



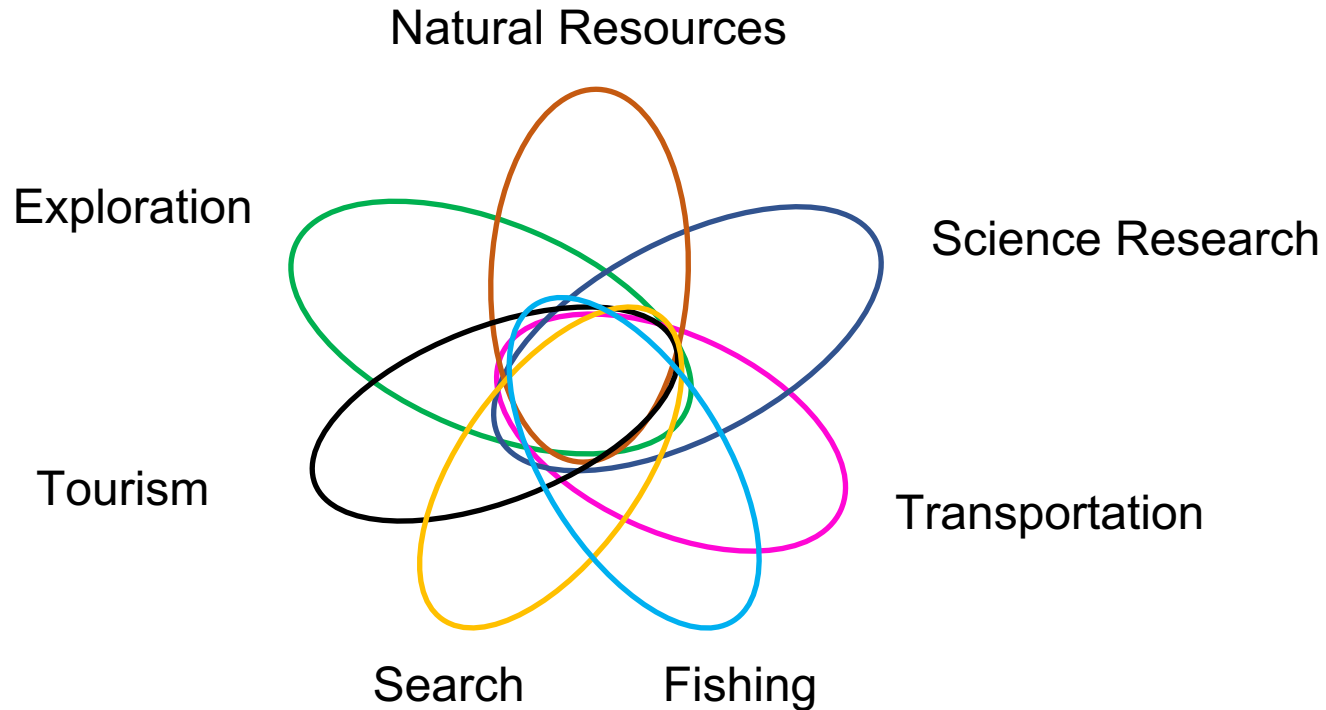
# Evolving and Sustaining Arctic Standards and Best Practices

Pier Luigi Buttigieg  
Jay Pearlman  
Francoise Pearlman  
Siri Jodha Khalsa  
Rene Garello

