

The Australian Ocean Data Network: The one-stop shop for Australian marine data and data products

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Our Vision

A single distributed, federated network for Australian marine science data and information.

To:

- Provide a key enabling technology for e-research.
- Promote the discovery, transfer and implementation of knowledge about marine environments by facilitating the management and exchange of, and ready access to, marine data and information.

The AODCJF

Australian Ocean Data Centre Joint Facility

A formal partnership among Commonwealth Agencies:

- Australian Antarctic Division (AAD)
- Australian Institute of Marine Science (AIMS)
- Bureau of Meteorology
- CSIRO Marine and Atmospheric Research
- Geoscience Australia
- Royal Australian Navy
- with support from the National Oceans Office

To manage ocean data to meet national and international obligations

BlueNet

A DEST-funded project with three main roles:

1. Join universities to the AODN
 - data facilitators
 - BlueNet Champions
2. Help agencies prepare to host 'external' data
 - building the virtual repository
3. Develop technologies for the AODN
 - Metadata Entry and Search Tool (MEST)
 - support for Oceans Portal

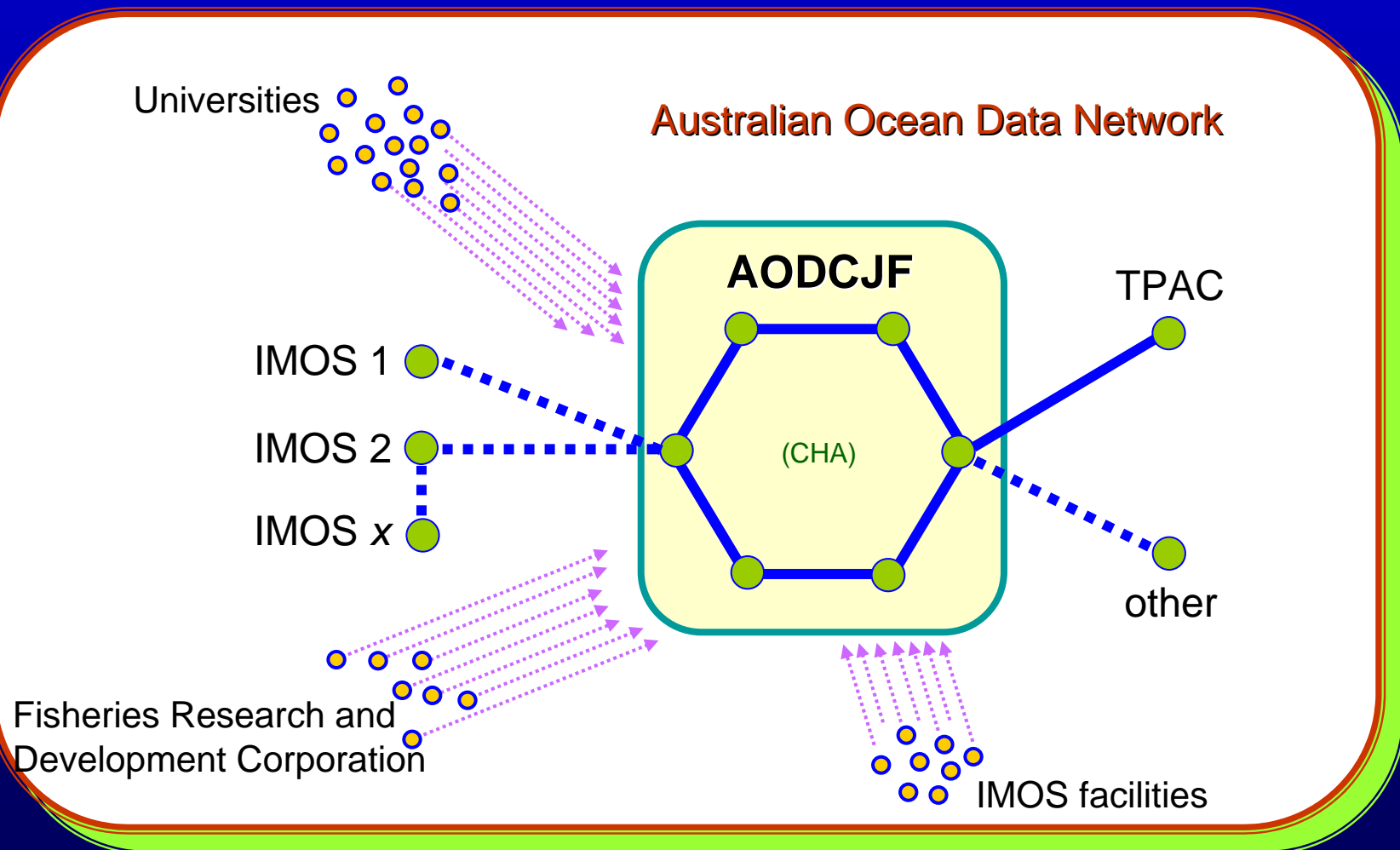
BlueNet - partners

- AODCJF Agencies
 - James Cook University
 - University of Sydney
 - Australian National University
 - University of Melbourne
 - University of Tasmania
 - University of Western Australia
- University of Queensland
- Deakin University
- University of New South Wales

