

Data Management Progress and Solutions: Updates

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Biological Data Training Workshop

February 8-9 2018
Seattle, Washington

Scope

- IOOS and OBIS standards and tools for biological data
 - Darwin Core, WoRMS (taxonomy) and metadata standards
- Web services for data access
 - MBON Portal, iOBIS
- Hands-on data exercises
 - Aligning Data
 - Working with ERDDAP

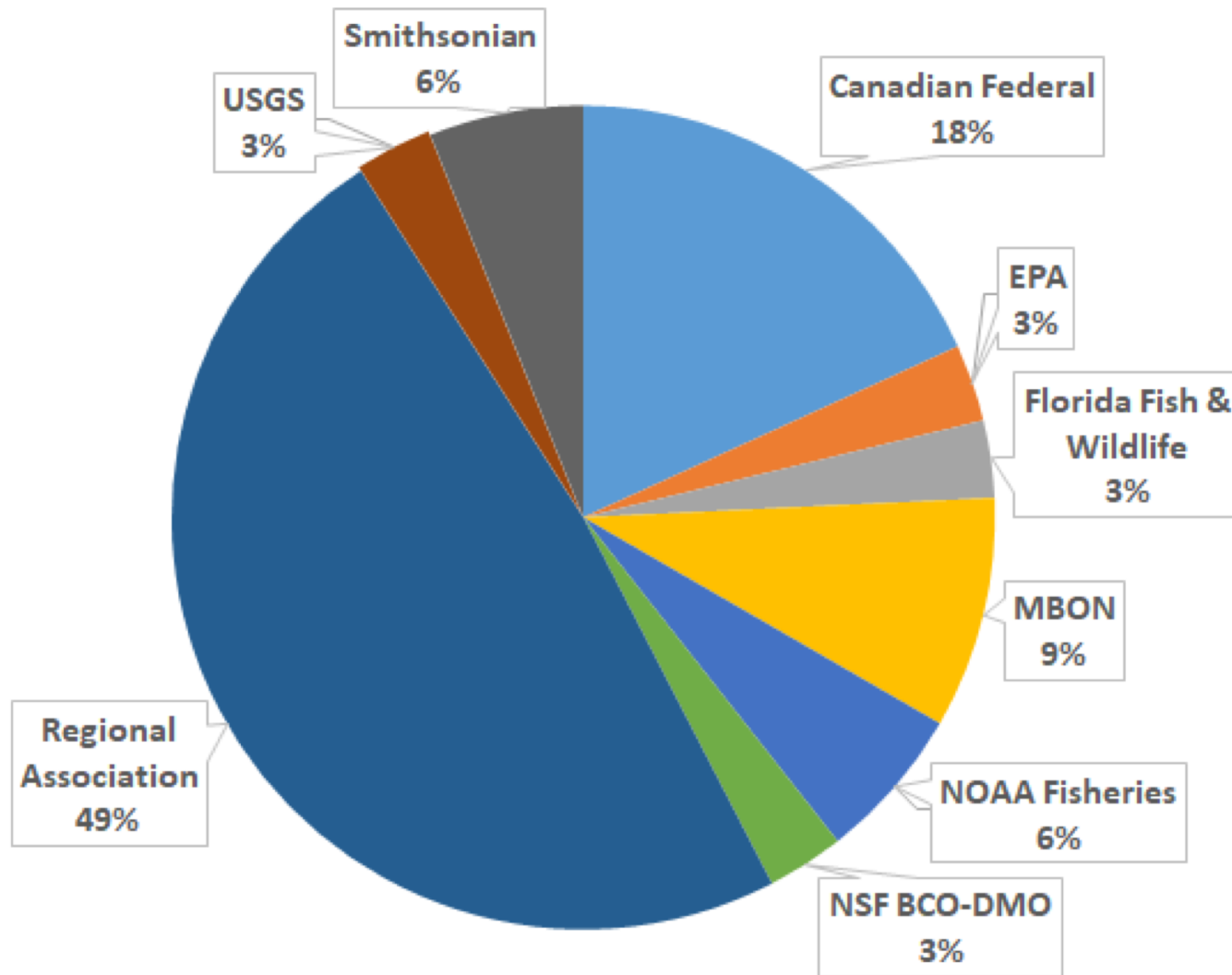


IOOS
Integrated Ocean
Observing System



OceanTeacher
GLOBAL ACADEMY

Workshop Participants



Outcomes

- Expanded IOOS and OBIS network of collaborators
- Increased awareness of standards and best practices for marine biological data
- Increased amount of marine biological data published through IOOS and OBIS
- Increased availability of marine biological data for science, species conservation and ecosystem-based management

