



**NOAA**  
GLOBAL OCEAN  
MONITORING & OBSERVING

# Enhancing Arctic Data Management and Development of Data-Driven Products and Tools for Climate Resilience under the Inflation Reduction Act (IRA)

*Overview for Potential Applicants*

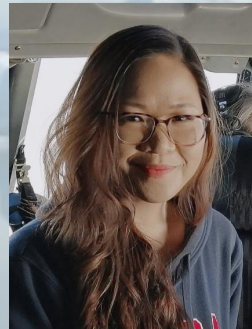
**NOAA-OAR-GOMO-2024-2008289**

**<https://grants.gov/search-results-detail/351387>**

***Global Ocean Monitoring and Observing -  
Arctic Research Program (GOMO-ARP)  
Competition Managers***

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**Cynthia Garcia, Ph.D.**



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# OUTLINE

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- I. **GOMO Arctic Research Program Overview**
- II. **Inflation Reduction Act (IRA) Funding Opportunity Description**
  - A. Competition 1 - *Enhancing Arctic Data Management for FAIR Compliance*
  - B. Competition 2 - *Building Climate Resilience through Data-Driven Products and Tools*
- III. **Definitions**
- IV. **Letter of Intent (LOI)**
- V. **Full Proposal**
- VI. **Review Process and Timeline**
- VII. **Final Advice**
  - Q & A

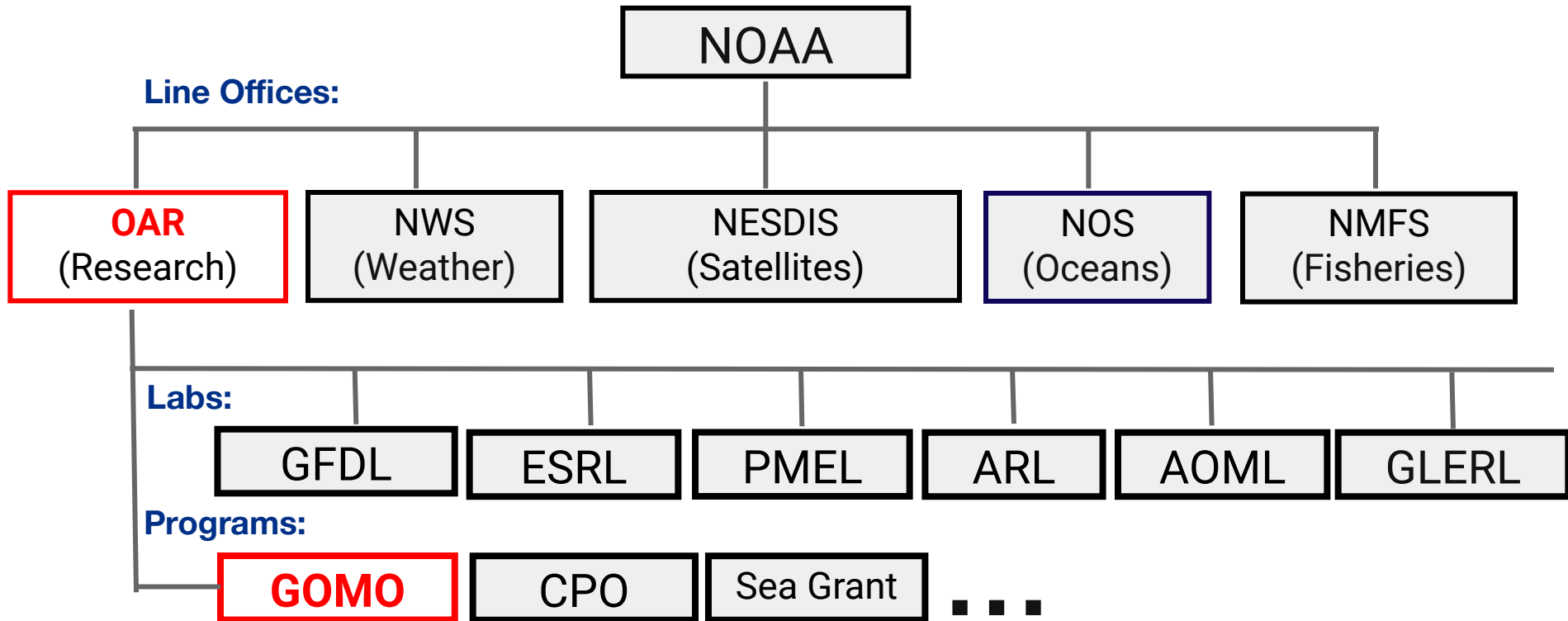
# NOAA Mission



## **Science, Service and Stewardship:**

1. To understand and predict changes in climate, weather, oceans and coasts;
2. To share that knowledge and information with others; and
3. To conserve and manage coastal and marine ecosystems and resources.

