OCEAN COMMUNITY

IWG-OCM Technical Workshop
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Adam Bode
NOAA Coastal Services Center
Outline / Objectives

- Setting the stage - a brief history of national geospatial initiatives
- All you ever wanted to know about ocean.data.gov
- How can we better coordinate and integrate the work of the IWG-IOCM?
Recent History of Selected National Geospatial Coordination Efforts

- **1990s**
  - [1990] Creation of the Federal Geographic Data Committee [FGDC]
  - [1994] Executive Order on National Spatial Data Infrastructure [NSDI]

- **2000s**
  - [2005] E-government (Bush) → Geospatial One-Stop released
  - [2009] Open Government (Obama) → data.gov released
  - [2009] Integrated Coastal and Ocean Observation System Act

- **2010s**
  - [2011] Geospatial One-Stop migrated to new geo.data.gov
Geospatial Systems Explosion

- State atlases and portals
- Regional portals
- IOOS RAs data catalogs and portals
- Federal agency-owned applications and portals
- National systems and portals
- Non-profit and academic systems and DSTs
- ...and lots and lots of catalogs
National Ocean Policy

- National Ocean Policy - July 2010
- Called for a National Information Management System (NIMS)
- National Ocean Council Data Workgroup was formed to develop a plan for the NIMS
- Ocean.Data.Gov was established as the web presence for the NIMS
- Regional portals are being established in some regions and expanded in others
- Meeting was held at GeoTools 2011 to begin addressing CMSP Portal development
"A robust national information management system dedicated to coastal and marine scientific data and information products is required to meet the diverse data and application requirements of CMSP, and the varying technical capabilities of users." [page 67]

**Guidance**
- Compatible with existing Federal information resources
- Has effective governance and accountability across agencies
- Built upon existing national data systems and initiatives
- Focus on end user; keep it simple
- Deploy initial prototype in nine months
National Ocean Council (NOC) created an Interagency Information Management System (IMS) and CMSP Data Portal Working Group

Time constraints → requirements gathered from existing resources

GSA via data.gov providing underlying IT infrastructure and website development support

NOC Working Group providing content and subject matter expertise

Ocean community 1 of 13 communities hosted on data.gov
System Components – Spatial Data

User Requirements
- States
- NGO’s
- Regions
- Industry

Featured Data
- Atlantic Offshore Seabird Dataset Catalog
- Endangered Species Act Critical Habitat
- EPA Office of Water (OW) 303(d) List of Impaired Waters NHD Indirect Dataset
- Essential Fish Habitat (EFH) Areas Protected From Fishing
- Extraterrestrial Digital Elevation Models (36 meter and 3 arc second resolution) Derived From Source Hydrographic Survey Soundings Collected by NOAA
- Habitat Areas of Particular Concern
- Maritime Limits and Boundaries of United States of America

Quick Search
- Administrative and Regulatory
- Biology and Habitats
- Ecological Functions, Processes, and Impacts
- Elevations and Bathymetry
- Energy and Mineral Resources
- Human Use
- Physical and Oceanography

Other Data Sources

Harvested by data.gov
Upload Metadata
Community Catalogs
Data Stewards
Regional/State Portals & Technical Community of Practice

Regional Planning Efforts

Planning Regions
- Arctic
- Great Lakes
- Gulf of Mexico
- Mid-Atlantic
- Northeast
- Pacific Islands
- South Atlantic
- West Coast

Technical Community of Practice

Welcome to the Technical Community of Practice. This Community, through a variety of web resources and a network of practitioners, is intended to provide the guidance and support necessary to develop a robust information management system to support coastal and marine spatial planning.

This Community is envisioned to be the support network for GIS analysts, data developers and managers, IT staff, and researchers charged with establishing regional information systems for their respective regional planning boards and developing and sharing data for the coastal and marine spatial planning process.

To achieve interoperability across the information management system, to promote the use of data standards and best practices, this Community serves as the access point for follow:
- Data Publishing and Exchange
- Data Quality and Documentation
- Communication Forum

To begin exploring these resources, click on one of the categories below.

