

2025 CoastWatch & ATN Training

Aug 14 & 15, 2025 Virtual
10am - 1pm (Pacific Time)

Resources

- [Coastwatch Tutorials \(on GitHub\)](#)
- [Coastwatch Lecture series](#)
- [Animal telemetry Network](#)

Schedule

Thursday, August 14, 2025

Time (PST)	Topic	Presenter
10:00 - 10:15	Training Overview - CoastWatch, ATN and the workshop component	Cara Wilson
10:15 - 11:30	Coastwatch satellite datasets and data portals	Cara Wilson
11:30 - 11:45	Break	
11:45 - 12:15	Using the ERDDAP data server	Cara Wilson
12:15 - 12:45	Accessing ERDDAP using scripts (R, python)	Cara Wilson
12:45 - 1:00	Day 1 wrap-up	

Friday, August 15, 2025

Time (PST)	Topic	Presenter
10:00 - 10:30	Intro to ATN and the DAC	Megan McKinzie
10:30 - 11:00	Demo of ATN data portal	Megan McKinzie
11:00 - 11:30	Accessing public ATN datasets	Megan McKinzie
11:30 - 11:45	Break	
11:45 - 12:00	Workshop, part 1: Linking CoastWatch and ATN data using scripts	Daisy Shi
12:00 - 12:45	Workshop, part 2: Hand's on time	
12:45 - 13:00	Wrap up and final discussion	All



<https://coastwatch-training.github.io/CoastWatch-Workshops/courses/icft25.html>

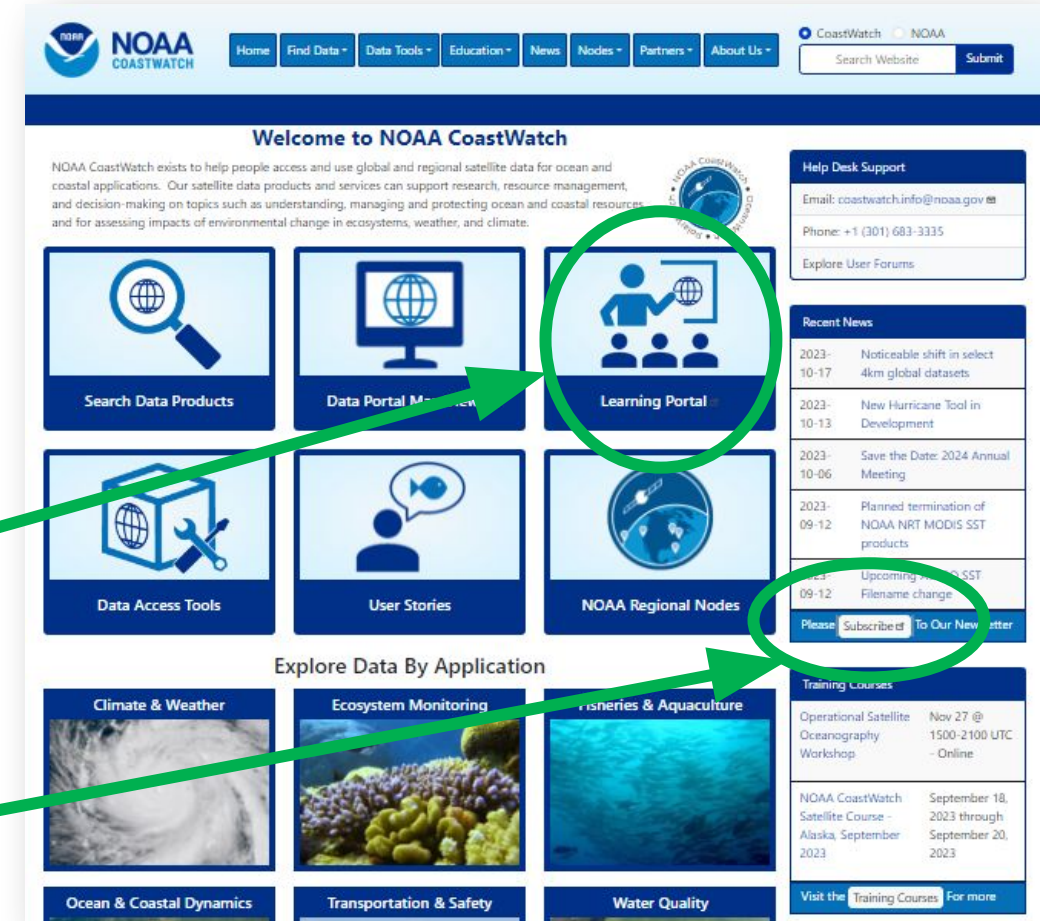
Questions?
Coastwatch.info@noaa.gov

Learning Portal has links to recorded lectures and tutorials

Subscribe to our newsletter for announcements for satellite classes:

subscribe

coastwatch.noaa.gov



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We will be using Slido to interact with participants:

Go to www.slido.com

#ATN2025



Introduction to the U.S. Animal Telemetry Network and its Data Assembly Center

Satellite Data Training Course



Dr. Megan McKinzie
ATN Data Manager



August 15, 2025



ATN Background



45 Years of Animal Tracking by Argos

150,000+ animals tracked since 1978

<https://www.noaasis.noaa.gov/POLAR/ARGOS/apps.html>



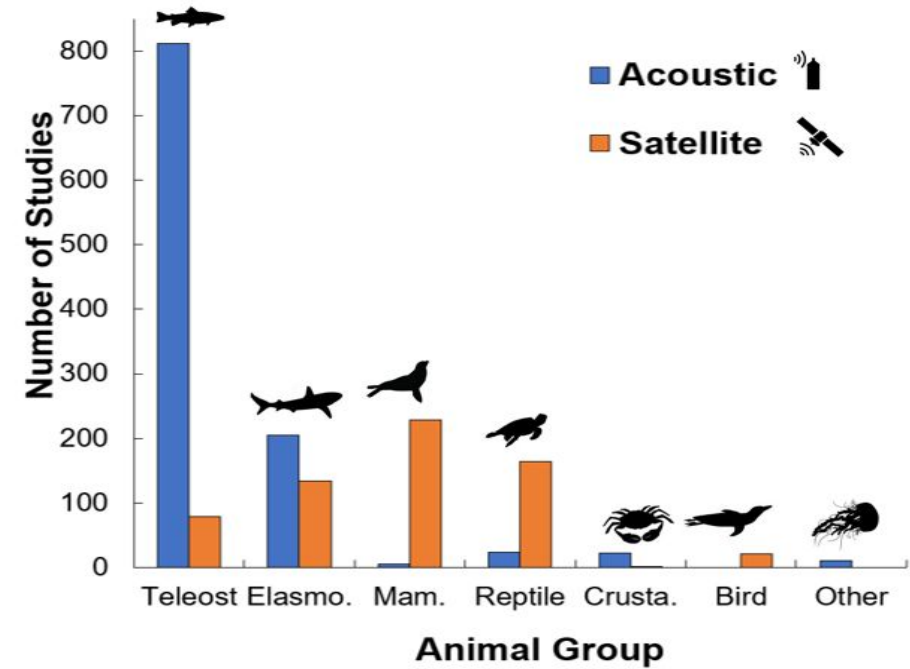
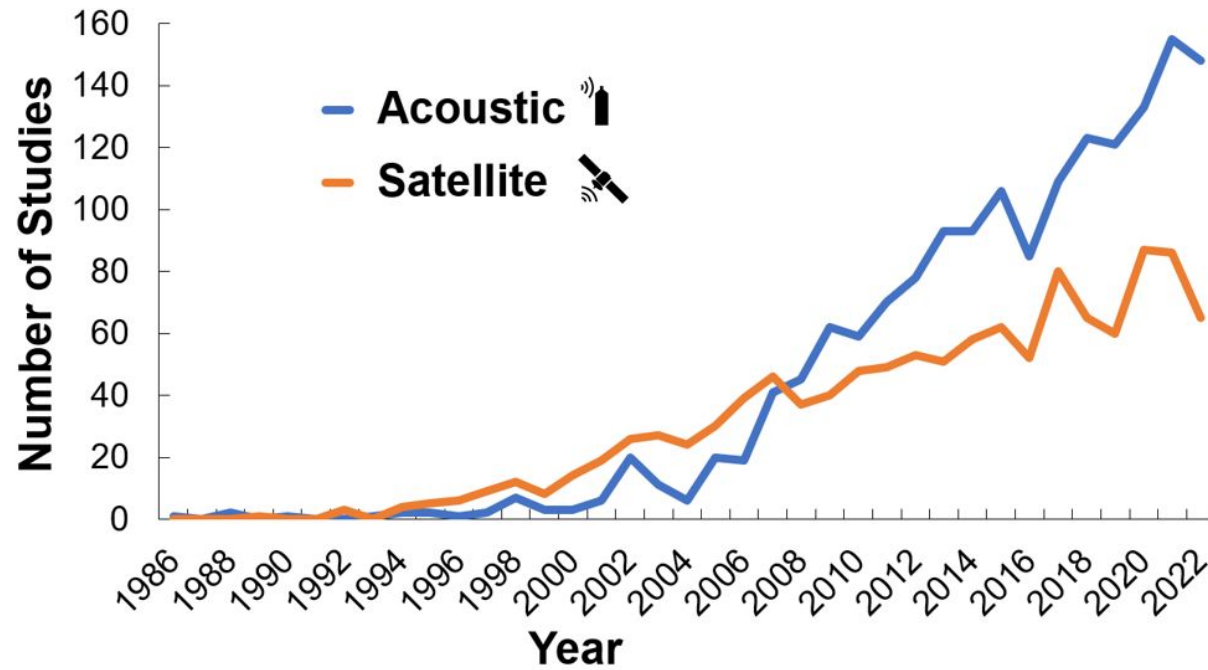
■ BIRDS

■ LAND
ANIMALS

■ MARINE
ANIMALS

■ FISH

ATN Background



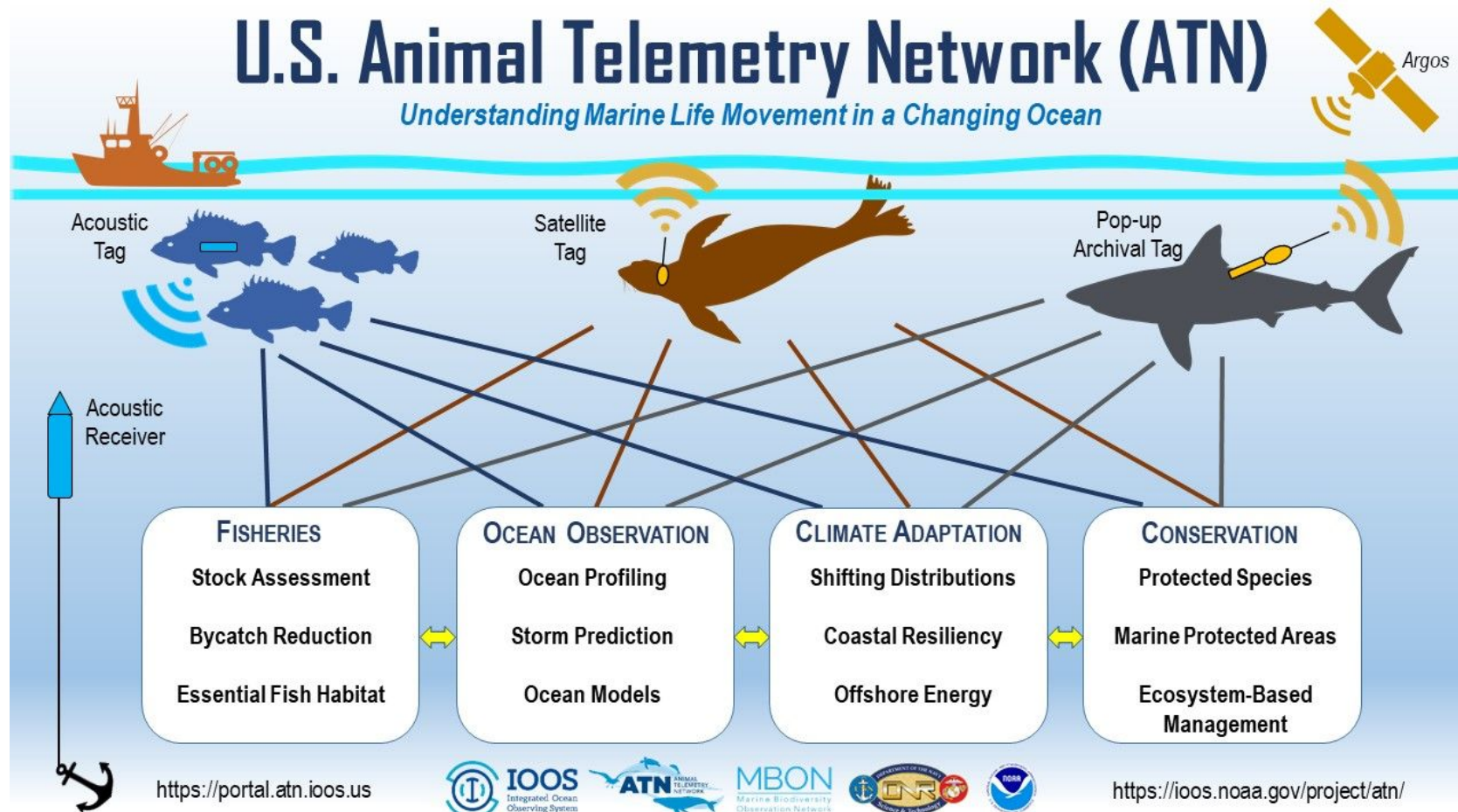
Kessel et al. (in prep), modified from Hussey et al. (2015) *Science*