# NOAA has many parts - OAR has NOAA Labs, Cooperative Institutes, and Research Programs



# Global Ocean Monitoring and Observing (GOMO)

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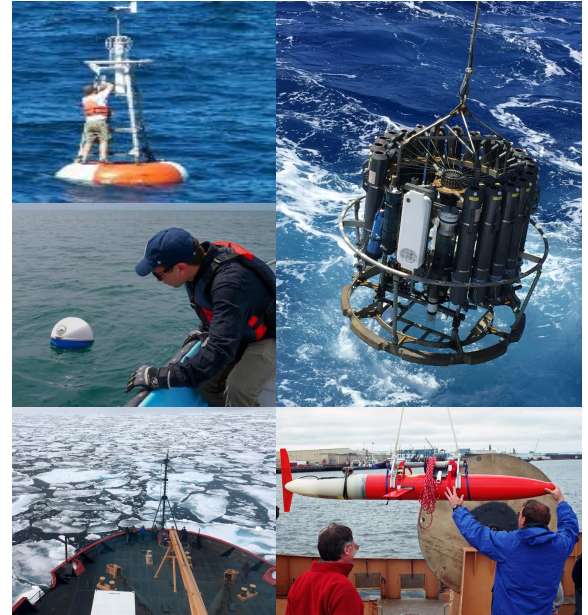
**MISSION:** To **provide and support high quality global ocean observations and research** to improve our scientific understanding and inform society about the ocean's role in environmental change.

**GOMO's Scope:** Research, development, deployment, sustained operations, delivery of high-quality information and products

