Changing the Data Governance Landscape

NOAA

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Shared Goals

Vision: NOAA culture that values data as a strategic asset

Goal 3: Improve the value, accessibility, and usability of observational data for informed decision-making
**NOAA Data Vision: Achieve Readiness for Tomorrow’s Data Landscape**

- **NOAA culture that values data as a strategic asset** to understand the environment, create value for businesses, improve government efficiency, and provide quality services for the public

- **Open access to NOAA data and science is critical** to support the mission
Federal Landscape on Open Data

- (2016) FAIR Principles - Findable, Accessible, Interoperable, Reusable
- (2018) Evidence Act, Geospatial Data Act, and Federal Data Strategy
- (2022) Open Data / Open Science --- NOAA Science Advisory Board; NASA, Nat. Academy of Sciences

Evidence Act Phase II - Open Data Access & Management

- Make each agency data asset available in an open format;
- Make public data assets available under an open license;
- Maintain a comprehensive data inventory; Federal Data Catalogue;
- Develop and maintain an Open Data Plan; and
- Engage the public in using publicly available data assets
First Principle: Maximizing the Value of NOAA Data

5 Goals
Leadership, Governance, Open Data, Capabilities, and Collaboration

20 Objectives
Maximize the overall value of NOAA data assets

23 Actions
How NOAA will make progress towards goals and objectives

70+ Milestones and Deliverables
Targets and Measures of Success
Change Agents: NOAA Data Governance Committee (DGC)

**Membership**
Assistant Chief Data Officers (ACDO) - new mission area data governance leads

**Topics**
- Standards, metadata, licensing, technology, access, policy, and workforce

**Roles & Responsibilities**
Data governance, management, and performance mgmt

**Policy**
New NOAA Data Governance and Policy Handbook - in development
Strategic Goals:

Goal 1: Sustain global ocean monitoring and observing for long-term continuity and improve data quality and system efficiency.

Goal 2: Innovate and evolve the ocean observing network to address emerging needs and opportunities for ocean health, ocean economy, weather and climate.

Goal 3: Improve the value, accessibility, and usability of observational data for informed decision-making.

Goal 4: Develop and capitalize on the expertise, diversity and capacity of the ocean observing enterprise.

- **Goal 1 & 2**
  - Data integration with NOAA Science & Technology (S&T) Strategies for Cloud, AI, and UxS

- **Goal 3**
  - Open Data foundational building blocks

- **Goal 4**
  - Supporting commercial enterprises for climate and New Blue Economy
S&T Synergy: Cloud, UxS, and AI

- **Cloud** - *Enable Innovation through Rapid Adoption of Cloud-Based Services*
  - Expand access to NOAA’s data to unleash its full value, while improving the security of the information systems and data supporting NOAA’s mission

- **Artificial Intelligence (AI)** - *Advance AI Research and Innovation in support of NOAA’s Mission*
  - Leading development of an AI-Ready Data Standard, ensuring NOAA Data are usable for AI/ML applications
  - NOAA Center for AI - Data Pilot Projects

- **Uncrewed Systems (UxS)** - *Implement an Innovative, Robust, and Encompassing UxS Data Enterprise*
  - Developing NOAA UxS platform inventory
  - Implementing UxS data management policies
Open Data / Open Science

- Persistent Identifiers: DOI and ORCID
- Open Data Licensing
- Public Access to Research Results (PARR) and Scientific Integrity
- Catalog, Metadata, and Standards Enhancement

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Open Data Licensing

Open Data / Open Science
Open Data Licensing / Commercial Data Buys

**DATA LICENSING**

- **NOAA as a data provider** - What license should we apply to NOAA data?
- **NOAA as a data user** - What licenses can we accept from external data providers?
- Federal [Open Data Policy guidance](#) recommends using [Creative Commons Zero (CC0)](https://creativecommons.org/publicdomain/zero/) wherever possible for NOAA’s open data
- Develop NOAA Data Licensing Policy and Guidance Documentation in active collaboration with agency partners and data users; release in FY23

**COMMERCIAL DATA BUYS**

- In broad use across NOAA
  - Weather: Lightning, Aircraft Obs, Mesonet, GPS-Met
  - Satellite: Commercial radio occultation satellite weather data
  - Fish/Research: Saildrone for various atmospheric and oceanic data
- Implications for use in NOAA research and mission operations
- Developing policy to guide NOAA’s future acquisitions

**Action 11:** Develop & maintain NOAA data licensing guidance that is consistent with Open Data policies in the EA.

**Milestones:**

A. Develop and publish NOAA Data Licensing Guidance that is machine-readable.

B. Develop NOAA policy for specifying appropriate Data Licenses for data that NOAA creates, procures, or otherwise receives as in the case with NOAA Data Buys from commercial or outside vendors.

C. Promote NOAA Data Licensing Guidance within NOAA and with key partners.
International Activities

NOAA Data are curated locally, applied globally

- Data governance and foundational data support benefits all data users
- NOAA data governance and guidance influenced by International entities
  - WMO - Significant impact on NWS activities
  - IOC - NOAA membership on many activities (GOMO participation)
  - OGC - NOAA is an active member

Data Management does not happen in isolation

- GOMO is pace setter with international marine data activities
- The CDO is ready to support GOMO from a governance and NOAA policy perspective
- GOMO data practitioners are encouraged to highlight GOMO international activities at the annual NOAA Environmental Data Management Workshop
Stakeholder Engagement and Equitable Access

- **Open Data Action:** Improving public access to priority NOAA data assets that aligns with the Evidence Act, as well as the Executive Order on On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government and the DOC Environmental Justice Strategy.
Building a New NOAA Data Ecosystem