- **Telemetry is a tool, but an extremely powerful and adaptable tool for marine life observation**
- **The use of telemetry is expanding rapidly worldwide**
- ***The need for data management, products, and delivery is growing commensurately***

Animal Telemetry Network (ATN)



- ATN was established with these needs in mind
- Serving the missions of multiple agencies and the broader scientific community



**Provide Unity, Stability and
Continuity to the U.S. Marine Animal
Telemetry Network and Promote its
Integration into the Nation's Ocean
Observing System Capabilities**

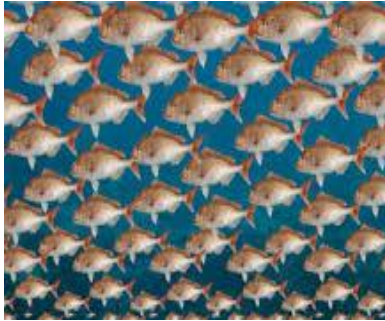


Unified Marine Life Program - “Microbes to Megafauna”

Hotspots



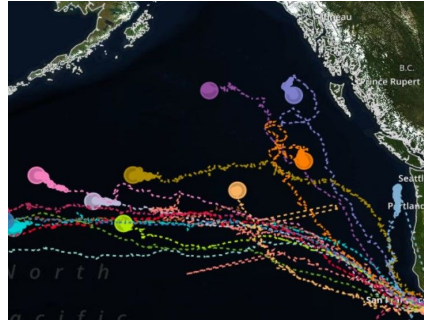
Abundance



Biodiversity



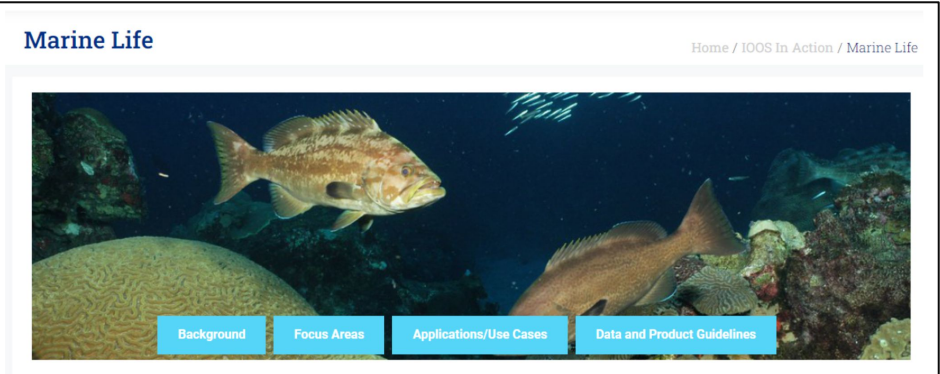
Movement



IOOS Marine Life – <https://ioos.noaa.gov/marine-life-1>

IOOS ATN – <https://ioos.noaa.gov/project/atn>

IOOS MBON – <https://marinebon.org>



The IOOS Marine Life Program Goal: Implement long-term, sustained marine life observation and data sharing capability that builds on and expands the infrastructure, momentum and successes of existing IOOS biological observing programs, including MBON, ATN, and efforts of IOOS partners and Regional Associations.



U.S. IOOS: Program Overview

IOOS Mission: To produce, integrate, and communicate high quality ocean, coastal and Great Lakes data that meets the safety, economic, and stewardship needs of the Nation



Thousands of observing data sets gathered every day by public and private programs

Integrated, made accessible, & supported U.S. IOOS

Supporting weather forecasting, maritime safety, and public health

Observations



Models

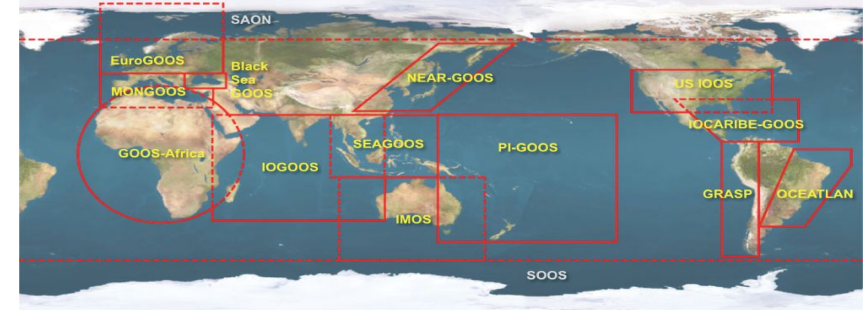
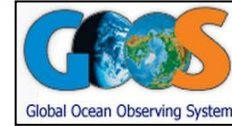


Data Access

U.S. IOOS: Program Overview

Global Component

- US contribution to Global Ocean Observing System (GOOS)
- 1 of 15 Regional Alliances of GOOS