Data Publishing and Exchange
- Data Quality and Documentation
- Communication Forum

Regional Ocean Partnership
West Coast Governors' Agreement on Ocean Health
Regional Data Portal
To be developed

California, Oregon, Washington

IOOS Regional Association
- Southern California Coastal Ocean Observing System (SCCOOS)
- Central & Northern California Ocean Observing System (CNoCOOS)
- Northwest Association of Networked Ocean Observing Systems (NANOOS)
Selecting the Appropriate DST

DSTs that enable practitioners to make well-informed decisions at each marine spatial planning process step must possess certain critical functional elements. Tool functions can be divided into six categories, including:

- Data management refers to tools that improve efficiency of data gathering and management and help to Gather Data & Define Current Conditions. (more)

- Mapping and visualization functionality is important throughout the process from Defining Current Conditions to Refining Goals and Objectives. (more)

- Alternative scenario development and analysis is a major function provided by DSTs that can aid in Identifying Issues, Constraints, and Future Conditions; Developing Alternative Management Measures; and Evaluating Alternative Management Measures. (more)

- Management measure option proposal is an important tool function that can aid in Developing Alternative Management Measures and Evaluating Alternative Management Measures. (more)

- Stakeholder participation and collaboration, and community outreach and engagement are important throughout all steps of the planning process. (more)

- DSTs that incorporate adaptive management and assessment of achieving objectives functionality into their tools are important for Evaluating Alternative Management Measures, Monitoring and Evaluating Management Measures, and Refining Goals and Objectives. (more)

Applicable Tools

Click on each tool to learn more about its purpose, how it works, and applications.

- ARificial Intelligence for Ecosystem Services (ARIES)
- Atlantis Ecosystem Model
- Coastal Resilience
- Cumulative Impacts
- Digital Coast
- Ecosystem-Based Management Tools Network
- EPA Metadata Editor
- Marine Integrated Decision Analysis System (MIDAS)
- Marine InVEST (Integrated Valuation of Ecosystem Services and Tradeoffs)
- MarineMap
- Marxan with Zones
- Multi-scale Integrated Models of Ecosystem Services (MIMES)
- Multipurpose Marine Cadastre (MMC)
Outreach to Regional Users: Regional Data Manager Workshop

- June 27-28 at the NOAA Coastal Services Center in Charleston, South Carolina
- Approximately 20 participants -- regional data managers, nongovernmental organizations, and federal agencies
- Three RAs represented: AOOS, SECOORA, PACIOOS
- Objectives
  - Develop a strategy to link national and regional information management approaches in the ocean and coastal planning community
  - Identify common standards and procedures to be adopted by regional ocean governance groups
  - Establish a practitioner’s network of data and tool developers and contributors to ocean.data.gov and the larger network of data portals
Participation on NOC Working Group is now limited to a small number of agencies (BOEM, EPA, GSA, Navy, NOAA, USGS)

Agencies are determining what data gets incorporated into ocean.data.gov

Phase 2 focus areas:
- Data inclusion at state/regional levels
- Integration with other national systems
- Enhanced Decision Support Toolkit
- Outreach and engagement

Uncertain out-year funding for data.gov IT infrastructure [potential for cost recovery]

Key Issue: Need to develop approach for incorporating non-federal data into oceans.data.gov [OMB policy limitations]
Contact Information

Adam Bode

NOAA Coastal Services Center
843-740-1265
Adam.Bode@noaa.gov
Future of Data.gov – Data Hubs

Data.gov
Topical Viewing
All Federal Datasets

Federal Catalogs

City Catalogs

HHS
NOAA
USGS
DOE

DCAT

NYC
Chicago
San Fran

Other Catalogs
Workflow – Harvested Records

1. Register Harvest URL
2. Approve Harvest
   - Records harvested on a schedule, auto approved
3. Find Harvested/Approved Records

4. Search for Each UUID
5. Email geodata@usgs.gov with UUIDs
6. Obtain all UUIDs (cut/paste)

7. Share with Data.gov

UUID obtained from URL

- Data publisher
- Admin
Current Policy Issues – Geo Since the Sep 2011 Migration

- **Competing Policies of Scope**
  - EO 12906, 1994: Share geospatial info across Fed, state, and local boundaries
  - Data.gov definition: Federal only

- **Workflow has changed since GOS**
  - OIRA’s approved process for Federal data stewards: implementation of "flag feature" at a *data record level* only
  - State and local partners still use geo.data.gov workflow as they did in GOS

- **Architecture**
  - Data.gov not approved for federation – however, geo federation remains
Future Capabilities

- **Workflow**
  - Make it more user friendly
  - More like a set of queues with notifications
  - Community leaders can “tag” datasets for inclusion into their communities

- **Metadata**
  - FGDC -> ISO 19115-2
  - Data.gov template -> Schema.org/DCAT

- **Map Visualizations**
  - Create a map visualization within your community on the fly using an existing map service