- Global Oceans
- **Arctic**

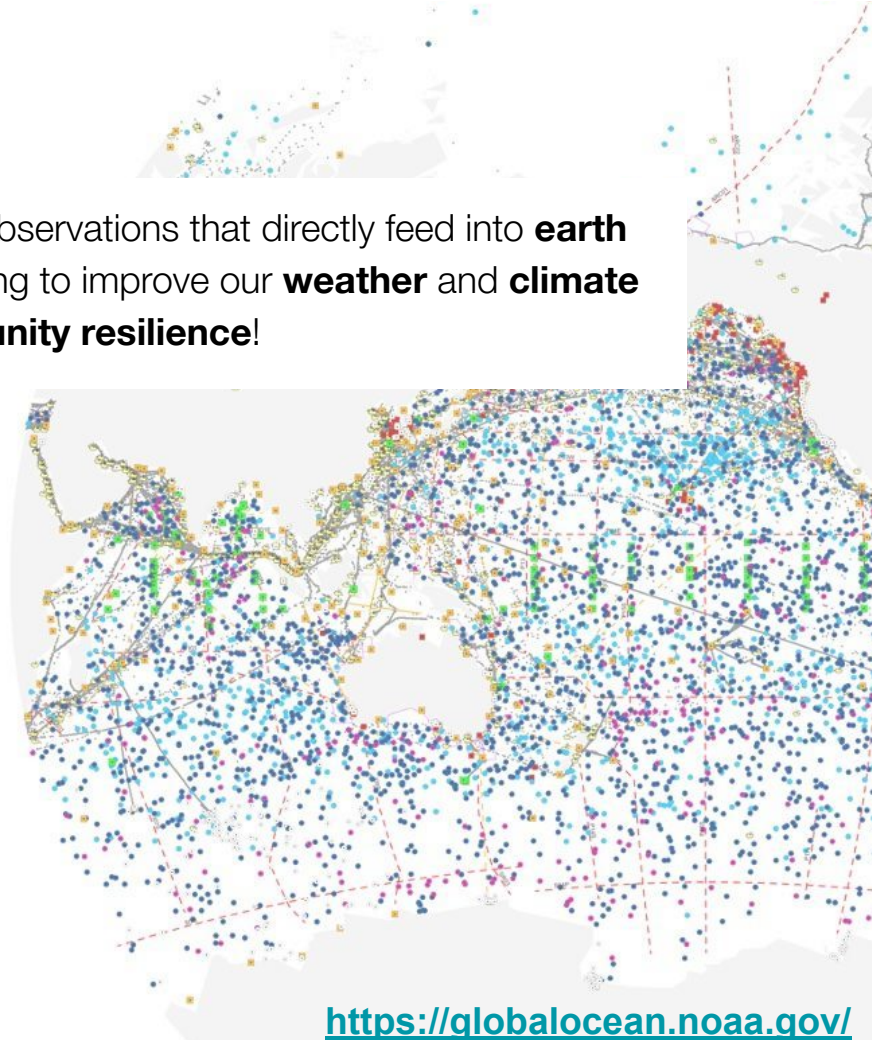
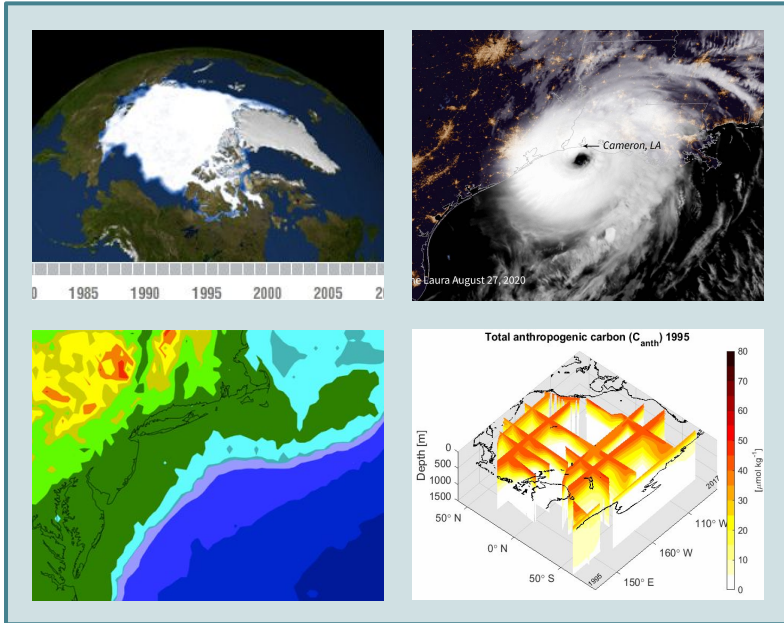
**GOMO's Partnerships:** NOAA, inter-agency, and international

- 100's of countries
- GOMO and PIs lead scientific, IOC, and WMO bodies



# OUR SOCIETAL IMPACTS

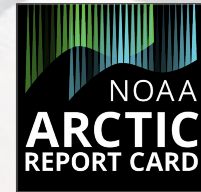
GOMO supports **50%** of the GLOBAL ocean observations that directly feed into **earth system models** and **global forecasting** helping to improve our **weather** and **climate prediction** and **community resilience!**



<https://globalocean.noaa.gov/>

# Arctic Research Program (ARP)

Aims to improve the **fundamental understanding of ocean-ice-atmospheric processes and marine ecosystems** in the northern Bering, Chukchi, and Beaufort Seas to characterize the response to climate variability and change. ARP also supports NOAA mission capabilities across the Arctic through **targeted sustained observing, model improvement and use, synthesis and science communication efforts.**



# ARP Key Priorities

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- Sustaining long-term **Observations** and developing & evaluating new observational technologies
- Investing in critical **Modeling** needs
- Supporting relevant and readily-usable **Products**
- Making sure that the **Data** are FAIR and CARE
- Expanding meaningful **Engagement** with Indigenous and coastal communities in Alaska
- Improving **Partnerships** across OAR, NOAA, between agencies, and internationally



# Definitions

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**Arctic** refers to all US and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.

**Data Management** refers to the processes that handle the acquisition, validation, processing, and storage of data to ensure accessibility, reliability, and timeliness for its users. In essence, it is about having proper controls and procedures over the lifecycle of data.

**Data Products** are data sets or information assets that have been transformed into a more usable format, and include additional value beyond just the observational data itself. These are created and designed to be directly used by end-users, decision-makers, or systems.

**Data Systems** are defined as the technological tools, platforms, or infrastructure used to store, process, and retrieve data. This can include databases and tools that enable better management and usage of data.