Outcomes

- A collection of software and scripts available on a [GitHub repository](https://github.com/ioos/BioData-Training-Workshop) (<https://github.com/ioos/BioData-Training-Workshop>) to aid in the curation and use of biological data
- Course Materials found on

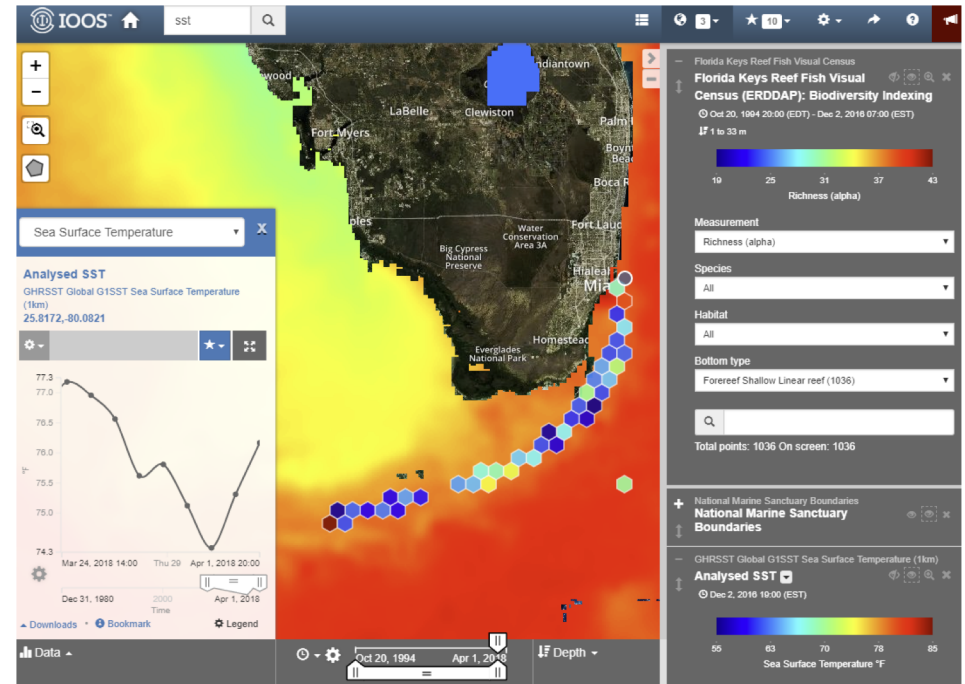


<https://classroom.oceanteacher.org/course/view.php?id=321>

Updates to Biological Data & Access Tools

The IOOS MBON Portal

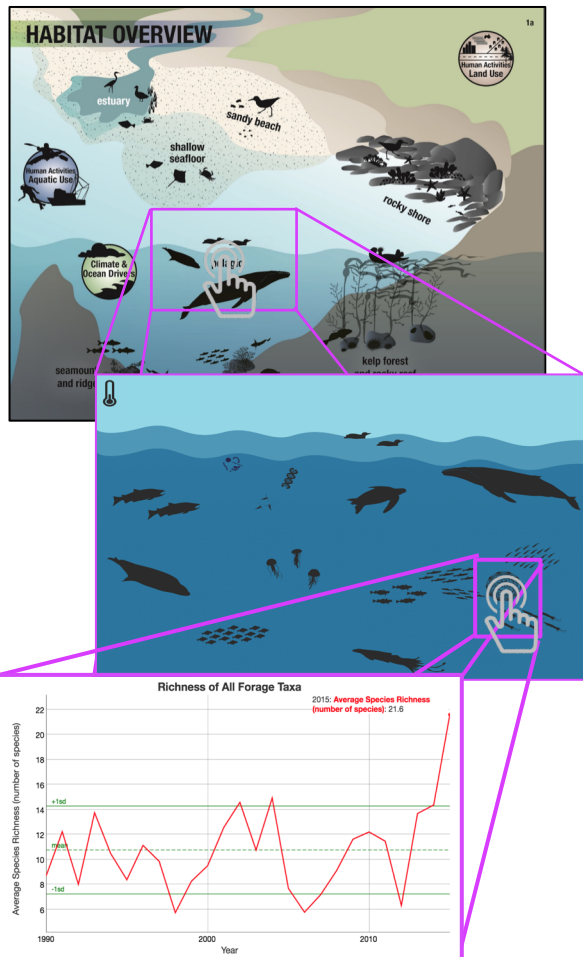
- Built by Sanctuaries MBON and Axiom teams
- Sustained by U.S. IOOS
- Interactive visualizations of *and* access to biological data
- **Version 2.0** updates and new features based on user input
- Ready for more data!