February 3, 2020



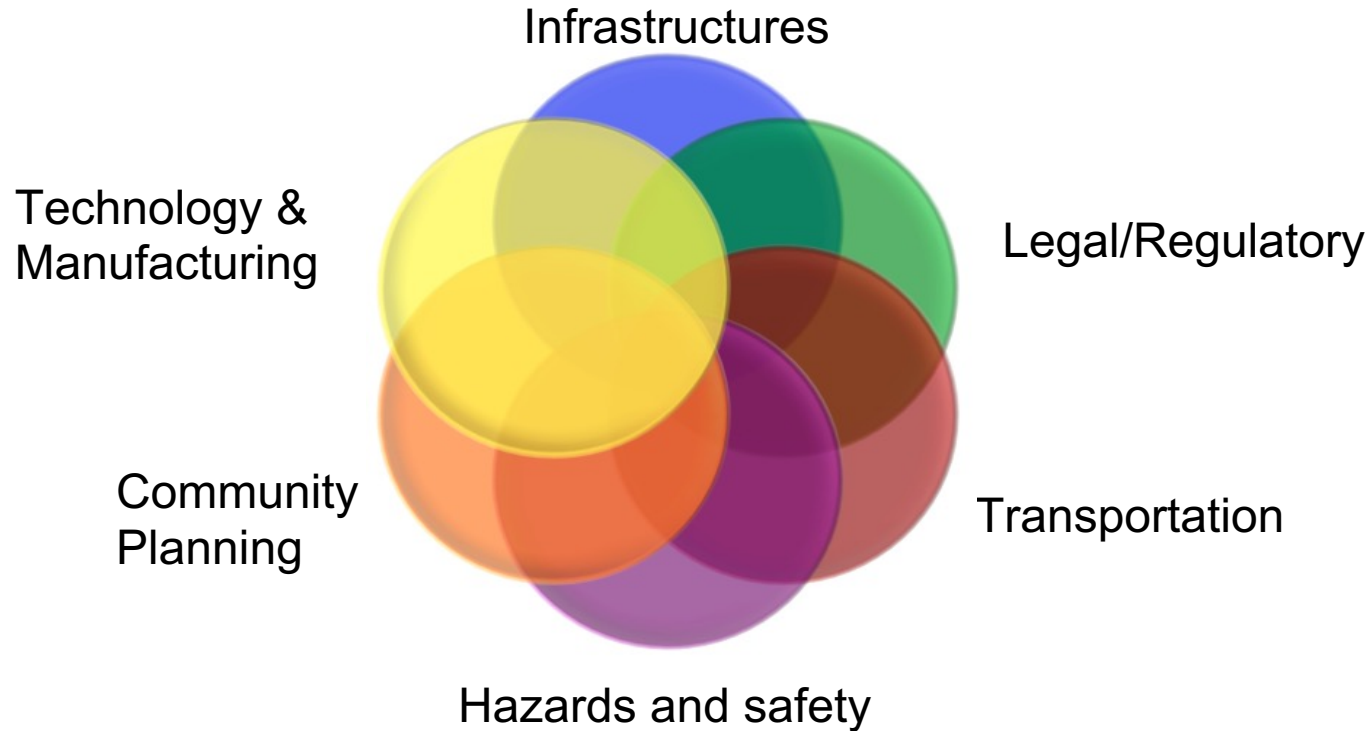
# Addressing Our Users



*Best Practices* – A Foundation for Observations, Analyses,  
Data Management and Positive Societal Outcomes

# Addressing Functions

and Standards  
(BP&S)