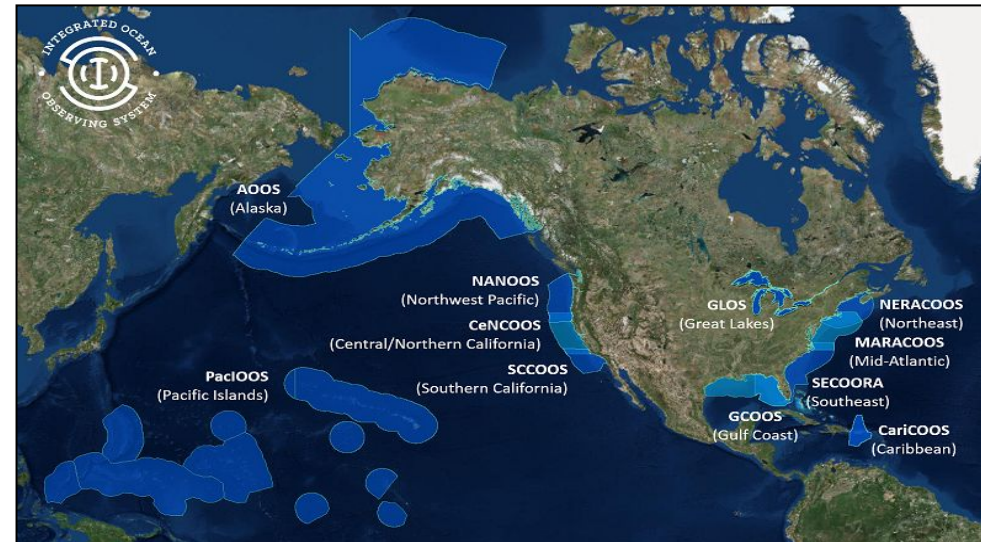
National Component

- 17 Federal agencies



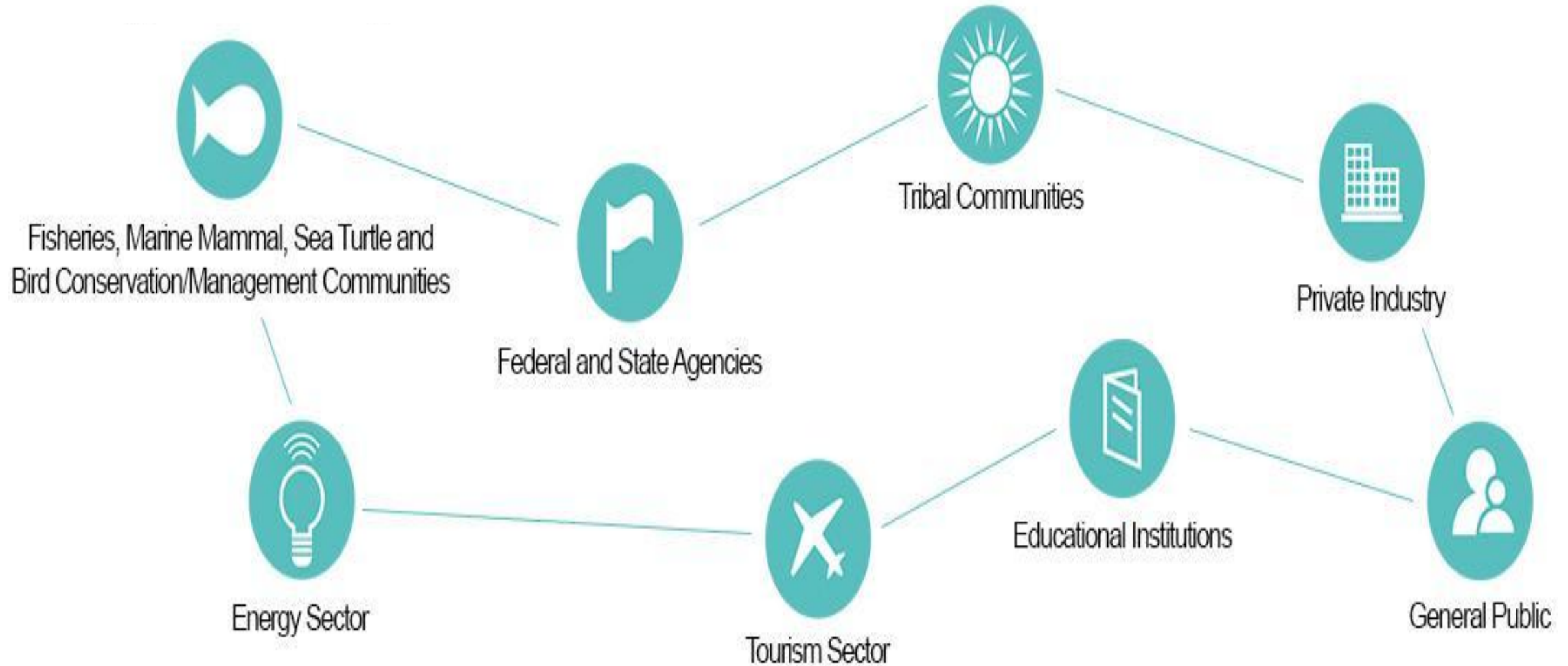
Regional Component

- 11 Regional Associations
 - Stakeholder driven
 - Academia, state/local/tribal government, private industry