Data tools targeting different audiences

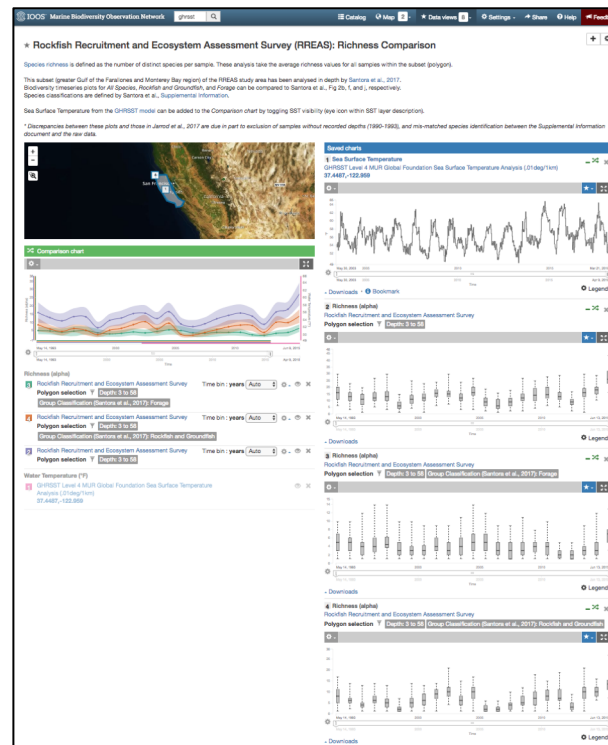
Infographics

Audience:
public, managers,
educators



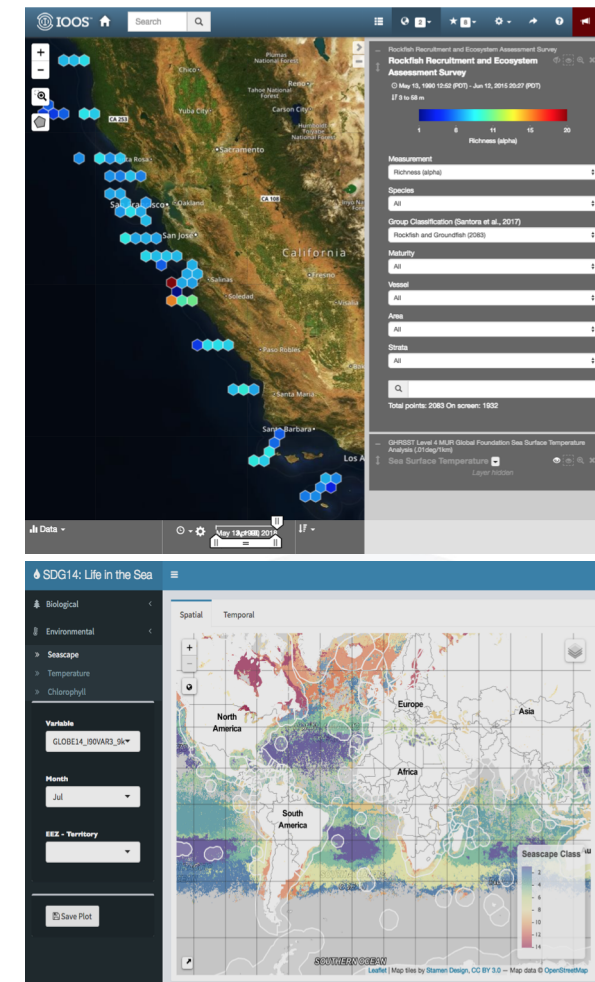
MBON Curated Data Views

Audience:
Advisory groups,
researchers, teams



MBON Data portal

Audience:
Scientists, technical
experts



IOOS MBON Portal Version 2.0

- Interactive Map
- Catalog of data layers
- Curated and Customizable Data Views

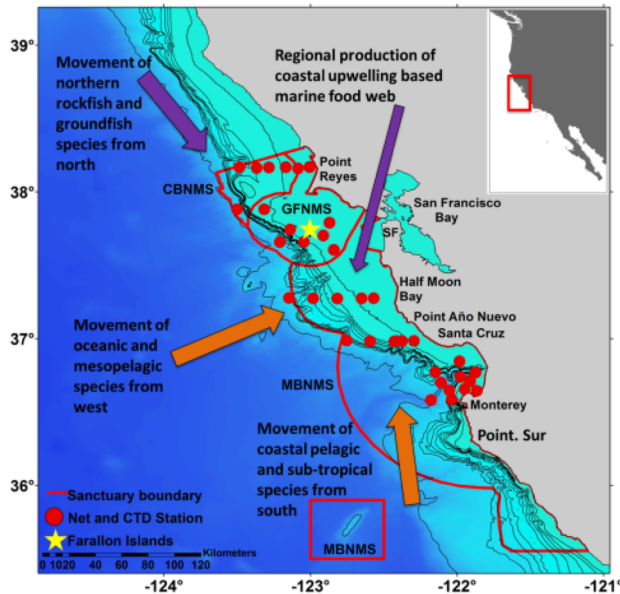
With these features, this portal will allow users to explore:

- What's going on in the environment?
- Is it the same or changing?
- How are changes impacting the biology?

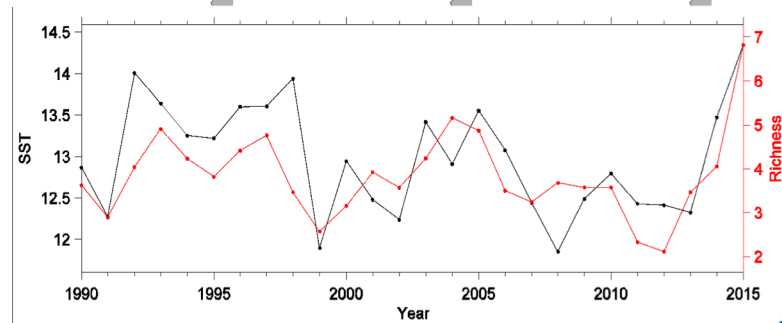