**Data Tools** refer to software, applications, or platforms that enable users to interact with, manipulate, or analyze data. These can range from simple mobile applications to sophisticated software programs that perform complex data analyses, simulations, or modeling.



# IRA Funding Opportunity Description

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**Inflation Reduction Act (IRA)** represents a substantial direct investments to date in our nation's ocean- and climate resilience for coastal communities, encompassing advancements in research, observational systems, and the dissemination of information and data to the public.

- Ensuring Arctic data are FAIR is paramount as **data and information form the basis of NOAA's products and services.**
  - Open and efficient delivery of high-quality data enhances the scientific understanding, improves predictive models, and facilitates well-informed policy and decision-making.
  - Facilitate interdisciplinary collaboration and innovation.
- **Overall Need:** Improve data systems and data management of the Pacific Arctic data (including Alaska, Alaskan waters, and the Arctic circle) to help enable a comprehensive, holistic understanding of the complex Pacific Arctic multi-disciplinary system and empower communities to respond more effectively to environmental challenges.

# IRA Funding Opportunity Description

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## Eligibility

- ❑ Eligible applicants are **institutions of higher education, other nonprofits, commercial organizations, international organizations, and state, local, and tribal governments**. Federal agencies or institutions are not eligible to receive Federal assistance under this NOFO.
- ❑ Collaborations and partnerships with NOAA laboratories, cooperative institutes, and centers are encouraged but not required. Federal employees are not eligible to be Lead-PIs.
- ❑ Federal employees could be co-PI, co-I, and/or collaborators using in-kind contributions from their agency or existing work funded through other sources.

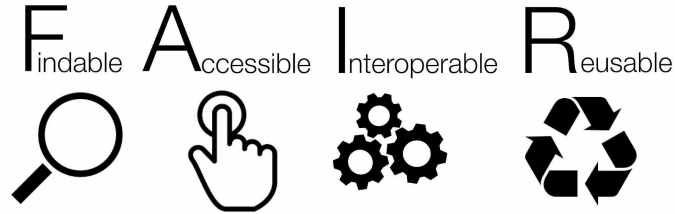


# IRA Funding Opportunity Description

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## COMPETITION 1 - *Enhancing Arctic Data Management for FAIR Compliance*

The goal of Competition 1 is to **design, develop, and deliver enhanced data management and data systems** to achieve FAIR data compliance for OAR-supported observation data of Alaska, Alaskan waters, and the Arctic, and will encourage interoperability with other NOAA data services and tools.



- Establish a comprehensive data management system that will align with NOAA's existing web-accessible data systems to support interdisciplinary Arctic research and to promote the development of climate resilience-focused products or services.
- Support the Arctic research community by establishing a range of data management services.
- Address the needs of local and Indigenous communities in terms of data access, information, products, or services.
- Promote the principles of Diversity, Equity, Inclusion, and Accessibility (DEIA) in data management endeavors.

# IRA Funding Opportunity Description

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## COMPETITION 1 - *Enhancing Arctic Data Management for FAIR Compliance*

**One (1) award** is anticipated for this competition. Total should be **no more than \$500K for four (4) years.**

- ❑ The budget in Years 1 and 2 should reflect the significant investment of time and funds in the **scoping, development, and establishment of the data system.**
- ❑ Years 3 and 4 should reflect the focus on **refining and maintaining** the developed data management systems (creating comprehensive documentation and engaging with outreach activities to ensure widespread adoption and usability).
- ❑ Funded project under this competition is **designed to align with NOAA's existing data management standards and protocols from the outset.**
- ❑ Collaboration with NOAA data experts is encouraged to guide the development process, ensuring that the projects adhere to best practices in data management and contribute to a unified NOAA data enterprise.

# IRA Funding Opportunity Description

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## COMPETITION 2 - *Building Climate Resilience through Data-Driven Products and Tools*

The goal of Competition 2 is to **create data-driven products and tools that leverage prior OAR and ARP research data** for better climate resilience.



- Leverage the wealth of available data and information from years of OAR-funded research to stimulate the development and industry adoption of products and services to enhance coastal resilience in the Arctic.
- To create sustainable, practical, and user-friendly products and tools that foster open science opportunities and empower communities with the knowledge and resources to maintain and evolve these tools, ensuring their effectiveness and relevance.
- Encourages active collaboration among data scientists, local communities, and rightsholders, ensuring solutions are grounded in actual needs.
- Upholding the principles of Diversity, Equity, Inclusion, and Accessibility (DEIA) throughout all data management endeavors.