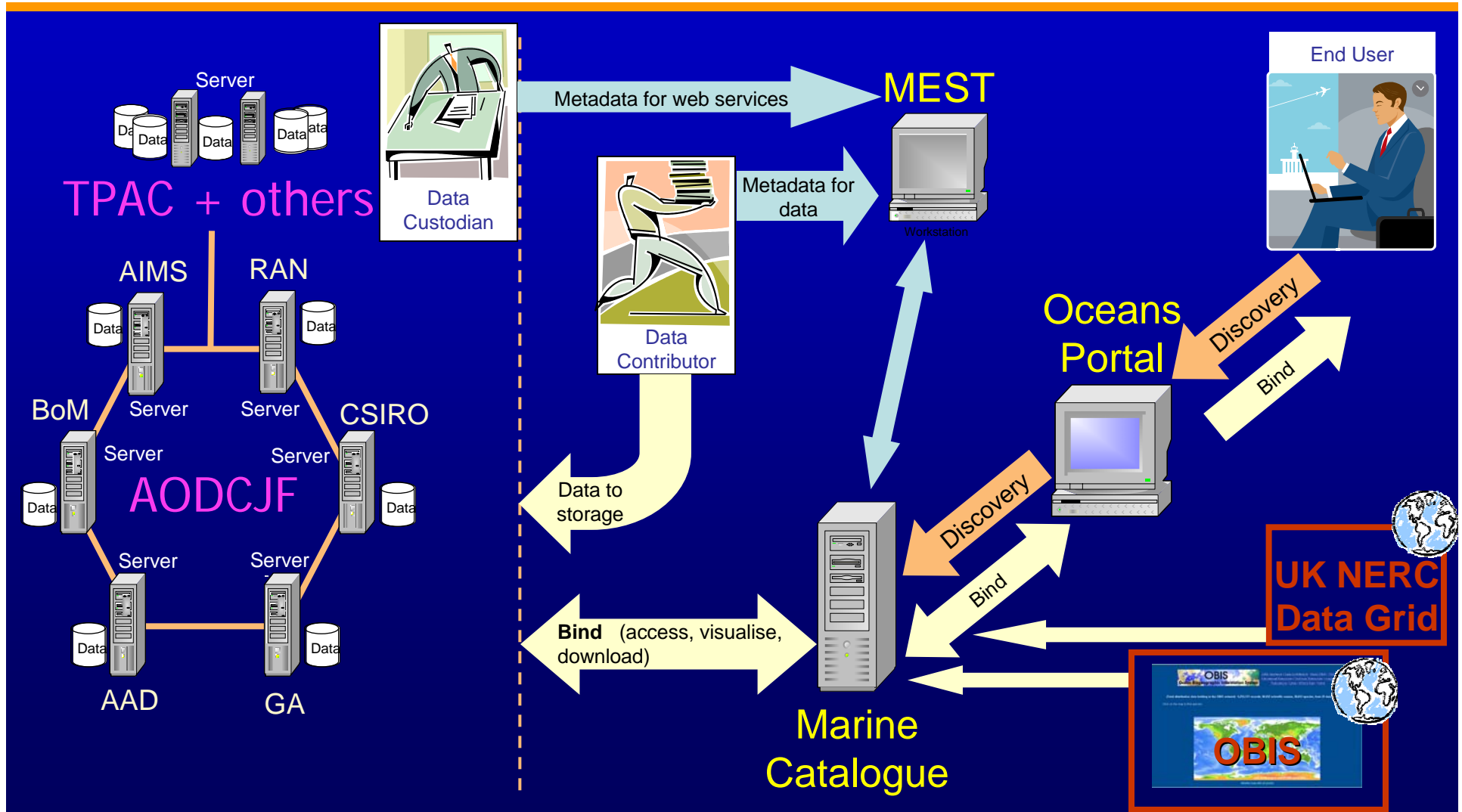
BlueNet - collaborators

- **MAMS** (Macquarie University)
 - Authentication, Authorisation, and Access
- **OAK Law** (Queensland University of Technology)
 - IP, ownership and licencing
- **ASK-OSS** (Macquarie University)
 - Open source software related issues
- **APSR** (Australian National University)
 - Best practice for sustainable repositories

The Network (AODN)



The Network (AODN)



Technologies

Portal

- GUI: search for data + call services listed in Catalogue
- Integrate & visualise disparate datasets
- GIS-like functionality (map layering, zoom, etc.)

Catalogue

- Harvests metadata records
- Stores and indexes metadata records for datasets and web services

MEST

- ISO19115 compliant
- Offers several metadata templates including Marine Profile
- Provides federated searching of other MESTS
- Manages permissions to view, create & edit metadata records



This site makes extensive use of pop-ups. Please configure your browsers' settings to allow pop-ups from this site for an optimal experience.

Topic Search

Search Browse

Search for a keyword from the Oceans Portal topics. If you are not familiar with the topics used in the Portal, select "Browse".

Popular Topic Searches

- [Human Dimensions](#)
- [Biosphere](#)
- [Sea Surface Temperature](#)
- [Community Resources](#)

Click on the above links to start a predefined search.

Species Search

Common name Scientific name

Search Browse

Popular Topic Searches

- [Humpback whale](#)
- [Orange roughy](#)

Click on the above links to start a predefined search.

Geographic Search

Search

Click on one of the above region names for a geographic search across the contents of the catalogue.

Free text search

 Search

Search for a word/phrase within the catalogue contents.
Important: the titles of services and documents is not as exact as searching via "topics" and may not show which data source has the information you are seeking.