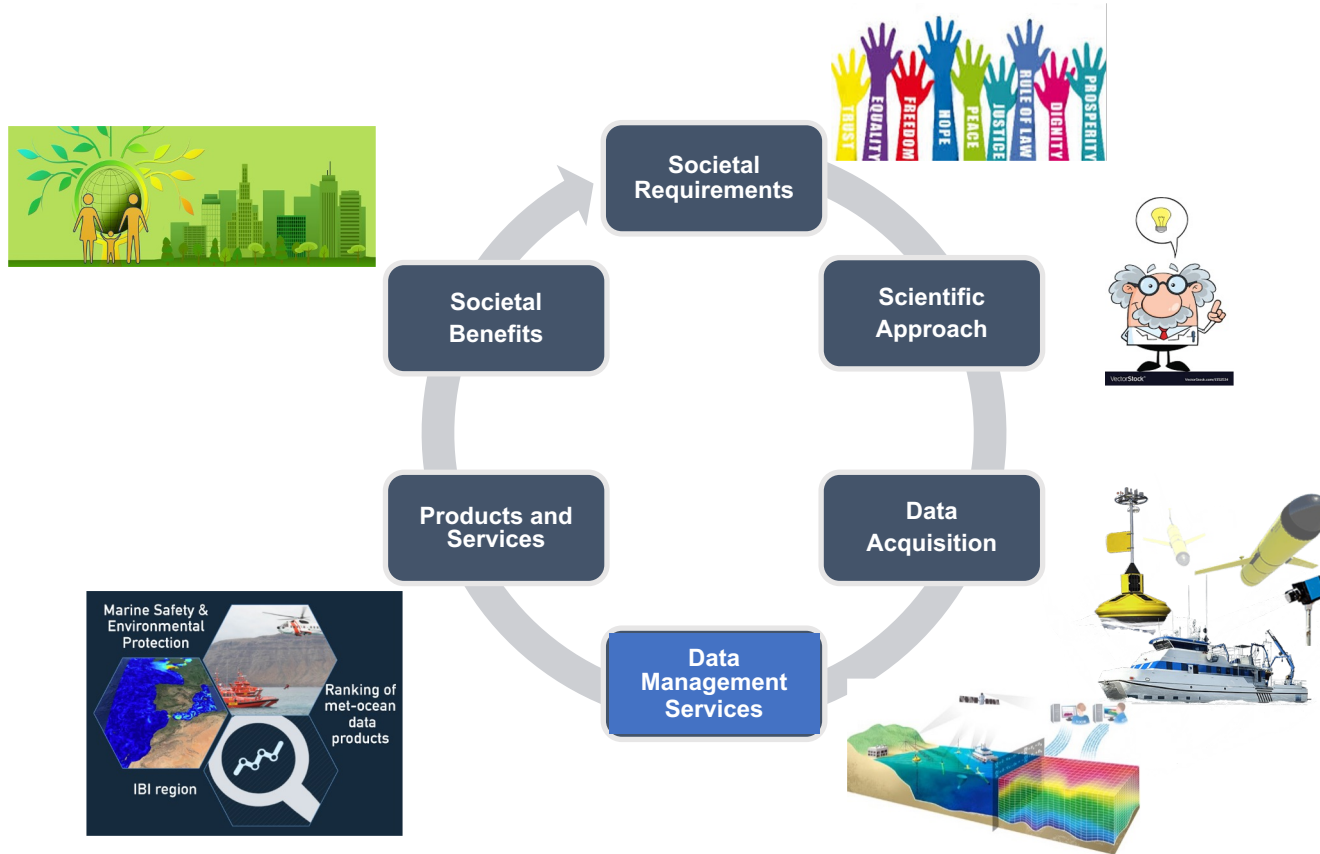


*Review standards and BP for relevance and priority*

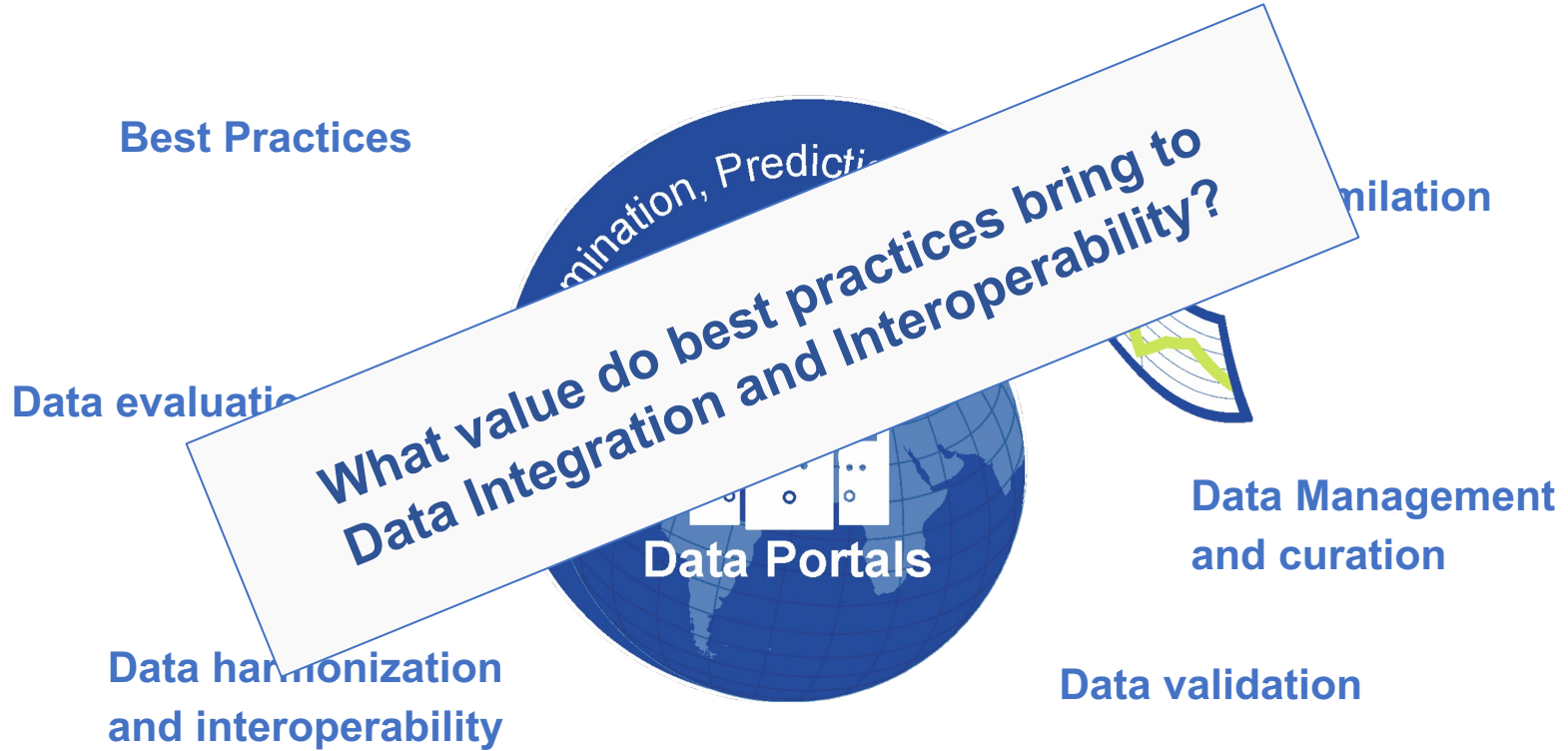


***What few things  
must be the same  
so that everything  
else can be different?***

# Address The Value Chain



# DATA FLOW AND INTEGRATION



# ARCTIC BEST PRACTICES

Best Practices are a Foundation for Key Cross Cutting Benefits



Using best practices results in:

Quality and consistency of observations

Efficiency (don't re-invent the wheel)

Transparency - Data traceability and reproducibility

Connections between data, models and applications

Resource for training and capacity development



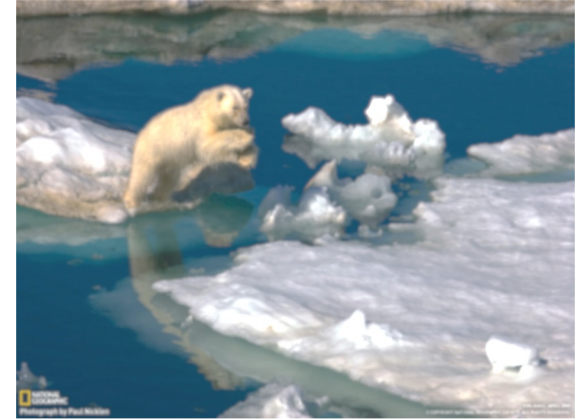
Upper Photo courtesy of Sophie Seeyave, POGO

