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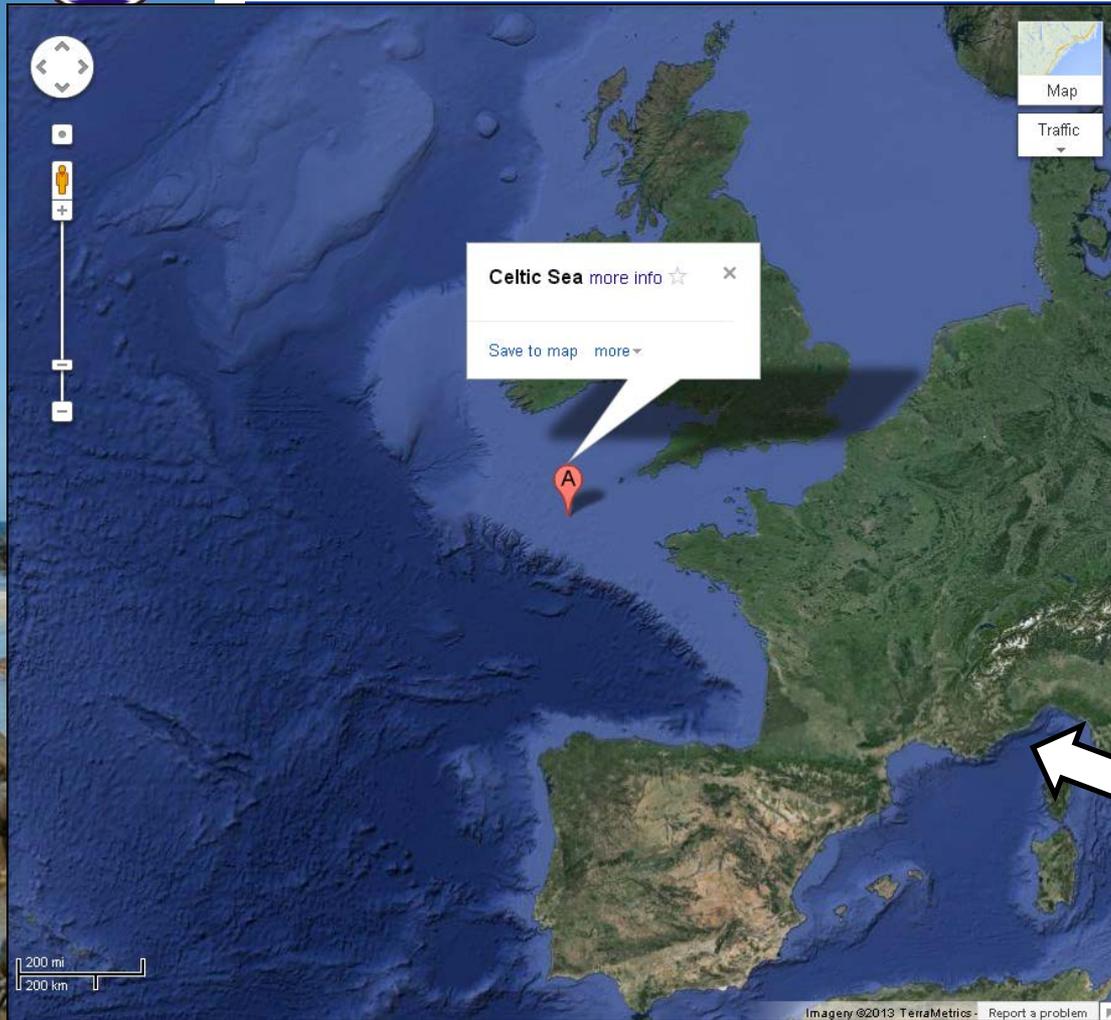
# **British Oceanographic Data Centre (BODC)**

**A guide to cruise data management and  
submission**

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# What is BODC?



for roles and responsibilities



SeaDataNet



International  
Oceanographic Data and  
Information Exchange



GEBCO



National near-real time  
DAC for ARGO and  
Gliders



# BODC role

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**BODC is one of 6 designated data centres responsible for the long-term curation of NERC data**

- British Atmospheric Data Centre (BADC) - Atmospheric science
  - National Geoscience Data Centre (NGDC) - Earth sciences
- NERC Earth Observation Data Centre (NEODC) - Earth observation
  - **British Oceanographic Data Centre (BODC) - Marine Science**
    - Polar Data Centre (PDC) - Polar Science
- Environmental Information Data Centre (EIDC) - Terrestrial & fresh water science, Hydrology and Bioinformatics



