RESEARCH COORDINATION NETWORK
Socio-Environmental Knowledge Commons

HDF User Group Meeting 2023
The full presentation was given by Luis Felipe Murillo (ND)
at the NSF-FAIROS Meeting May 19, 2023
SOCIO-ENVIRONMENTAL KNOWLEDGE COMMONS PROJECT

- **Main Goal:**
  - **Study, translate, and disseminate Open Science (OS) tools and methodologies to advance collaborative socio-environmental research**

- **Scope:**
  - Social + environmental research projects that
    - **(1)** collaborate with frontline communities
    - **(2)** use or develop OS tools and methodologies

- **Disciplinary Improvements:**
  - Science and Technology Studies + Public Access
  - Research Coordination Network (RCN) supported by NSF OAC and SBE
  - NSF Grant #2226425
PROJECT STRUCTURE

- **Three Components of Research and Development:**
  - (1) Open Science, (2) Science and Technology Studies (STS), and (3) Socio-Environmental Action Research
  - **STS as “Translational” Practice** between OS and socio-environmental researchers working with communities affected by environmental and climate issues
PROJECT: WORK PACKAGES

- Five Research Network Coordination Activities:
  
  (1) **STS research** on the challenges of “openness” in sci/tech
  
  (2) **Convenings** to workshop OS tools with RCN members
  
  (3) **Fellowships** for early-career researchers to advance OS
  
  (4) **Data Facilitation Consortium** to support data stewardship goals
  
  (5) **Resource Hub** to disseminate OS outputs from RCN members
RESEARCH COORDINATION NETWORK (RCN): MEMBERS

Science and Technology Studies
- Scott Frickel, Brown U.
- Aya Kimura, U. of Hawaii
- Gwen Ottinger, Drexel U.
- Abby Kinchy, Rensselaer Polytechnic Institute
- Kirk Jalbert, Arizona State U.
- Marko Monteiro, State U. of Campinas

Open Science
- Phil Bourne, U. of Virginia
- Daniel Mietchen, Freie Universität Berlin
- Christine Kirkpatrick, SDSC U. of CA, San Diego
- Mark Parsons, U. of Alabama, Huntsville
- Karl Benedict, U. of New Mexico
- Stephanie Carroll, Arizona State U. (pending)

Socio-Environmental Action Research
- Alison Parker, Wilson Center
- Michelle Roos, Environmental Protection Network
- Kathy Pope, Environmental Protection Network
- Daniela Soleri, UC Santa Barbara
- Marccus Hendricks, U. of Maryland (pending)
- Mónica Ramirez-Andreotta, U. of Arizona (pending)
RESEARCH: “STATE OF OPEN SCIENCE IN SOCIO-ENVIRONMENTAL RESEARCH”

- Main Goal:
  - Explore how OS tools and practices are being incorporated into Socio-Environmental (SE) research

- Research Design:
  - Profile socio-environmental projects across three dimensions:
    1. Institutional landscape
    2. Use and/or development of OS technologies
    3. Collaboration with frontline communities

- Project Examples:
  - “Impact of Climate Change in the Built Infrastructure of the North Slope, Alaska”
  - “Community Science Kits for Soil Contamination in Upstate New York”
  - “AmazonFACE: studying the impact of climate change in the rainforest”
RESOURCE HUB

RCN

- Individual researchers
- Research projects
- Institutions
- Communities

SEEKCommons Hub

Catalog and archive tools, datasets, software, open resources

Catalogued Resources

Promote and distribute in Linked Open Web

Hierarchical Data Format

5-star data

WIKIDATA

WIKIPEDIA
Quick Demo: Wikidata & Scholia

Welcome!

Wikidata is a free and open knowledge base that can be read and edited by both humans and machines.

Wikidata acts as central storage for the **structured data** of its Wikimedia sister projects including Wikipedia, Wikivoyage, Wiktionary, Wikisource, and others.

Wikidata also provides support to many other sites and services beyond just Wikimedia projects! The content of Wikidata is available under a free license, exported using standard formats, and can be interconnected to other open data sets on the linked data web.

Scholia is a service that creates visual scholarly profiles for topics, people, organizations, species, chemicals, etc using bibliographic and other information in Wikidata. [More info...](#)

Scholia relies on Wikidata, and Wikidata contains only a limited albeit growing subset of the corpus of scholarly literature, its authors and citations. Read more about the limitations in the FAQ or check the statistics.
FELLOWSHIP PROGRAM

- **Main Goal:** Bringing the “next generation” of early-career researchers with new perspectives and voices to socio-environmental research with open technologies

- **Program Design:** Two cohorts (Year 2 and 3) with 9 undergrad, grad, post-doc fellows to work on:
  - *Open technologies for data management, formats, standards, protection, and sharing*
  - *Open data and metadata curation for sharing and preserving project outputs*
  - *Developing FAIR Implementation Profiles (FIPs) with embedded ethical principles (i.e. CARE)*

- **Curriculum for SEEKCommons Fellows:** Open Licensing, Open Scientific Computing, Wikidata for Research, Data Management and Stewardship, FAIR Guidelines, CARE principles, and more!
DATA FACILITATORS CONSORTIUM (DFC)

- **Main Goal:** Create a training and capacity-building program designed to support multi-directional learning and sharing. Rely on the expertise of the SEEKCommons network to develop and provide OS resources to Fellows and the broader public.

- **DFC Design:** All products—trainings, workshops, resources—will be hosted in the Resource Hub and include modules for socio-environmental researchers & communities:
  - *Data Management, Data Standards, and Conventions with OS tools*
  - *FAIR-focused OS methods and services around the research lifecycle (Digital Objects, FIPs, etc.)*
  - *Community-first data sharing and use agreements, stewardship, and (co-)ownership of data*
  - *STS methods for translating OS concepts across diverse and unequal stakeholder groups*
how to contact us:
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