Pier Luigi Buttigieg (AWI)

Hands on with the UNESCO/IOC-IODE Ocean Best Practices System
The core Best Practices Working Group

- Mark Bushnell  IOOS
- Pier Luigi Buttigieg  AWI
- Juliet Hermes  SAEON/JCOMM
- Emma Heslop  SOCIB/JCOMM
- Frank Muller-Karger  MBON/U South Florida
- Cristian Muñoz  SOCIB
- Francoise Pearlman  IEEE
- Jay Pearlman  IEEE
- Pauline Simpson  IODE
Objectives

Through a use case centered on the UNESCO/IOC-IODE Ocean Best Practices repository, participants will be shown how machine-readable expert knowledge representations (i.e. ontologies) can enhance access to and discovery of quality methods for marine observation and place them in relation to the SDGs.

- [www.oceanbestpractices.org](http://www.oceanbestpractices.org) (last release)
- [https://tinyurl.com/obpBeta](https://tinyurl.com/obpBeta) (next release)
- [https://www.oceanbestpractices.net/feedback](https://www.oceanbestpractices.net/feedback) (your feedback)
Objectives

Participant feedback will be used to enhance the system and improve its fitness for their own activities.

In your opinion, which marine phenomena should be linked to SDG monitoring, extending the official indicators?

https://tinyurl.com/EuroGEOSS-sdgio-input
The main goal:
Transition from a loosely-coordinated set of existing ocean observing activities to a sustainable, efficient, and fit-for-purpose Integrated Atlantic Ocean Observing System (IAOOS)

www.atlantos-h2020.eu
WP6 Cross-cutting issues and emerging networks

[...] Coordinate engagement of international expertise and dissemination of best practice to improve efficiency and impact [...] to include international expertise in the design and development, operation and maintenance of IAOOS and to disseminate this best practice
Best Practice

A documented procedure which, through experience and research, has consistently shown results superior to those achieved by other means and can be used as a benchmark, particularly if advocacy can lead to it being widely adopted

...modulo cost, feasibility, and context
...and which has a process for evolution

BPs should be catalysts for “Next Practices”

Mike Myatt,
Best Practices - Aren't,
Forbes. AUG 15, 2012 @ 04:16 PM
Most potential BPs are scattered, have varying degrees of accessibility, and varying digital lifetimes.
The Mission: solutions for a FAIRer future for Ocean Best Practices

**FAIR:** Findable, Accessible, Interoperable, Reusable
Wilkinson et al. (2016) *Scientific Data* 3, DOI:10.1038/sdata.2016.18
Disclaimer: IODE/IODC does not warrant that the information, documents and materials contained in the OceanBestPractices repository website is complete and correct and shall not be liable whatsoever for any damages incurred as a result of its use.
Disclaimer: IODE/IOC does not warrant that the information, documents and materials contained in the OceanBestPractices repository website is complete and correct and shall not be liable whatsoever for any damages incurred as a result of its use.
Adding semantic technology…
BODC sensor vocabs

OBO Foundry Ontologies

ENV, CHEBI, SDGIO

Sensors, Environments, Chemicals, SDG content...
This document includes methods to sense seepage of methane from the sea floor ...
A semantic interface for the Sustainable Development Goals

More on the ontology in this afternoon’s SDG14/15 session
Linking machine knowledge between SDGs and ecosystems

- **disposition**
  - is a **access**
    - is a **access to basic services**
      - is a **access to food provisioning services**

- **process**
  - is a **service**
    - is a **ecosystem service**
      - has active participant
      - occurs in
        - **marine pelagic ecosystem**
          - has active participant
          - occurs in
            - **marine fishing**
              - specified in
                - conserve and sustainably use the oceans, seas and marine resources

- **provisioning ecosystem service**
  - is a **support of fish communities**

- **objective specification**
  - is a **sustainable development goal**
Search 227 documents for 119896 terms from 3 ontologies

ENVO, CHEBI, SDGIO
Explore knowledge neighbourhood to enhance discovery
Leveraging contextual domain knowledge to enhance search
Interfacing with EuroGEOSS

- Quality data and information products and streams rest on best practices along the value chain.
- EuroGEOOS marine best practices (from planning to data archiving) have a natural home in the UNESCO/IOC-IODE OBP archive and system.
- The ontology classes (terms) used to tag best practices are equally suited to linking data across distributed systems.
- Ontology-linked data holdings and methodology stores are a core piece of a FAIR-compliant datascape.

https://tinyurl.com/EuroGEOSS-sdgio-input
Links

• The OBP System
  • [www.oceanbestpractices.org](http://www.oceanbestpractices.org) (last release)
  • [https://tinyurl.com/obpBeta](https://tinyurl.com/obpBeta) (upcoming release)
  • [https://www.oceanbestpractices.net/feedback](https://www.oceanbestpractices.net/feedback) (your feedback)

• Input for the SDG Interface Ontology
  • [https://tinyurl.com/EuroGEOSS-sdgio-input](https://tinyurl.com/EuroGEOSS-sdgio-input)