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# The DRI Data Legacy and GEO

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GEO-DRI Workshop

Phillip Harder

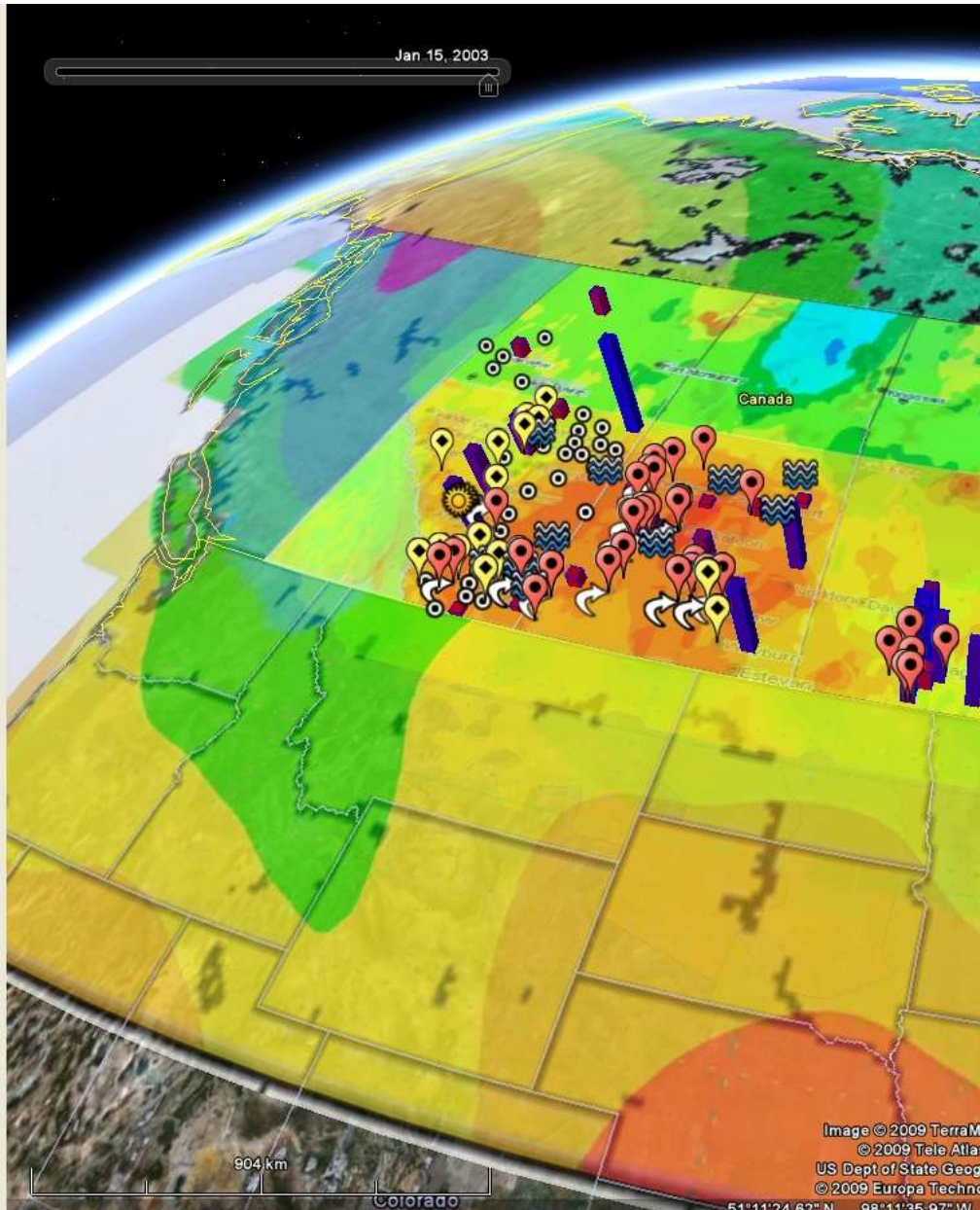
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# DRI Data Legacy