# ARCTIC BEST PRACTICES

**Best practices bring many benefits:**

**BUT**

- Not all best practice knowledge is documented
- BPs are scattered and can be hard to find
- BPs can be lost when a project ends
- Promising methods may not be shared
- Work to create a BP is often not acknowledged



**A system for Arctic BP  
is needed**





# WHAT IS A BEST PRACTICE?

**A best practice is a methodology that has repeatedly produced superior results relative to other methodologies with the same objective.**

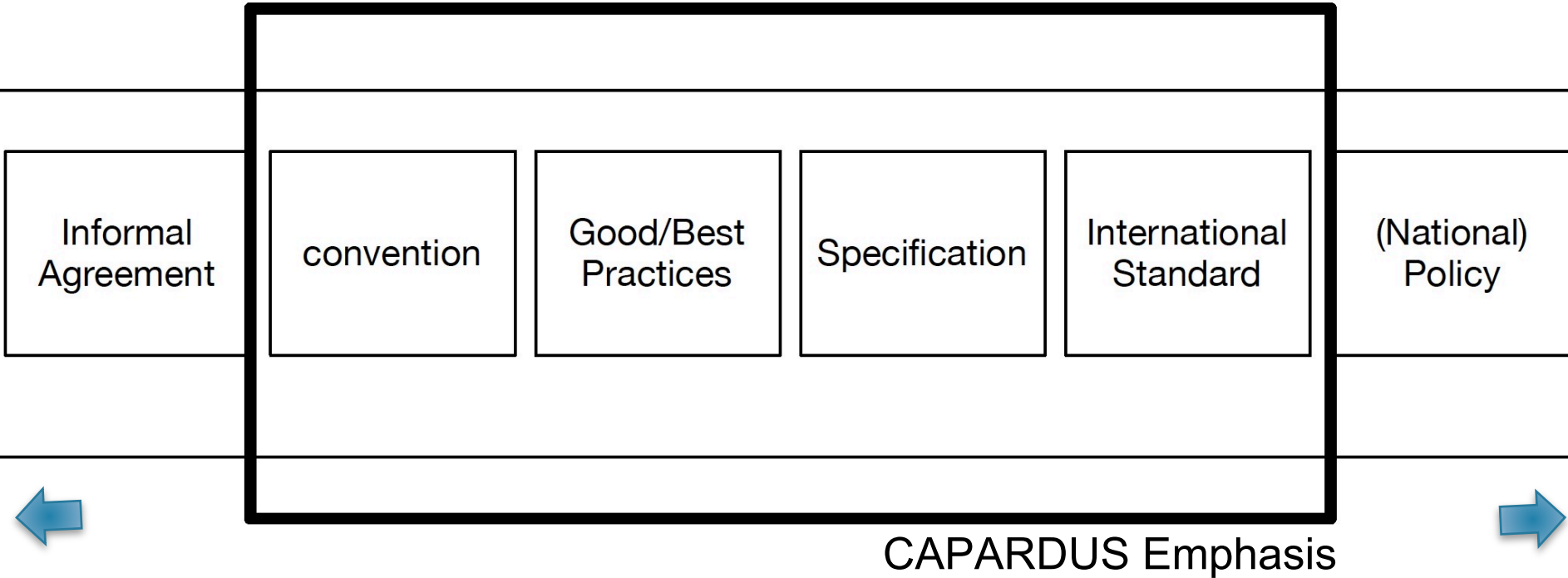