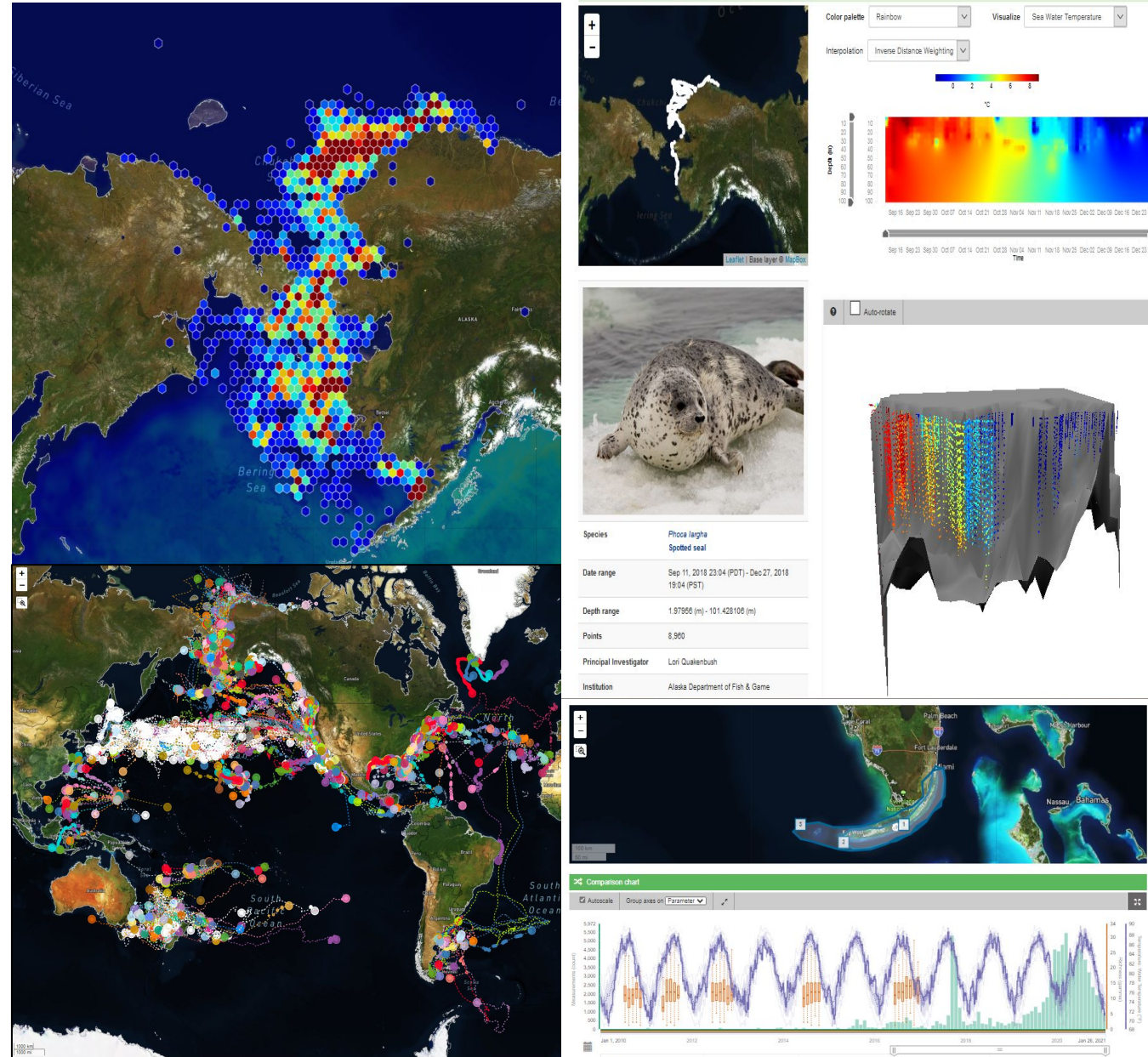
Partnership effort that leverages dispersed national investments to deliver ocean, coastal and Great Lakes data relevant to decision-makers.

Marine Life Stakeholders



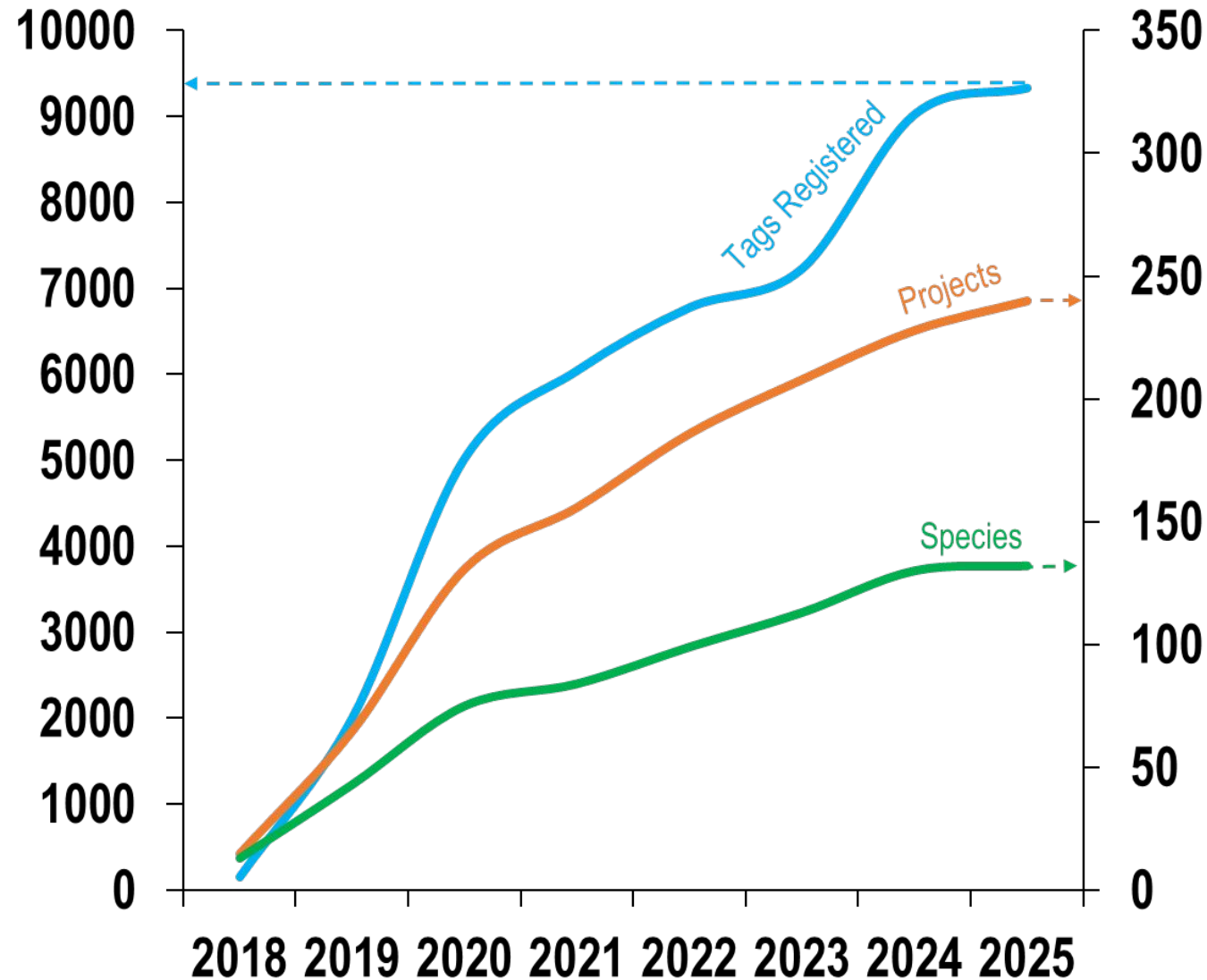
ATN Data Assembly Center (DAC)