- is an effort to integrate and synthesize access to the data of DRI
  - it will be developed to make data available to end users after DRI is completed
  - consist of
    - a comprehensive centralized store of metadata
    - datasets that are available will be accessible through data legacy
    - data will be visualized through Google Earth where applicable
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# Selection of Data used in DRI

- GRACE Satellite Data
- Observational Groundwater
- Observational Meteorological Stations
- Gridded Temperature and Precipitation
- Hydrometric Stations
- In-situ Soil Moisture
- Dust Storm Occurrence
- Eddy Correlation
- Reanalyses Products
- Satellite Derived Cloud Data
- Spring Pond Counts
- Modelled Soil Moisture
- Modelled Evapotranspiration
- Modelled Plant Available Water
- Modelled Spring Freshet, SWE, SCA....
- Snowcover Area
- Historical seasonal/monthly forecasts
- and much more.....

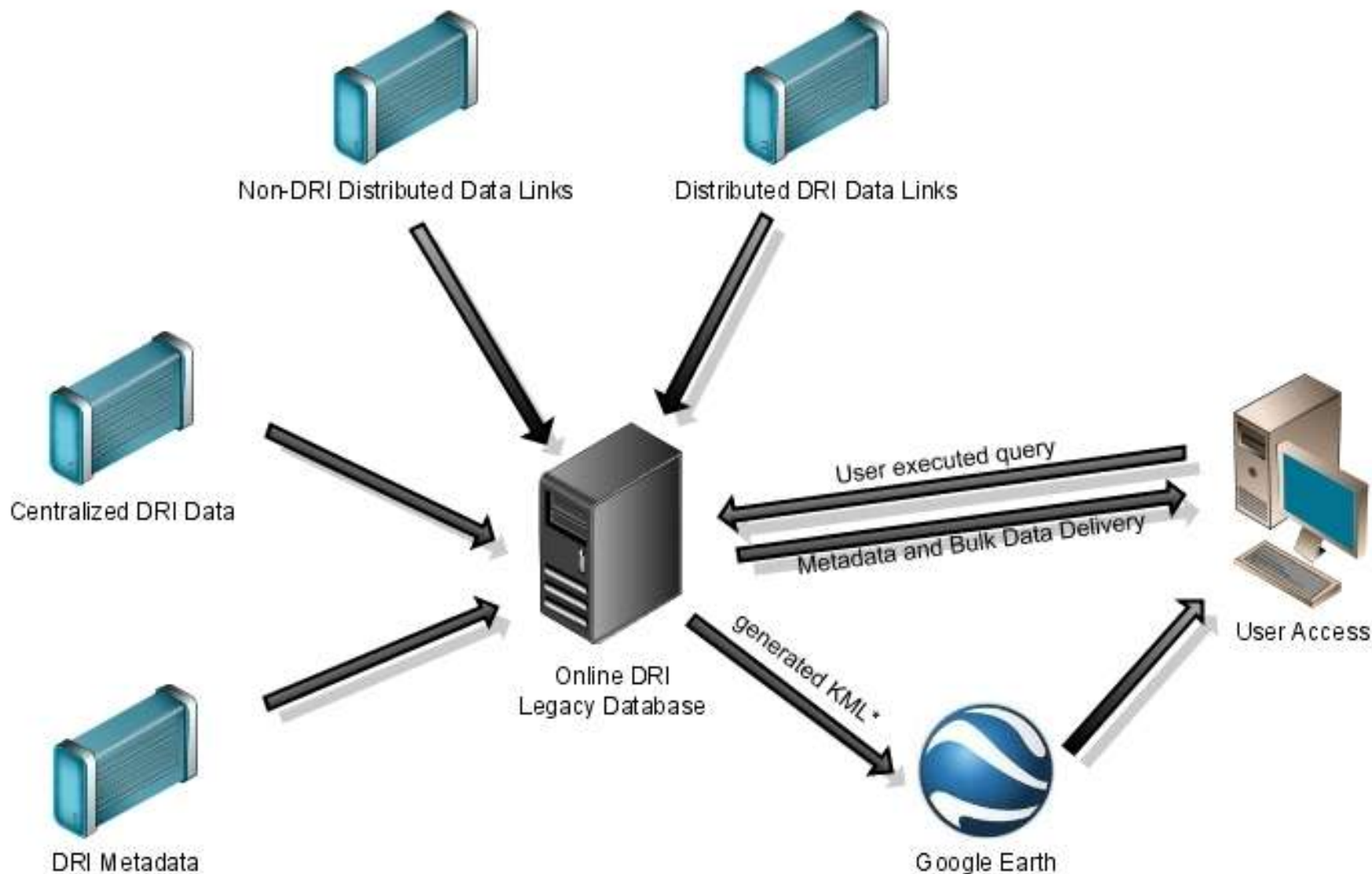


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# Work Plan

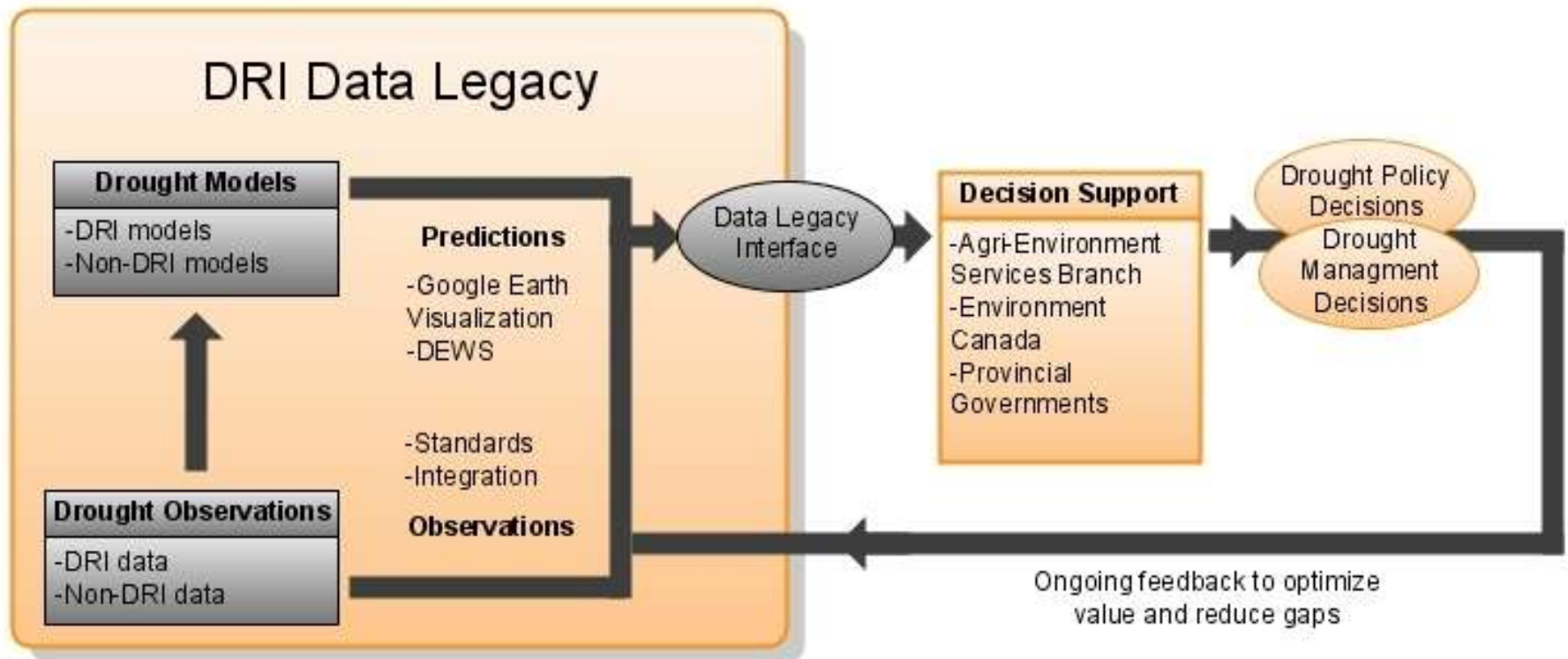
- Phase 1: Metadata
    - DRI has adopted the ISO 19115 metadata standard
      - will allow DRI metadata discoverable in global data systems
    - Metadata is being organized into a searchable relational database
  - Phase 2: Data
    - Nature of DRI datasets is unique:
      - Historic focus (1999-2004/2005) means data often collected by other agencies
      - Tricky to define what a DRI datasets is and which ones to archive?
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# DRI Drought Data Legacy and Decision Support Mechanism