Select topic Search Spatial search View map

Legend

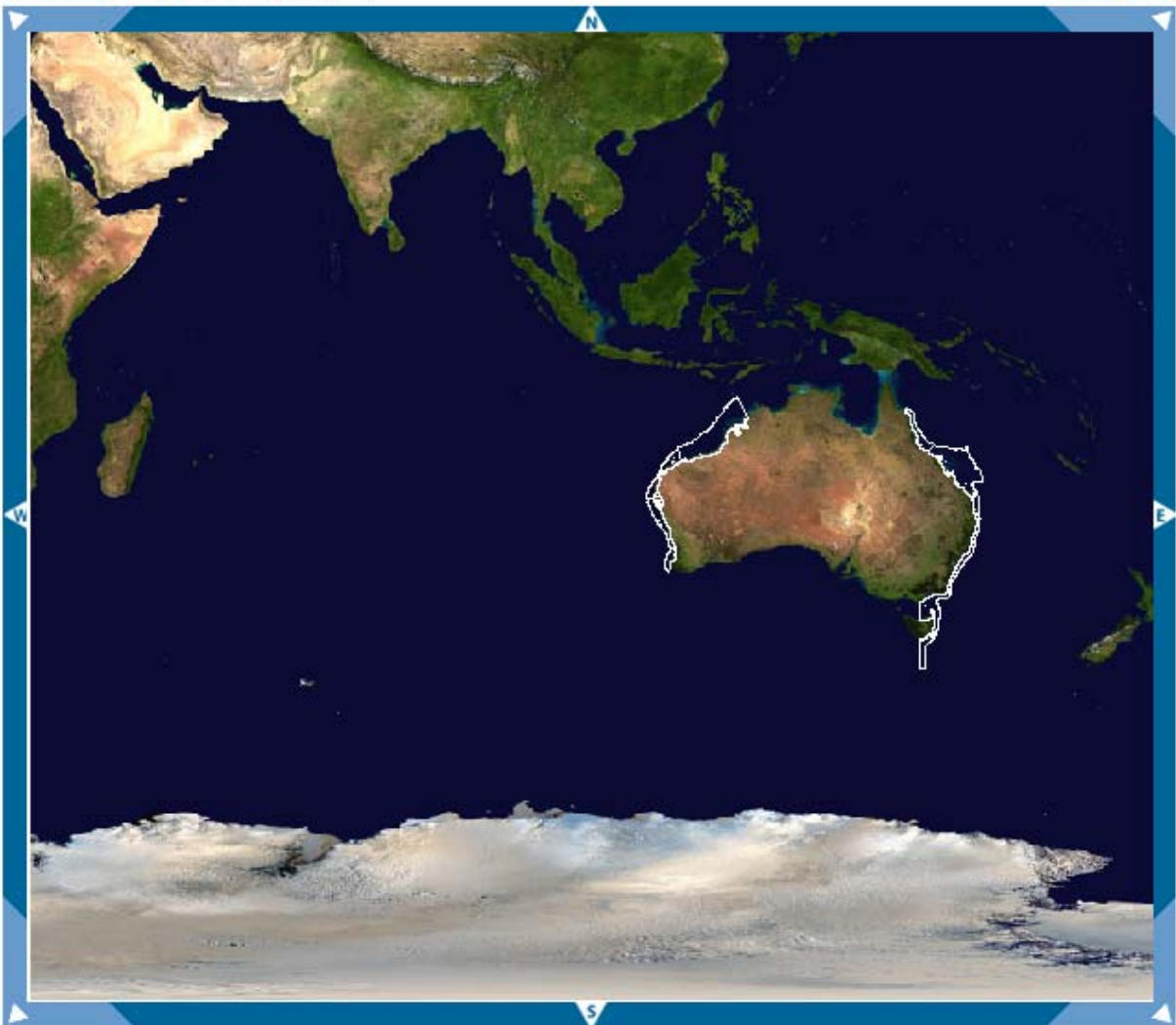
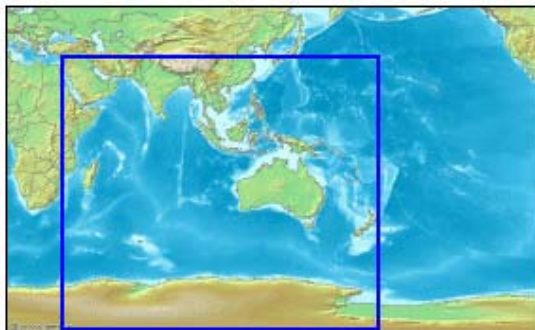
Symbol	Layer name
	Humpback Whale (Megaptera novaeangliae)
	Topography