- Community resource
- Receives data from multiple sources/tag types
- Enables/promotes data availability and sharing among community partners
- Maximizes access to telemetry data
- Enhances and expands electronic tag data products
- Enables permanent archiving at NCEI, DataONE; DOI minting



ATN DAC Contributing Members

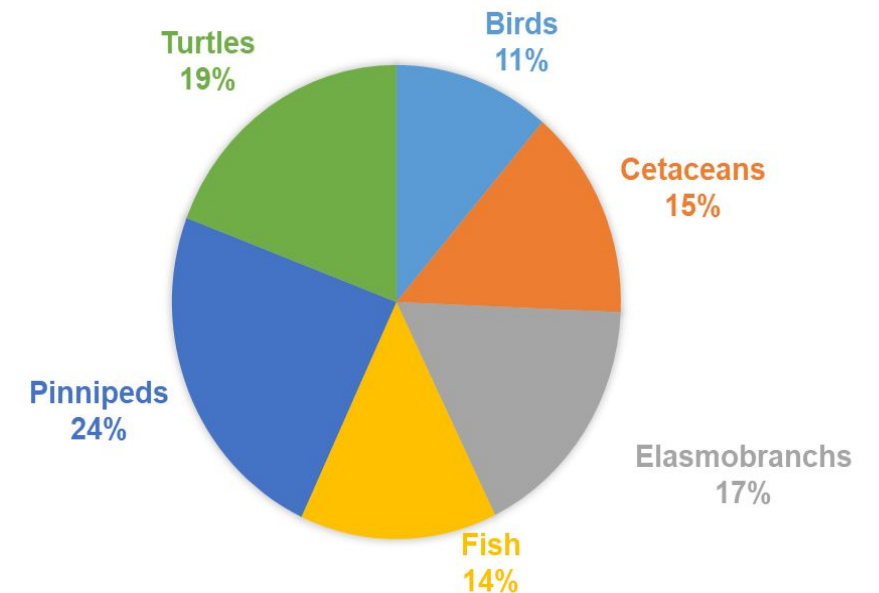
ATN Growth



REGISTERED IN DAC*

- Projects = 240
- PIs = 114
- Organizations = 84
- Species = 132
- Deployments = 9334

PROPORTION OF DEPLOYMENTS BY PLATFORM




*Primarily from Argos based satellite tags

ATN DAC Platforms

ATN DAC Registration/Project Submission

Submit project-level metadata (e.g., title, abstract, contact information) and tag deployment records (e.g., PTT ID, species, deployment dates).

Email:

Password: OR 

[Lost password?](#)

New here? You can create an account with your email or sign in with Google to create an account.



ATN Registration App – <https://dacregistration.atn.ioos.us>
Research Workspace – <https://researchworkspace.com>
ATN Data Portal – <https://portal.atn.ioos.us>



ATN DAC Platforms

ATN DAC Registration/Project Submission

Submit project
deployment

Enter

Password

RESEARCH WORKSPACE

Request more information ?

Login 

The Research Workspace is a web-based platform for collaboratively managing science projects through the entire data lifecycle. Whether you are a research scientist, data manager, or program manager you can benefit from using the Research Workspace. Coordinate information transfer, create and execute reproducible numerical workflows, generate metadata and publish finalized data products to national archives all through a single application.



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ATN DAC Platforms

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Submit project
deployment

Enter

Password

The Research Workspace is a web-based platform for research scientist, data manager, and data analyst to execute reproducible numerical