\*KML only generated if selected data is from the Centralized DRI Data

# DRI Data Legacy and Decision Making



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# Stewardship after DRI ends

- Data legacy will be made publicly available online after DRI is scheduled to end
  - Current plans are for two archive locations
    - Environment Canada in Montreal
    - National Center for Atmospheric Research (NCAR) in Boulder Colorado
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# Progress

- Online metadata form operational and collecting information
- Collection of datasets has begun
- Have had interaction with all of the DRI investigators
- Developed a DRI Data Legacy Policy for after the network ends
- Developing the [Data Legacy System](#) which links:
  - Metadata Database
  - Data
  - Other drought projects and data sources



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# DRI Data Legacy and GEO

- DRI Data Legacy has been accepted as an activity in response to GEO CFP: Earth Observations in Decision Support Projects (Feb 2009)
  - Accepted contributions to AIP-3 include:
    - Drought scenario development
    - Making the DRI Data Legacy available to the GEO AIP
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# AIP-3 Scenario Part 1

- Proposed AIP-3 scenario provides a preliminary framework with which to utilize the DRI Data Legacy to introduce new research products and techniques to operational users to augment current systems.

Actors:

Research Group:

- Drought Research Initiative: The network of scientists producing scientific results and new techniques relating to drought on the Canadian Prairies

Stakeholders:

- General Research Community: Scientists that are engaged in studying drought and other climatic extremes but not a part of DRI
  - Drought Data Users: A collection of managers from the water and agriculture sectors and others who utilize drought data in their operations
  - Policy Makers: A collection of federal and provincial managers responsible for responding to drought situations
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# AIP-3 Scenario Part 2

## Scenario Steps:

1. Research group tasked to map the intensity and extent of an incipient drought in comparison to historical drought conditions.
  2. Research group request data from the DRI Data Legacy portal and other existing data portals (GEOSS, provincial and federal agencies).
  3. Research results will outline the region where drought is present and where drought conditions exists and how it relates to past droughts.
  4. Based on this assessment, research group will provide stakeholders with advice on possible actions that could be taken to mitigate the impacts of the drought
  5. Stakeholders will take necessary policy and program actions to deliver services and provide assistance to affected communities.
  6. Research staff will monitor the actions taken by stakeholders to assess the impacts and benefits of these actions.
  7. These steps would be taken on a bimonthly basis for an entire annual cycle (or on a monthly basis for the growing season) in order to assess the full range of the drought and drought impact mitigation over the entire annual cycle (or the growing season) in several different climate regions.
  8. A report on the benefits of Earth Observations and GEO in addressing global drought problems would be developed and serve as a basis for further development of a global drought monitoring capability. This report would include an evaluation of the various terms used for drought and drought impacts in available drought ontologies and data bases.
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- DRI's largest contribution will be the DRI Data Legacy itself and the associated scenario.
  - The DRI Data Legacy and other contributions to AIP-3 will be completed by December 2010 as the DRI network is scheduled to cease its activities then.
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# Thank You

- Questions?