Scale 1:33196459






Locator map

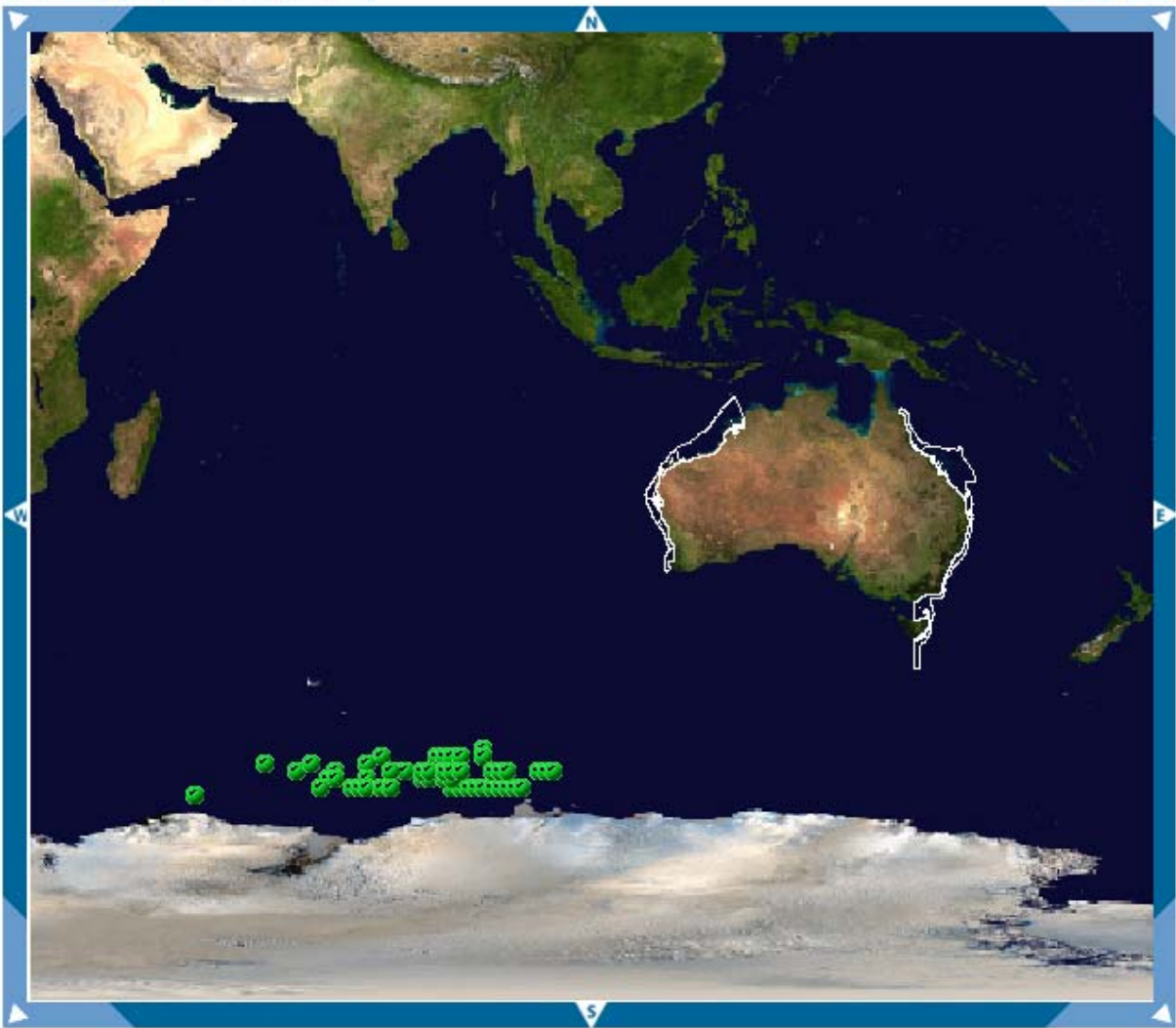


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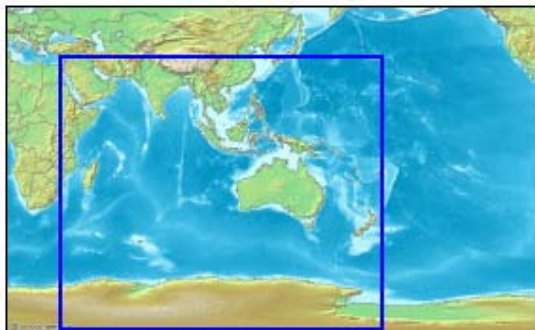
Select topic Search Spatial search View map

Legend	
Symbol	Layer name
	Humpback Whale (Megaptera novaeangliae)
	Humpback Whale (Megaptera novaeangliae)
	Topography

Map navigation toolbar: zoom in, zoom out, pan, home, info, hand, menu. Scale: 1:597647026. Download and Print icons.



Locator map



To filter list of matching catalogue content, set search options in the form below and then click on the search button.

Title

Abstract

Custodian

Content type

Before (from) / /

After (to) / /

Temporal Aggregation unit

SST Product type

Selected topic:

/ [EARTH SCIENCE](#) / [Oceans](#) / [Ocean Temperature](#) / [Sea Surface Temperature](#)

Topic: Sea Surface Temperature

Search parameters:

Spatial search extent: 45,-85,179,-1

There are 10 matching result(s).

Everything in all oceans

[download dataset](#) | [more info](#)

Google (search term = oceans)

[open website](#) | [more info](#)

Intergovernmental Oceanographic Commission

[open website](#) | [more info](#)

National Oceans Office website

[open website](#) | [more info](#)

Near Real-Time SST Grid

[add to map](#) | [more info](#)

SST

SST image (by image date) [add to map](#) | [more info](#)

SST Analysis - Time enabled

[add to map](#) | [more info](#)

SST, Australian region - 10 day composites, 2002, January to June - CMAR V1.0

SST image (by image date) [add to map](#) | [more info](#)





Sea surface temperature - a users guide

[download dataset](#) | [more info](#)

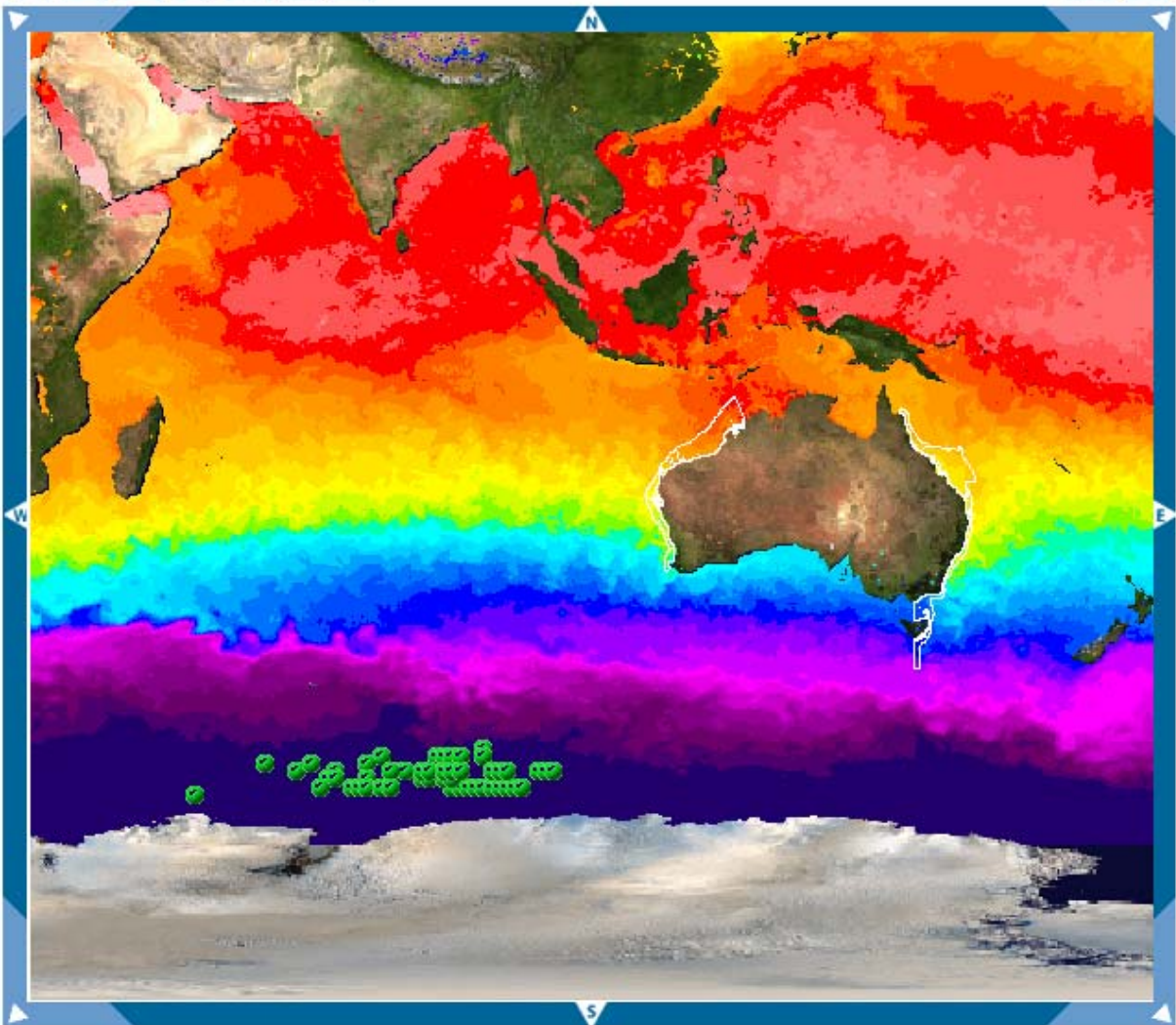
Website with SST data source global cover mult year