RESEARCH WORKSPACE



Integrated Ocean Observing System

Animal Telemetry Network

Home Catalog Map Data views Downloads Settings Share Help Feedback

Animal Telemetry Network Data Portal

EXPLORE MAP

PROJECTS



All Tag Deployments



Real-time Tag Deployments:
Past 30 Days



Satellite Telemetry Project
Inventory



Acoustic Telemetry Asset
Inventory



Axiom
DATA SCIENCE

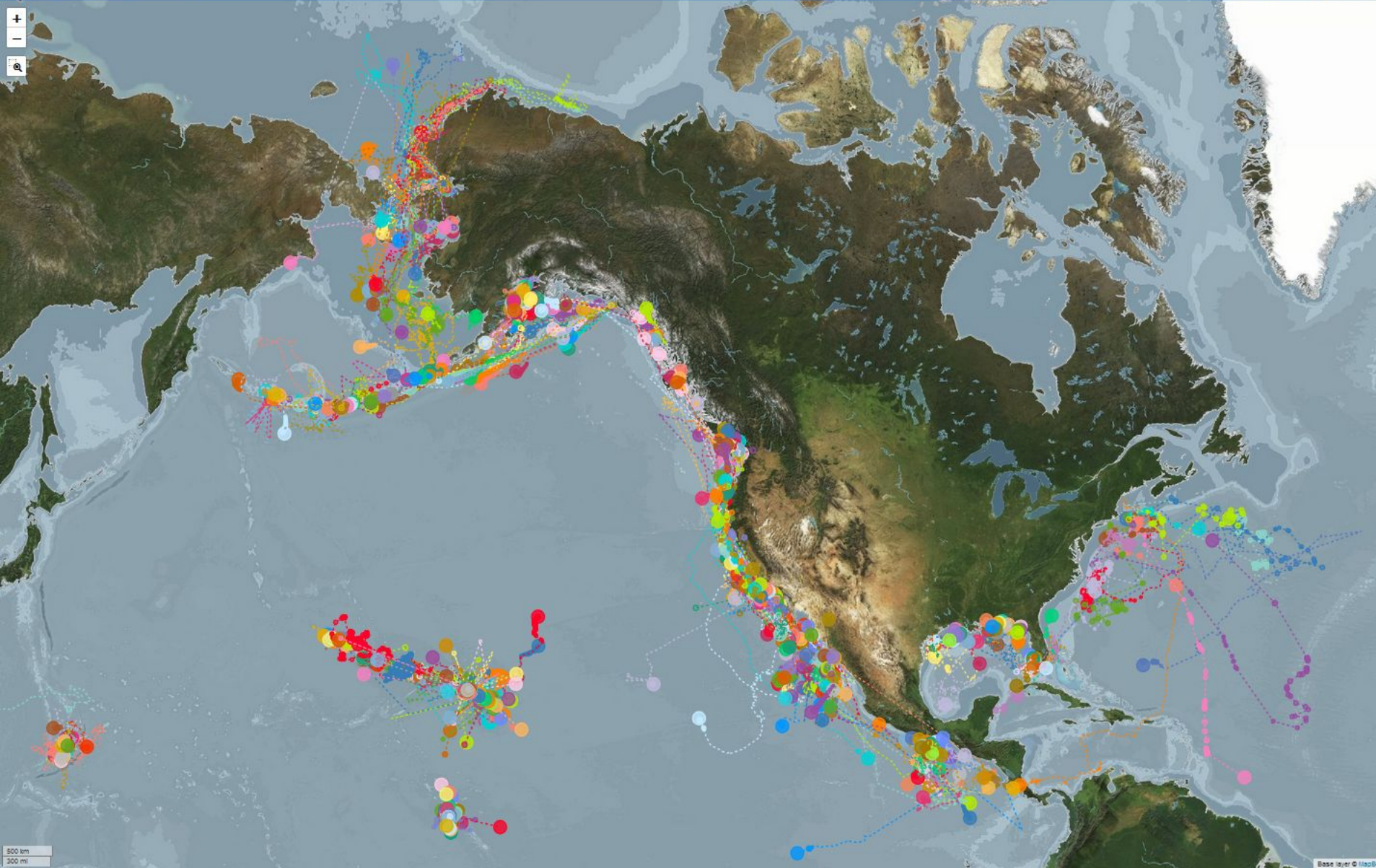
ATN Registration App – <https://dacregistration.atn.ioos.us>

