DWH Long-Term Data Management & Coordination

February 8, 2018

@ 2018 GOMOSES Conference

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Coastal Response Research Center

Coastal Response Research Center (CRRC)

- Partnership between NOAA's Office of Response and Restoration and the University of New Hampshire
- Since 2004
  - UNH co-director – Nancy Kinner
  - NOAA co-director – Ben Shorr

Coastal Response Research Center

- Conduct and Oversee Basic and Applied Research and Outreach on Spill Response and Restoration
- Transform Research Results into Practice
- Serve as Hub for Oil & Environmental Spill R&D
  - ALL Stakeholders: Federal, State, NGOs, Academia, Industry
- Facilitate Collaboration on R&D Among Stakeholders
- Application to All Hazards

NOAA/CRRC and DWH Data Management

- ERMA: Environmental Response Management Apllication
- Environmental Disasters (EDDM)
- DWH Long-Term Data Management (DWH LTDM)

Shout Outs

- Amy Merten – NOAA ORR
  - CRRC Co-Director
  - ERMA's grand neice
  - Chief of ORR Spatial Data Branch until Dec 2017
- Russ Beard NOAA Stennis
  - Too many hats to recount here
  - Data guru

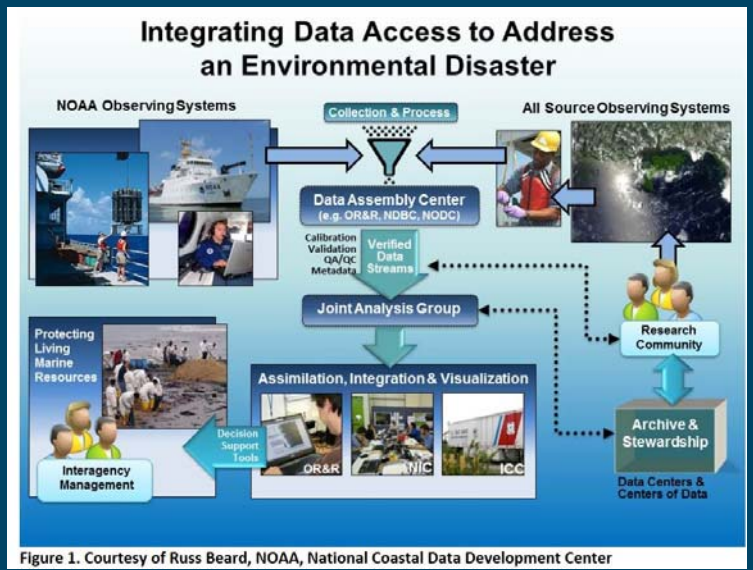

Figure 1. Courtesy of Russ Beard, NOAA, National Coastal Data Development Center

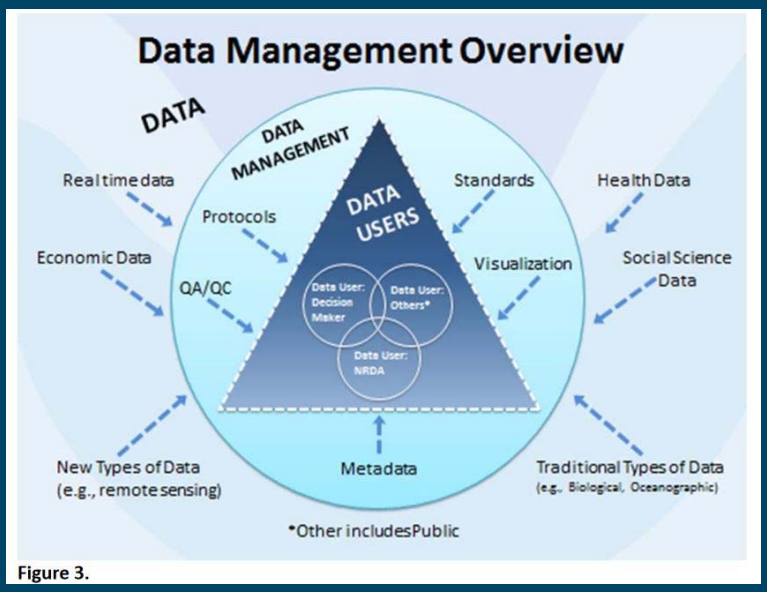

Figure 3.

