to target their actions more narrowly, improving impact and return on investment. Humanitarian responses and public health interventions can focus more quickly and effectively on those most in need during an emergency; investments in infrastructure can be tailored to existing or planned patterns of human settlement and movement; resource managers can

better match available resources with demand. Quantitative assessment of the net benefits of improved data requires detailed information on how the data were used to guide decisions and adjust actions, leading to outcomes with different direct and indirect benefits or losses. We discuss here a use case on the integration of population data into decision making about deployment of utility crews after severe storm events, based on SEDAC's collaboration with StormCenter Communications as part of the ESIP Disaster Cluster's work with the All Hazards Consortium.

Discussion?

- useful considerations to measure value on slide 14; challenges on slide 15
- Factors for determining *who* is an “at risk” population
- How do we assess the output and influence of those decisions?

Talk II: *Increase the Relevance, Impact, and Efficiency of Your Research* - Ben Hickson (University of Arizona)

Demonstrating the relevance and impact of research outcomes has become critically important as funding resources have become increasingly competitive. Relevance of research is largely influenced by the potential for application with impact is governed by access to both research and products. Libraries at research institutions are working to develop tools and resources that enable researchers to streamline their research through the adoption of relevant tools and software and expose their research through the democratization of access to digital content. Open access journals as well as data repositories capable of handling the scale of today's research are important components addressing access while facilitating the adoption of tools in GIS, programming, and data management have become a principal component of enabling valid, robust, and accessible research. This presentation will touch on these tools as well as other research support services.

Discussion?

Finding Relationships slide had some data resources of interest

- IPUMS
- RefUSA
- FAO
- GABBs via MyGeoHub.org
- OpenStreetMap
- Esri Living Atlas, Open Data

- Libraries role - in general and across libraries - in helping define and share value
 - You mentioned federated library network - UA connected to Tufts, Harvard, etc.
- Wikipedia: for general public knowledge - an interesting consideration for developing public awareness
 - In addition to scientific/university vetted access
 - More eyes on research = greater impact
- Ways to build data value into the research process
- [Sidenote: Ben showed how UA uses OSF - if you are interested in learning more, ESIP has an OSF repository, or experience with it, and you can talk with Annie Burgess to learn more]
- National Socio-Environmental Synthesis Center - pairs domain scientists
- Use your library resources!

Talk III: *Understanding Value to Articulate Worth in EO Data* - Christine White (Esri), Laura McNulty (Esri), and Tripp Corbett (Esri)

Value and worth have specific and separate definitions in the fields of business, philosophy, and economics. Worth refers to a monetary assessment of some item, and can be inferred from value. Value must be considered through different meaningful categories – e.g., the audience doing the valuing, the economic assets and profits in question, the emotional connection to goods and services, social impact, etc. Getting at these value categories can be challenging but if accessed, they can tell a bigger story about the true value and impact of research and data for scientists. Bringing in data such as Esri demographics and business info, and using geospatial tools to intersect with research data, can provide a strong start in making these socioeconomic connections.