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Archived Datasets

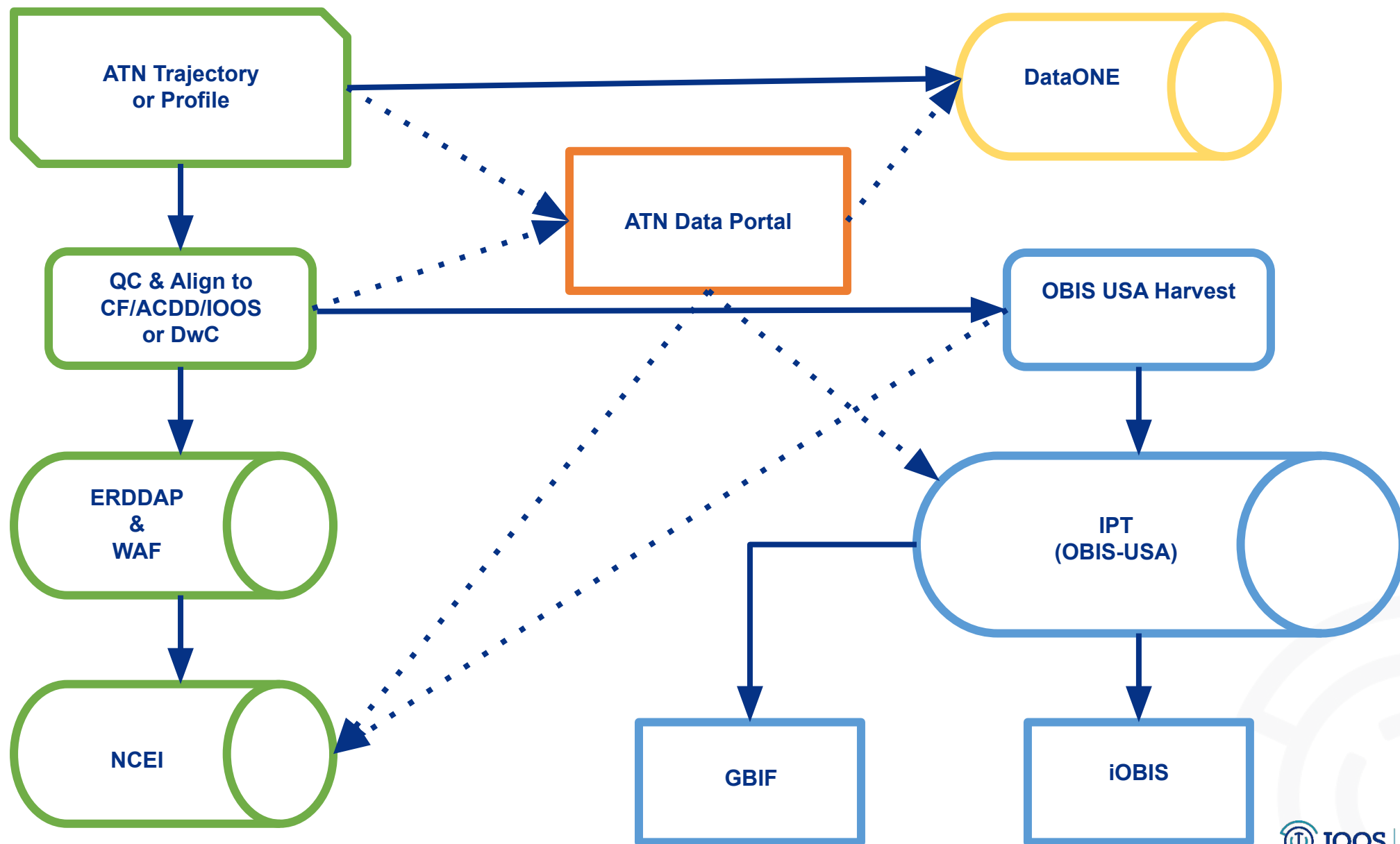


Legend Find Data

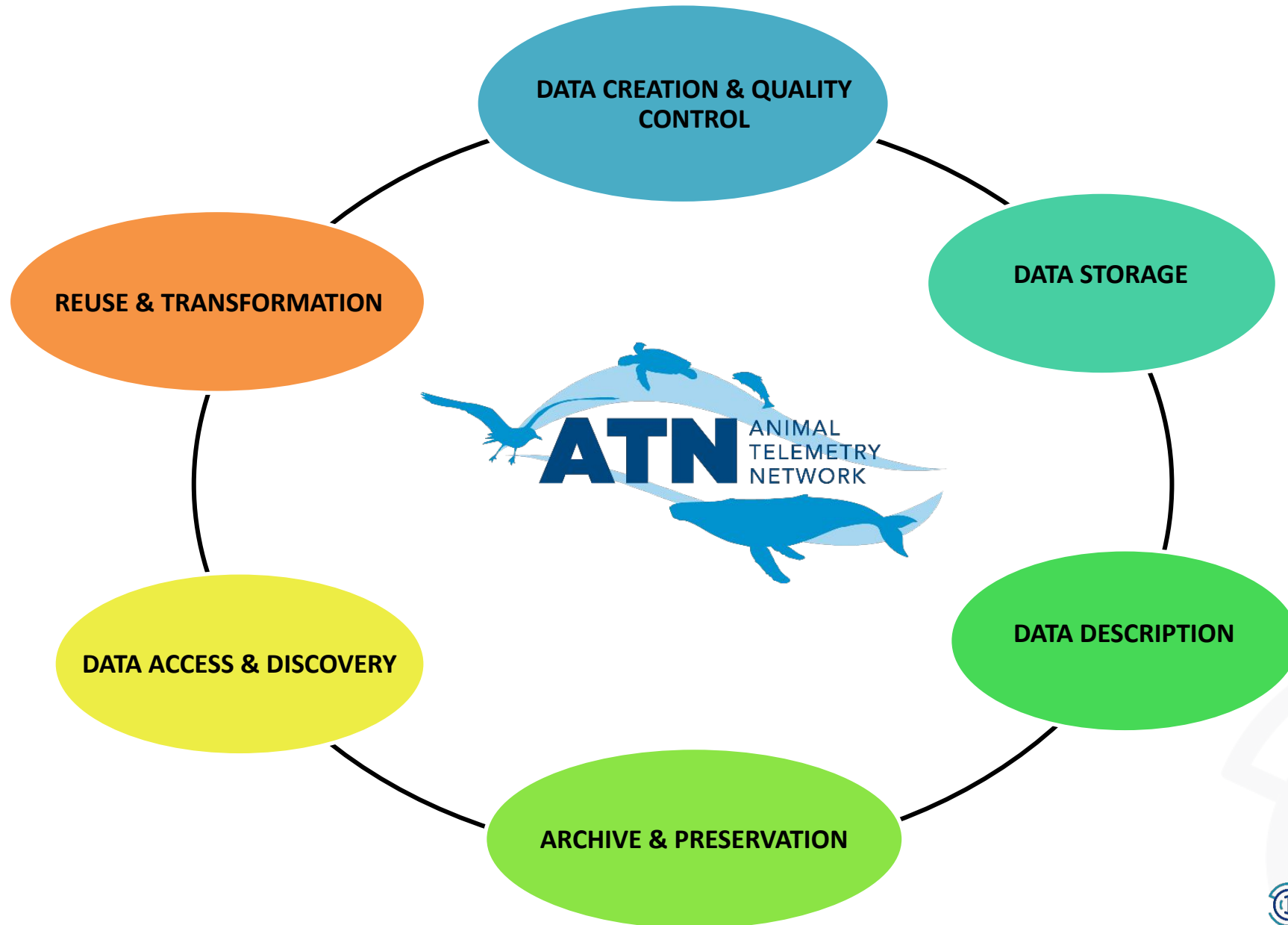
Minimize all Hide all

- + Animal Telemetry Network
Palmyra Blue Water Research - Cetacean Movement Ecology, 2022-2023
- + Animal Telemetry Network
Ocean Migration and Behavior of Steelhead Kelts in the Northern Gulf of Alaska, Examined with Satellite Telemetry, 2018-2020
- + Animal Telemetry Network
Movement Patterns and Habitat Use of Tiger Sharks Across Ontogeny in the Gulf of Mexico, 2010-2018
- + Animal Telemetry Network
Movement Patterns and Habitat Use of Cetaceans within the Mariana Archipelago, 2013-2018
- + Animal Telemetry Network
Mixing it up in Alaska: Habitat Use of Adult Female Steller Sea Lions Reveals a Variety of Foraging Strategies, 2010-2016
- + Animal Telemetry Network
Mesoscale Eddies Release Pelagic Sharks from Thermal Constraints to Foraging in the Ocean Twilight Zone, 2013-2017
- + Animal Telemetry Network
Gulf of California Mobulid Ray Tagging Data, 2004-2014
- + Animal Telemetry Network
Franciscana Movements in Argentina and Brazil, 2005-2013
- + Animal Telemetry Network
Eastern Pacific Ocean Dolphin Project, 2010-2023
- + Animal Telemetry Network
Common Murre tracking, Oregon Coast, 2015-2017
- + Animal Telemetry Network
California Sea Lion Adult Male Migration Patterns, 1995-2000
- + Animal Telemetry Network
Blue and Fin Whale Movements from Tags Deployed in California (2014-2017) and in Oregon (2018)
- + Animal Telemetry Network
At-Sea Distribution of Steller Sea Lions in the Western-Central Aleutian Islands, 2000-2013
- + Animal Telemetry Network
Alaska Juvenile Steller Sea Lion Telemetry Dataset from the Eastern Aleutian Islands, 2000-2002
- + Animal Telemetry Network
A Dataset from Bio-loggers Deployed on Harbor Seals (*Phoca vitulina*) in Cook Inlet, Alaska, 2004-2007

Archival Services



ATN Data Assembly Center (DAC)



Have Questions, Get in Touch...

Megan McKinzie, ATN Data Manager
mmckinzie@mbari.org



THANK YOU !



Photo: Dan Costa