EDDM Effort

Workshop Objectives

- Engage community to apply consistent terms and concepts, data flow, and QA/QC.
- Provide oversight for foundational, baseline data collected prior to environmental event, based on user requirements.
- Provide best-practice guidance for data and metadata management.

Workshop Objectives

- Suggest infrastructure design elements to facilitate quick and efficient search, discovery, and retrieval of data.
- Define characteristics of "gold standard" data management plan for appropriate data sampling, formatting, reliability, and retrievability.
- Promote use of workshop protocols, practices, and recommendations.

EDDM Website

- https://crrc.unh.edu/workshops/EDDM

EDDM

- Working Groups on:
  - Field Protocols & Training
    - Natural Libraries of Medicine Hurricane Environmental Sampling Tools
  - Common Data Model
    - Crosswalk existing Common Data Models (e.g., EPA Scribe & NOAA DIVER)
  - Gold Standard
    - Data dictionaries, criteria for: baseline data, QA / QC, security
    - Consistent vocabularies
    - Interoperability

EDDM Working Groups

- https://crrc.unh.edu/EDDM

DWH Long-Term Data

(100, 000 environmental samples, 15M publically available records)

Project Leads

- Marti Goss – NOAA RC
- Ben Shorr – NOAA ORR
- Lauren Showalter – NAS GRP

DWH Long-Term Data

Objectives

- Collaboration among GOM partners for data management & integration for planning, restoration, implementation & monitoring
- Best practices for public distribution & public access to data
- Lots of data models (e.g., GOMA Portal, NOAA NCEI, DIVER, GRIIDC, GCOOS, LA CIMS)

DWH Long-Term Data

Working Groups

- **Data Management Standards**
- **Interoperability**
- **Discovery / Searchability**

Thursday 7:30 AM in Celestin B

DWH LTDM

- https://crrc.unh.edu/DWH_DataManagement

Next Steps

- Working Groups
  - Data Management Standards
  - Interoperability
  - Discovery/Searchability
- Workshop

Data Management Standards

- Identify categories of standards needed (e.g., data acquisition including sampling protocols and quality control, data management)
- Determine what gaps need to be filled for data management standards
  - Gap analysis will inform the list of standards (e.g., metadata) that need to be established.
  - Done in concert with the RESTORE Council's monitoring and assessment work group (CMAWG) and the Cross-TIG MAM (NRDA) Analysis

Data Management Standards

- Leads
  - Jessica Henkel, RESTORE
  - Nick Eckhardt, NOAA

Interoperability

- Determine what could optimize interoperability efficiency between DWH LTDM systems, and drive collaboration among them
- Compile strategic goals and key features for data warehouses and repositories
- Determine the intended, current and future use of DWH long-term data management systems

Interoperability

- Leads
  - Jay Coady, NOAA
  - Sandra Ellis, GRIIDC

Discovery/Searchability

- Develop and share technology used by DWH data management services for keyword, semantic, geospatial, and temporal searches.
- Identify community-driven vocabularies and definitions for specific data types to improve the ability to incorporate consensus keywords into data and metadata.
- Leverage architecture where possible of existing systems (e.g., USGS Sciencebase, NOAA OneStop) as appropriate.
  - Compile approaches regarding data, links, and metadata (e.g., embedded ESRI maps that delineate study areas).

Discovery/Searchability

- Leads
  - William Nichols, Harte Research Institute
  - Jay Coady, NOAA

Workshop

- 2-day workshop
- Location: NOAA's Disaster Response Center, Mobile, AL
- Dates: Dec 4-5, 2018

Discussion

- Speak Up!!
- Sign Up!!!

Thank you!

http://crrc.unh.edu/