[open website](#) | [more info](#)

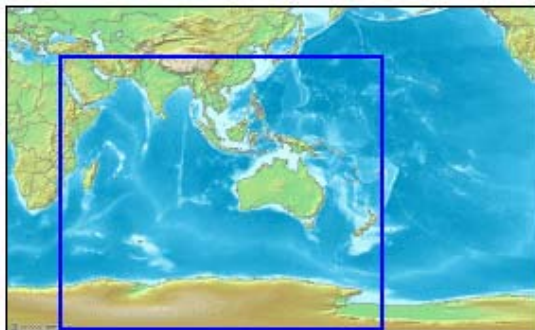
Select topic Search Spatial search View map

Legend	
Symbol	Layer name
	Humpback Whale (Megaptera novaeangliae)
	Humpback Whale (Megaptera novaeangliae)
	Near Real-Time SST Grid
	Topography

Map navigation icons: Home, Back, Forward, Home, Info, Hand, Full Screen, Print, Scale 1:597647026



Locator map



The Future: eMII

e-Marine Information Infrastructure

Key component of Integrated Marine Observing System (NCRIS)

IMOS facilities:

1. Argo Australia (CSIRO)
2. Ships of Opportunity (CSIRO, AIMS, BoM)
3. Southern Ocean Time Series (University of Tasmania)
4. National Facility for Ocean Gliders (UWA)
5. Autonomous Underwater Vehicle Facility (Univ Sydney)
6. Australian Ocean Mooring Network (CSIRO + others)
7. Australian Coastal Radar Network (James Cook University)
8. Acoustic Tagging and Monitoring (Macquarie University)
9. Marine Sensor Networks (AIMS)
10. Ocean Remote Sensing Services (BoM, CSIRO, GA, AIMS)

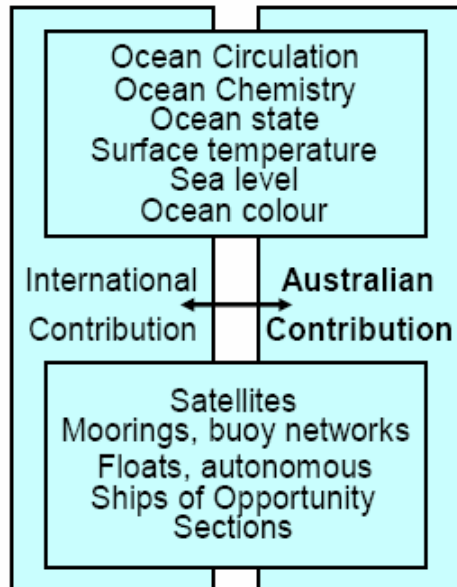
The Future: eMII

Integrated Marine Observing System

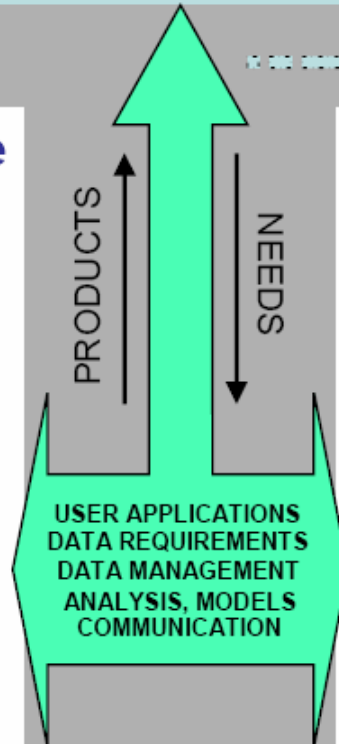
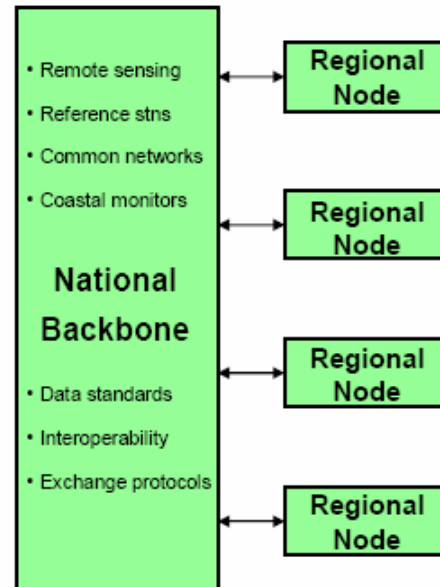
Primary Users
Research Community

