Citizen Science Data and Information Quality

ESIP Information Quality Cluster (IQC)

ESIP 2020 Winter Meeting

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ESIP Information Quality Cluster (IQC)

- Vision
  - Become **internationally recognized** as an **authoritative and responsive information resource** for guiding the implementation of **data quality standards and best practices** of the science data systems, datasets, and data/metadata dissemination services.
- Information Quality
  - Science Quality
  - Product Quality
  - Stewardship Quality
  - Service Quality
- What do we do?
  - Share experiences; collaborate internationally; invited speakers at monthly telecons; sessions and/or presentations at AGU, AMS, ESIP, E2SIP, and OGC meetings
  - Maintain wiki site with many useful references http://wiki.esipfed.org/index.php/Information_Quality

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- Publications
  - Peng, G. *et al.,* 2016: **Scientific stewardship in the Open Data and Big Data era - Roles and responsibilities of stewards and other major product stakeholders**. *D.-Lib Magazine,* 22 (5/6), doi: https://doi.org/10.1045/may2016-peng.
  - Ramapriyan, H K, Peng G, Moroni D, Shie C-L, **Ensuring and Improving Information Quality for Earth Science Data and Products**. *D-Lib Magazine*, 23 (7/8), July/August 2017, DOI: https://doi.org/10.1045/july2017-ramapriyan
  - Moroni, David F.; Ramapriyan, Hampapuram; Peng, Ge; Hobbs, Jonathan; Goldstein, Justin; Downs, Robert; et al. (2019): ***Understanding the Various Perspectives of Earth Science Observational Data Uncertainty***. ESIP. Report. https://doi.org/10.6084/m9.figshare.10271450.v1
- Publications through NASA ESDSWG Data Quality WG
  - ESDS-RFC-031: DQWG Recommendations for the Data Management Plan Template for DAACs
  - ESDS-RFC-032: DQWG Recommendations for the Data Management Plan Template for Data Producers
  - ESDS-RFC-033: DQWG's Comprehensive Recommendations for Data Producers and Distributors
  - ESDS-RFC-034: High Priority Data Quality Recommendations for Data Producers and Distributors
  - ESDS-RFC-039: Reuse Readiness Assessment of Data Quality Software Products

  See https://earthdata.nasa.gov/esdis/eso/standards-and-references

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- Next Step
  - Seek experimentations with and feedbacks for IQC publications and recommendations and make improvements
  - Expand the scope of IQC from satellite-based remote sensing to include airborne, in-situ, and citizen science.
- Sessions at ESIP Winter Meeting
  - “Bringing Science Data Uncertainty Down to Earth - Sub-orbital, In Situ, and Beyond” – David Moroni
  - “Citizen Science Data and Information Quality”

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- Agenda
  - Citizen Science Data Quality: The GLOBE Program – Helen M. Amos (NASA GSFC)
  - Can we trust the power of the crowd? A look at citizen science data quality from NOAA case studies - Laura Oremland (NOAA)
  - Community data for community science - Andrea Thomer (University of Michigan) and Stephen C. Diggs (Scripps Institution of Oceanography / UCSD)
  - Earth Challenge 2020: Understanding and Designing for Data Quality at Scale - Anne Bowser (Wilson Center)
  - Discussion and Key Takeaways

Discussion

- What are the topics that IQC shall focus on?
  - Near term and long term
  - Most needed by the community
  - Low-hanging fruits