Cryospheric Data Management
An overview

Lynn Yarmey
Cryospheric Data Management
A (high-level and incomplete) overview

Lynn Yarmey
Sneak Peek

• Highly complex, distributed landscape
  • Mix of organizations and projects
  • Diverse organizational, domain-specific, and regional approaches
  • Heterogeneous data and metadata practices

• Progress in connections, coordination
  • Ecosystem mapping
  • Facilitating standardization
  • Mediation and communities of practice
  • People dedicated to maintaining connections
Sneak Peek

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Cryospheric <-> Polar
NSIDC Context

(Not all shown)
U.S. Context
(Not all shown)
International Context

Interactive (beta) Ecosystem Map - http://arcticdc.org/products/data-ecosystem-map from the Arctic Data Committee Chair and Task Lead Peter Pulsifer
Caveat – Ecosystem Map starting with Arctic regional efforts, but growing to include related domain-based work

Working with communities directly to appropriately represent efforts

Updates in progress, more to come!

Interactive Ecosystem Map (beta) - http://arcticdc.org/products/data-ecosystem-map from the Arctic Data Committee Chair and Task Lead Peter Pulsifer
Progress

• Progress in connections, coordination
  • Ecosystem mapping
    • Arctic Data Committee (ADC)
  • Ecosystem registry
    • Re3data.org
  • Mediation and communities-of-practice
    • SCADM, ADC Memorandum of Understanding
    • Polar Data Forum *(handouts available)*
    • Disciplinary data communities
    • Research Data Alliance
  • Facilitating standardization and interoperability
    • *(Examples coming next)*
  • Etc.
Challenges

- Open data access, preservation
- Semantic differences
- Outdated, non-standard formats
- Analog and un-digitized data
- Lack of documentation, web services
- Changing standards
- Lack of uncertainty estimates
- Short-term funding
- Etc.
Interoperability Examples

- Integrated data search and community portals
  - GCW
  - IASOA
  - Arctic Data Explorer
  - Etc.

- Data standardization and exchange
  - PermaData
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• Many more!
Thank you

Additional questions? Contact me: Lynn.Yarmey@colorado.edu