# What is a Standard?

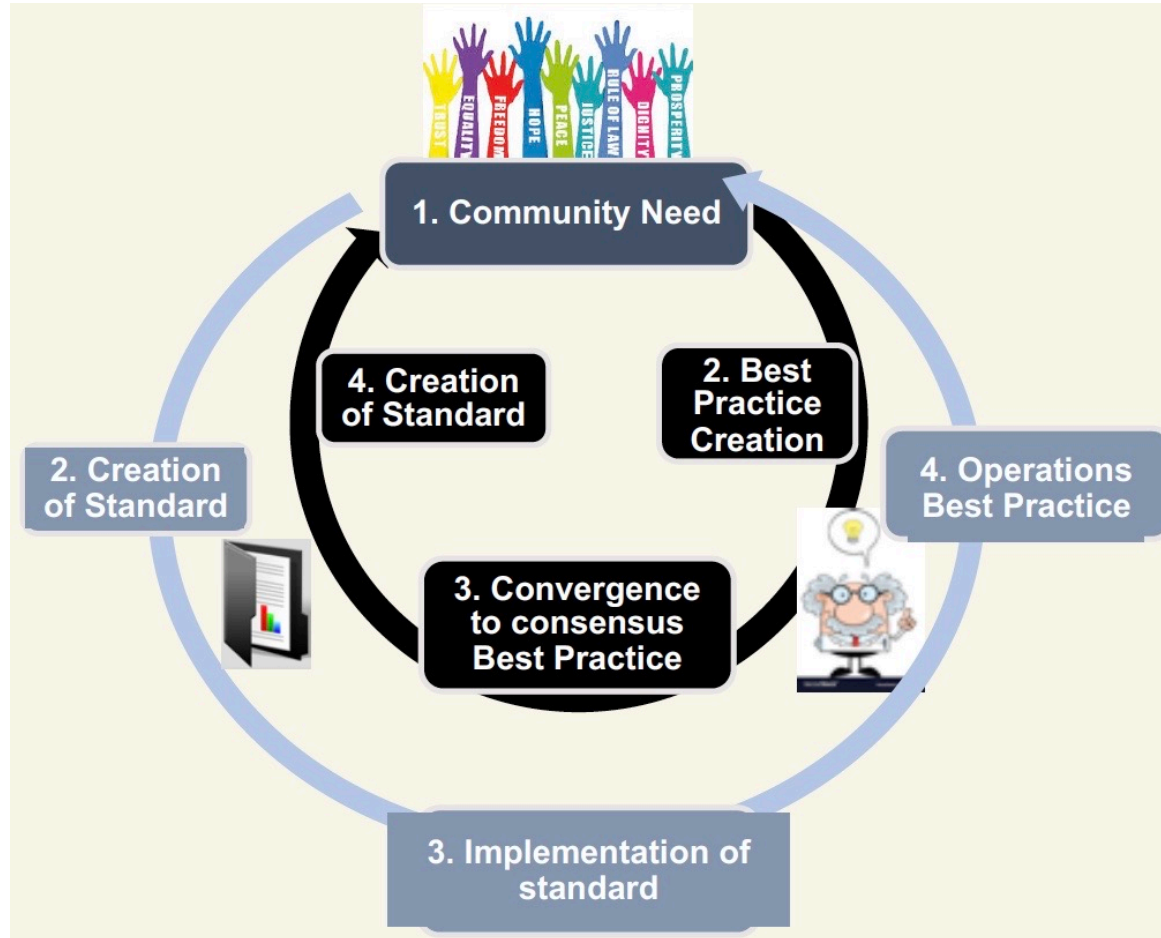


- A **de jure standard** is a technology, method or product that has been officially endorsed or legislated for a given application.
- A **de facto standard** is a custom or convention that has achieved a dominant position by public acceptance or market forces.

# Standards or Best Practices?



# Standards and Best Practices Lifecycles



# Attributes of both BP and Standards

- Trust
  - Validity and Relevance
  - Verifiable
  - Consistent outcomes
  - Transparent (rationale)
  - Privacy/Ethics
- Implementable