# IRA Funding Opportunity Description

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## COMPETITION 2 - *Building Climate Resilience through Data-Driven Products and Tools*

**Two (2) awards** are anticipated. About **\$140K (on average) per year for two (2) years.**

- ❑ The Year 1 budget can reflect investments on the design and development of innovative, data-driven tools and products that facilitate climate resilience for Arctic communities.
- ❑ Year 2 can focus on enhancing the deliverables through community engagement, user testing, and the establishment of mechanisms for long-term community-driven stewardship and use. Collaboration with NOAA scientists and data experts and alignment with NOAA's strategic data initiatives are encouraged throughout the project duration.

# Letter of Intent (LOI)

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LOIs should be **no more than two (2) pages**. If the following are not included, or the LOI is submitted late, it may not be considered:

- A tentative project title.
- Name(s) and institution(s) of the Lead Principal Investigator(s) and other Principal Investigator(s).
- Statement of the problem.
- Brief summary of work to be completed, methodology to be used, data sets needed or to be collected.
- Approximate cost of the project.
- Relevance to the Competition that is being targeted.

LOI submission due date: by 5:00 pm ET on **January 11, 2024**

Submit by email to: Cynthia Garcia ([cynthia.garcia@noaa.gov](mailto:cynthia.garcia@noaa.gov)) and Sandy Lucas ([sandy.lucas@noaa.gov](mailto:sandy.lucas@noaa.gov)).

- A response to the LOI from the Competition Manager (e-mail or letter) will be sent to the investigator within four (4) weeks after the LOI's due date encouraging or discouraging a full application.
- Applicants who have not been encouraged may still submit a full application.
- While LOIs are strongly encouraged, applicants are not required to submit and may submit a full application even if they have not submitted a LOI.



# Full Proposal

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- **Full applications** are limited to 35 pages, single spaced, using 12-point font type with one-inch margins on standard 8.5 by 11 inch paper. For full applications with three or more Principal Investigators, the page limit is 40 pages.
- The page limit includes:
  - Title page
  - Abstract
  - Results from prior research
  - Project narrative
  - Budget narrative
  - Budget table
  - Vitae
  - Current and pending support
  - Associated figures
  - References
  - Data/Information Sharing Plan
  - Statement of Diversity and Inclusion



# Full Proposal

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Full Applications submission due date: by 5:00 pm ET, on **March 01, 2024**

Submit to: **Grants.gov**

- For applicants without Internet access, please contact the CPO Grants Manager Diane Brown by mail at NOAA Climate Program Office (R/CP1), SSMC3, Room 12734, 1315 East-West Highway, Silver Spring, MD 20910 to obtain an Application Package.
- Two-stage review process: The **first panel** looks at: 1) the scientific and/or technical merit, 2) qualifications of the applicant(s), and 3) project costs. The **second panel** evaluates the Importance/Relevance and Applicability of Application to the Program.
- Review of applications will occur during the 2-4 months following the full applications due date. Applications should use September 1, 2024, as the start date.



# Final Advice

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- **NOAA is a mission-driven agency. Be sure to review the NOFO** to see the specific topics and competition focus. Reach out to competition managers if you need any clarification.
- **Use the LOI process.** Although LOIs are not required, the process gives you the opportunity to succinctly express your main idea for the proposal/project. It will also give you an idea of whether the topic fits with the program announcement.
- **Follow the guidance in the NOFO** (for page limits, required sections, etc.) and use the tips from other agencies for writing proposals (e.g., NSF has a handbook).
- Be sure to **clearly state the focus of your project** (introduction), **why the project is important** (motivation), and **how you will address/answer your questions** (e.g., use observations or a model, what data will you use, etc.)

A landscape photograph featuring a large body of water in the foreground, likely a lake or a wide river. The water is a deep blue color. In the background, there are several mountain ranges with snow-covered slopes. The sky is a mix of light blue and pink, suggesting a sunset or sunrise. A large, bright orange moon is visible in the upper left portion of the sky. The word "Questions?" is written in white, bold, sans-serif font in the center of the image.

**Questions?**

# Enhancing Arctic Data Management and Development of Data-Driven Products and Tools for Climate Resilience under the Inflation Reduction Act (IRA)

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