Secondary Users

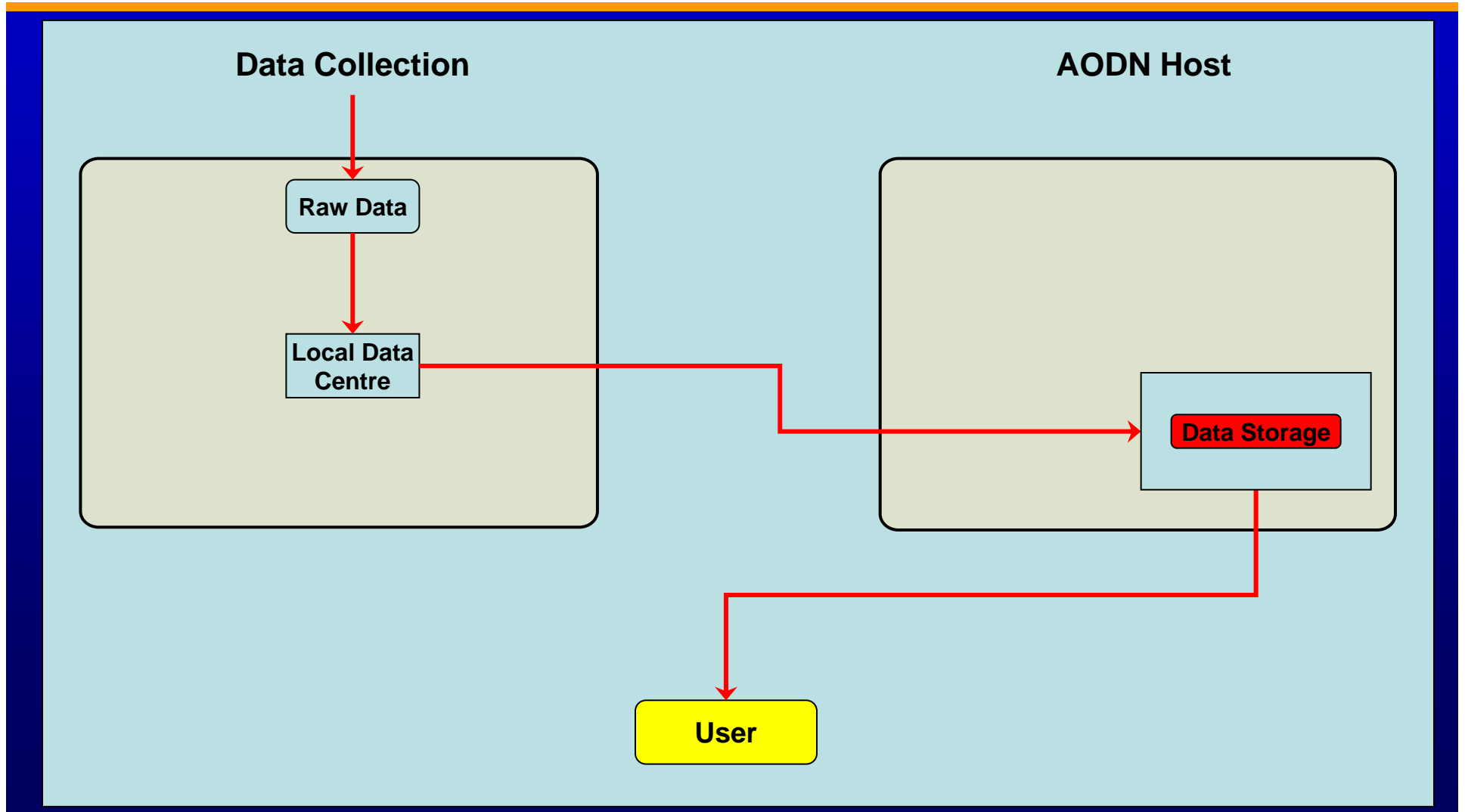
Open Ocean / Climate



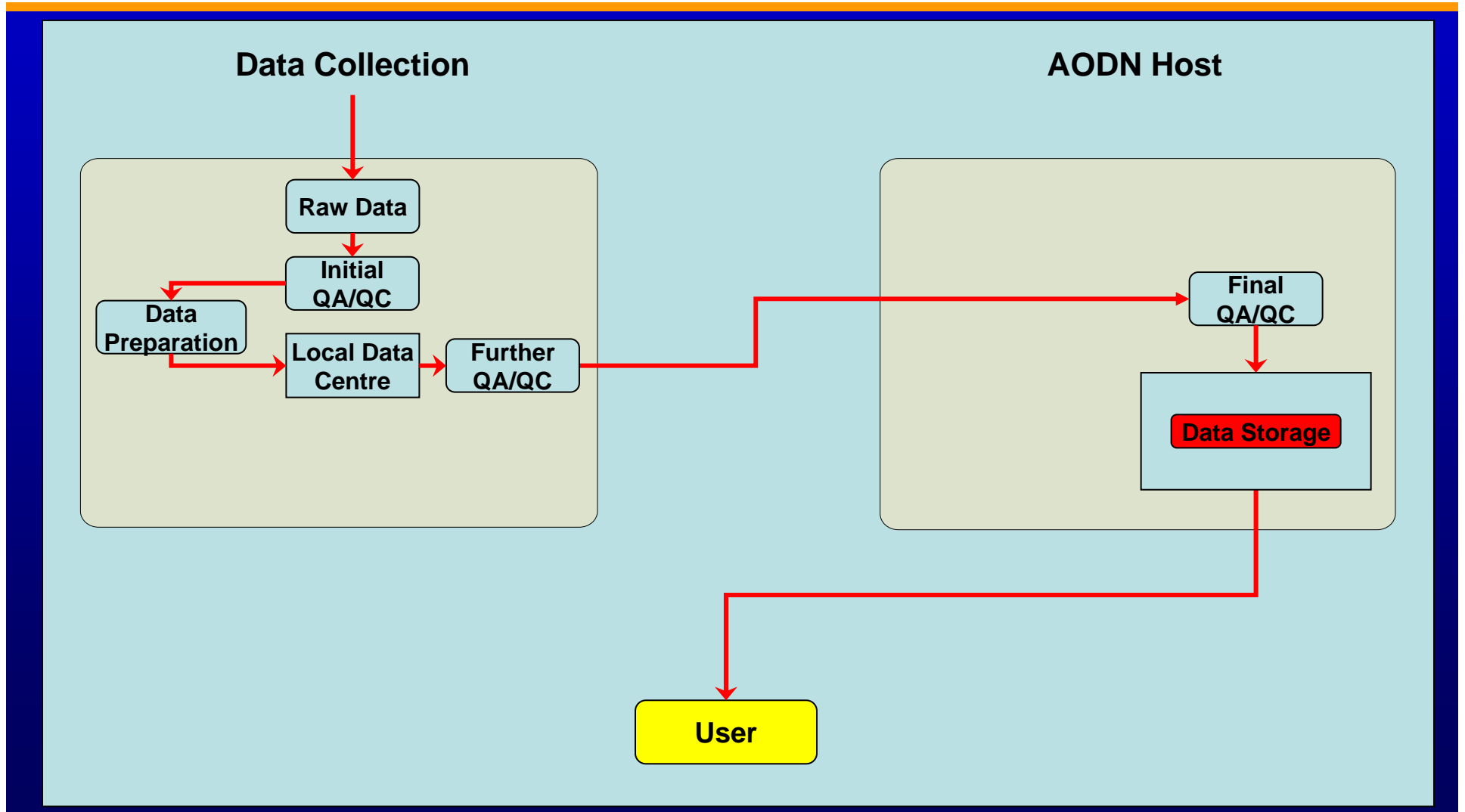
Coastal



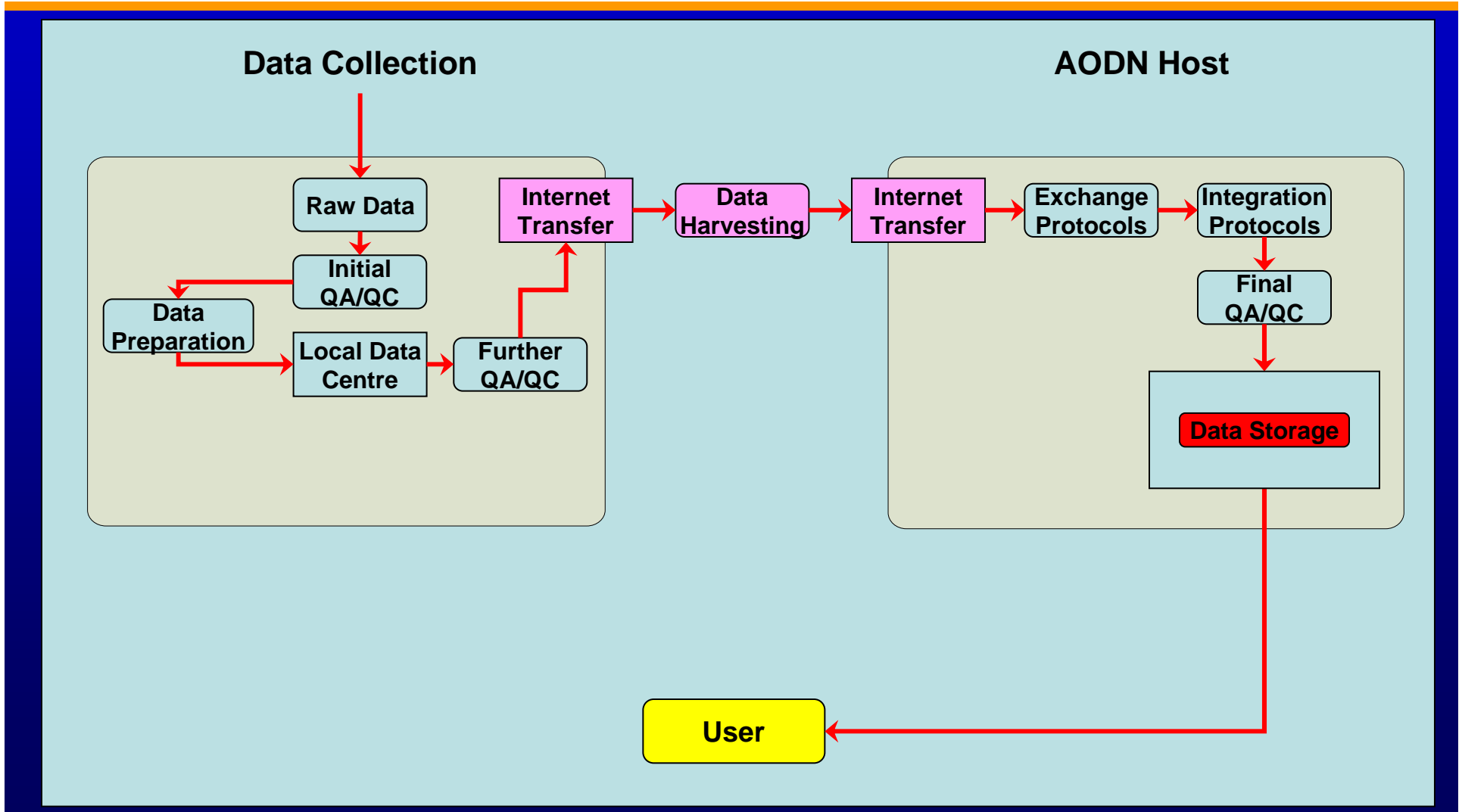
The Future: eMII



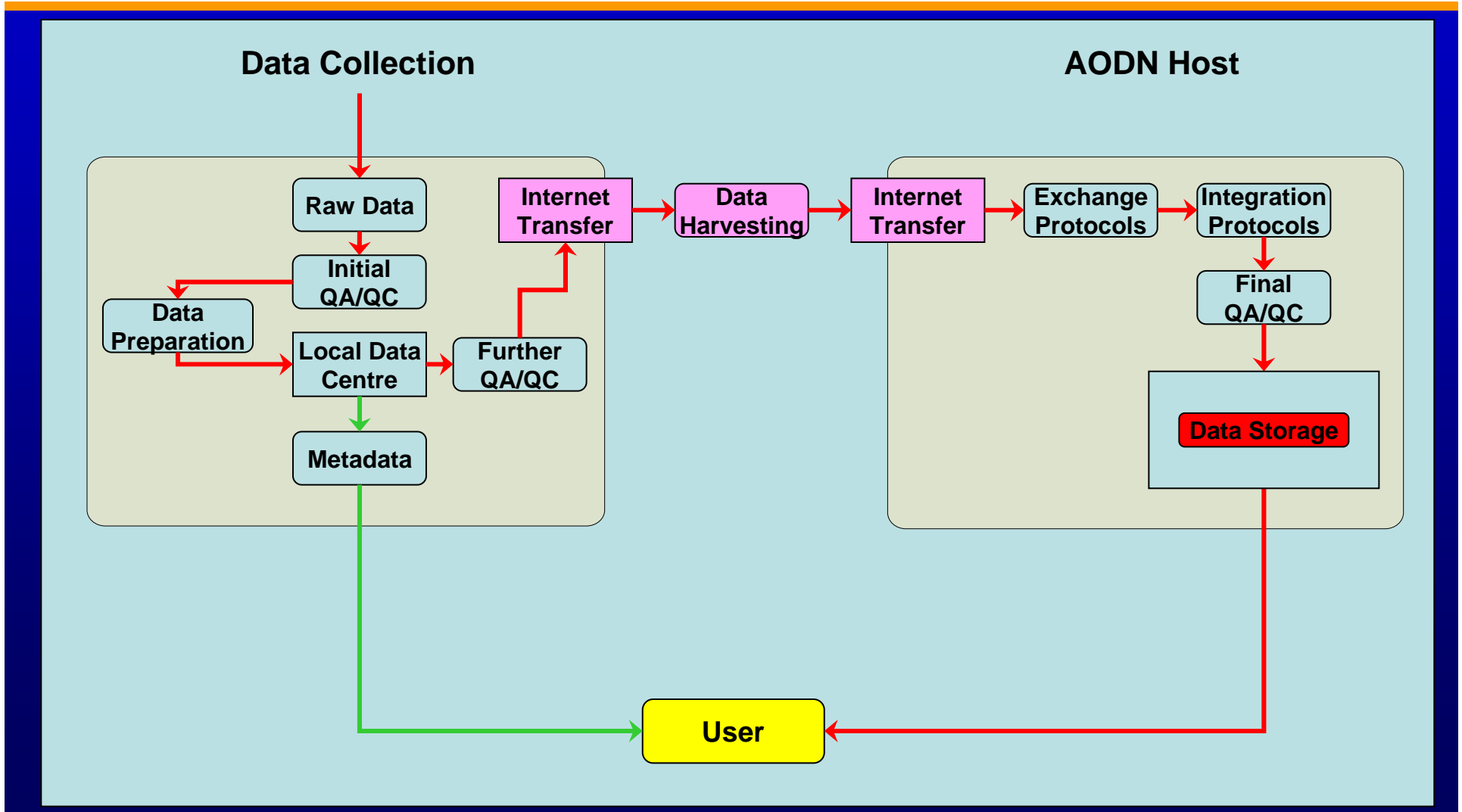
The Future: eMII



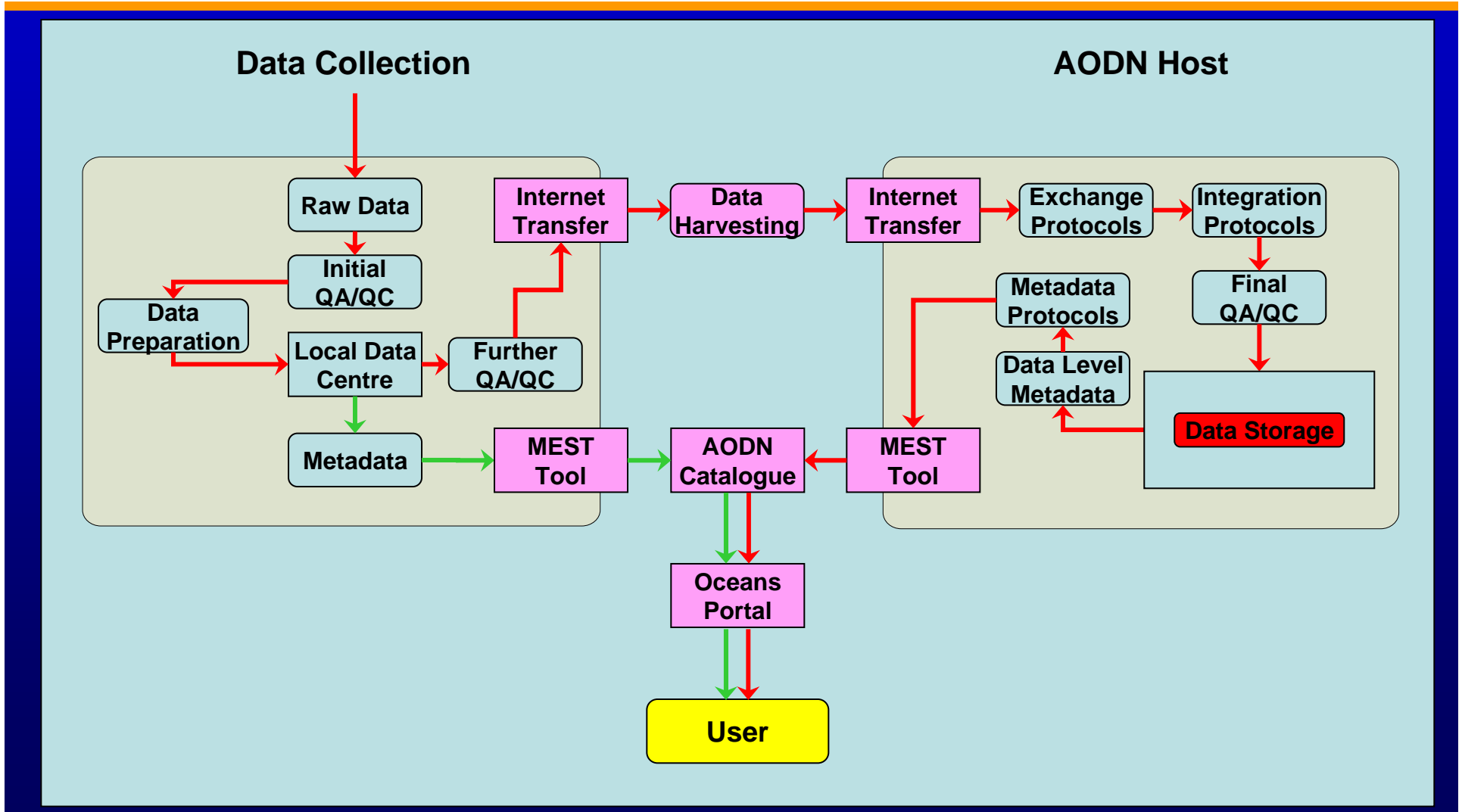
The Future: eMII



The Future: eMII



The Future: eMII



The Future: AODN Challenges

- Culture: data sharing
- **Technologies**: Portal, Catalogue, MEST
- **AAA**: permissions at each stage of data discovery and re-use
- **Interoperability**, standards, community practice
- **QA/QC**
 - Ensuring adequate descriptions of quality
 - Ensuring appropriate re-use of data
 - Resources for QA/QC
- Outreach and support
- **IP and data ownership**
- User uptake

Opportunities for Synergy

Generic cross-domain issues

- technologies: portal, MEST, catalogue, crawlers
- AAA issues
- interoperability
- legal solutions

Need for interoperability above the research domain level

- e.g. need for federated portal, catalogue and MEST systems
- the nature of major science challenges at national level, e.g. climate change, environmental management
- within NCRIS:
 - Evolving Biomolecular Platforms and Informatics
 - Integrated Biological Systems
 - Networked Biosecurity Framework
 - (Terrestrial Ecosystem Research Network)