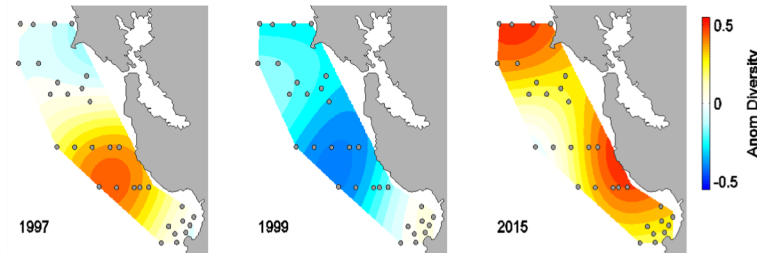
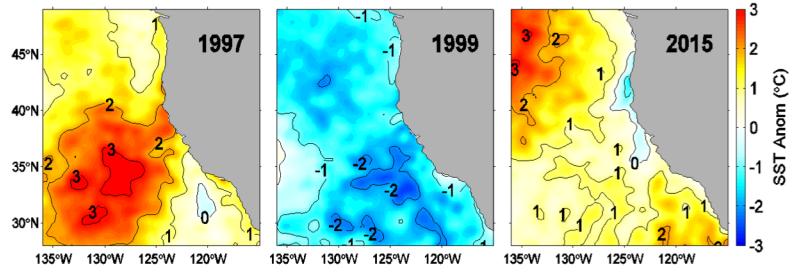
Impacts of ocean climate variability on biodiversity of pelagic forage species in an upwelling ecosystem

J.A. Santora, E.L. Hazen, I.D. Schroeder, S.J. Bograd, K.A. Sakuma, J.C. Field (2017)

MEPS Vol 580: 205-220, DOI: 10.10.3354/meps12278



Monterey Bay National Marine Sanctuary (red boundary) with stations sampled. Arrows show water movement (blue: cold periods; orange: warm periods).



- 1995 and 2015 heat waves (ENSO events) show high coastal diversity. Species richness follows temperature.
- These changes lead to major changes in the diversity and production of life in the sea, affecting fisheries and coastal water quality.