# Best Practices are not just Documents



**OBPS Repository**



**Peer Review  
Journal**



**Support/Training**



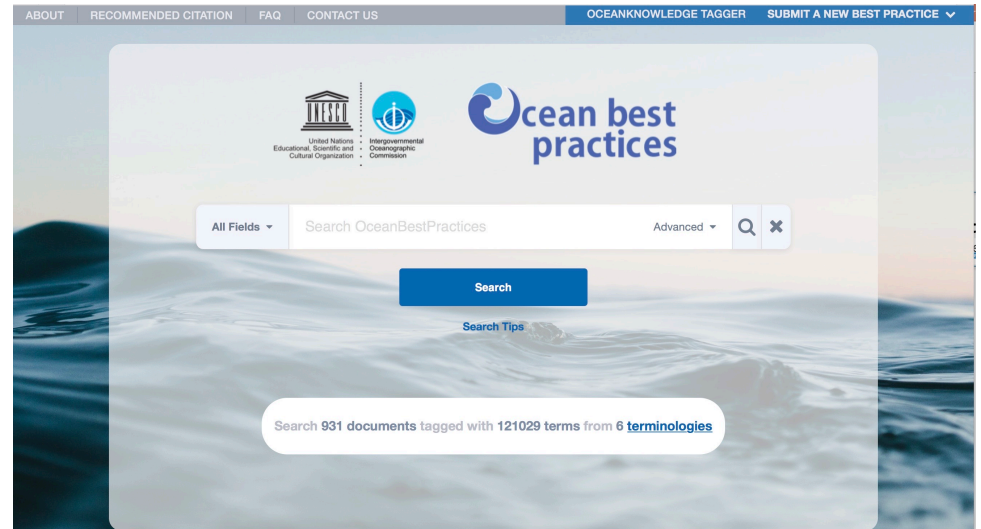
**User Support**





# OCEAN BEST PRACTICES SYSTEM (OBPS)

The OBPS is an IOC project with over **900 best practices** supporting the entire ocean community in sharing methods and developing ocean best practices.



The OBPS follows the FAIR principles of findability, accessibility, interoperability and reusability.

# Acknowledgements

## IOC Ocean Best Practices System Steering Group

Mark Bushnell  
Pier Luigi Buttigieg  
Juliet Hermes  
Emma Heslop  
Johannes Karstensen  
Adam Leadbetter  
Ana Lara-Lopez  
Frank Muller-Karger  
Cristian Muñoz  
Francoise Pearlman  
Jay Pearlman  
Peter Pissiersens  
Rachel Przeslawski  
Nick Roden  
Pauline Simpson

IOOS  
AWI  
SAEON  
UNESCO  
GEOMAR  
MI  
IMOS  
USF/MBON  
IMR  
IEEE  
IEEE  
UNESCO  
GA  
Univ Bergen  
IODE





# Identify Priority Standards and Best Practices (S&BP) From Use Cases

Greenland  
WP2

Svalbard  
WP3

Russia  
WP4

USA  
WP5

WP1  
WP6

Coordination with  
Other Stds Dev Orgs  
WP1

Co-Develop A Comprehensive Framework of S&BP WP1

Greenland  
WP2

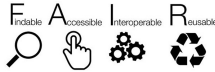
Svalbard  
WP3

Russia  
WP4

USA  
WP5

Status and  
needs for BP



## ABPS Repository WP6



Co-design with stakeholders  
Implementation Roadmap for ABPS  
Co-design Submission Templates

Requirements Synthesis  
and Recommendations WP7

## Technology Development WP1 WP6

Element 84  

Linked Open Data  
Ontologies



# For Discussion 1

- Across the stakeholders you interact with, how would the terms "best practices" and "standards" be understood?
  - What is the range of possible submissions we can expect?
    - How can we best communicate our mission to archive, disseminate, and interlink best practices across stakeholder groups? Are there any ways such a mission can be misunderstood or cause unease?
    - How can we ensure stakeholders (particularly indigenous and local stakeholders) retain control of their knowledge? Would indexing the existence of knowledge (rather than the digitised knowledge itself) be a route to explore?
    - Are there user interfaces that would be particularly suited to the stakeholders? Which languages must the system address?
- what can be the prime value of an ABPS to the groups you work with?



## For Discussion 2

- Who are the Users?
- What are the User needs?
- How can Standards and Best Practices support User objectives and be implemented?
- What are the priorities for inclusion of best practices?