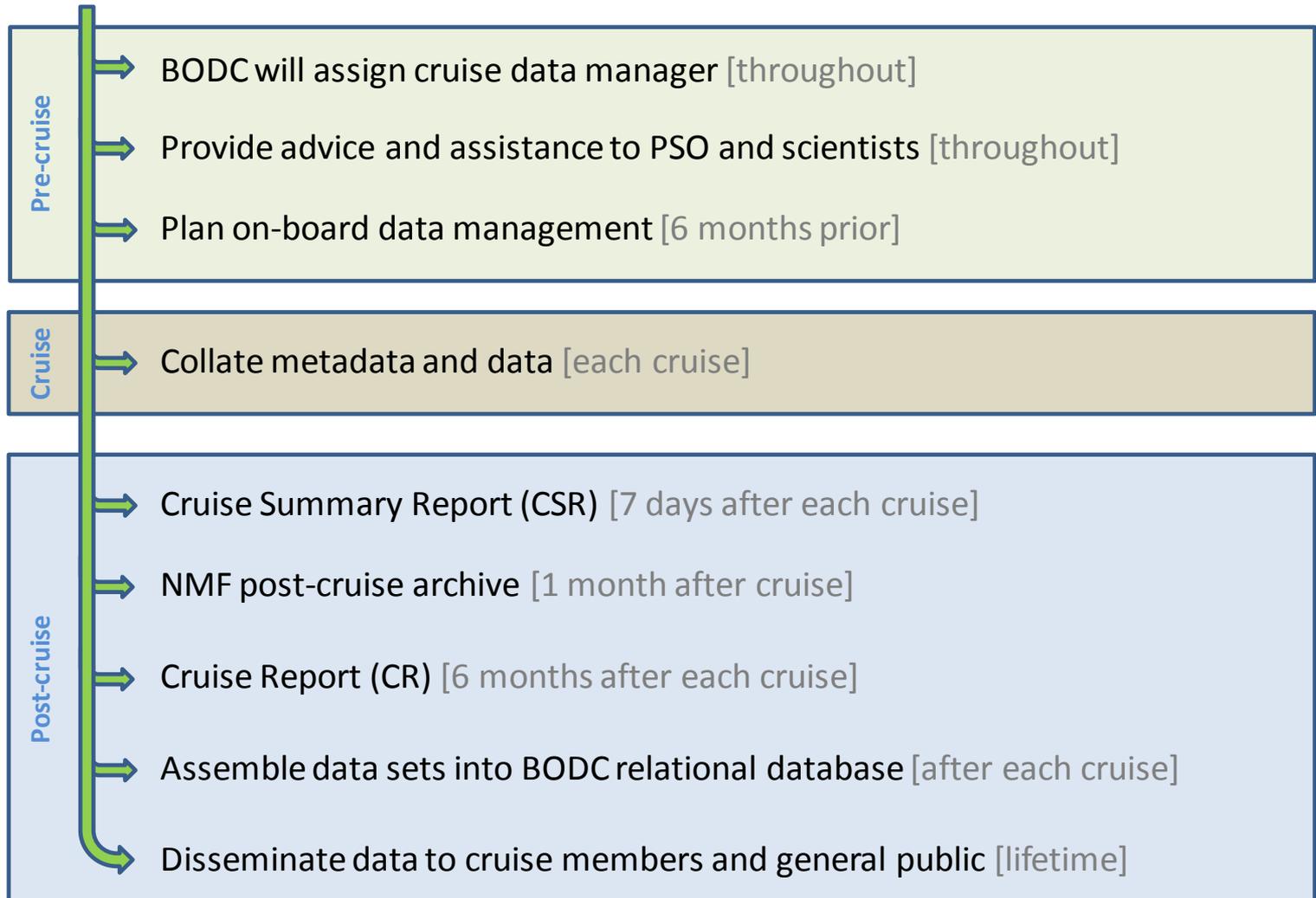


# NERC Data policy

- Ideally, cruise data should be submitted as soon as possible after **'collection'**
- **'Collection'** is when there are data values (e.g. the end of a cruise, when data are gathered from an experiment or analysis, data downloaded from instrument etc.)
- Central cruise data (e.g. CTD) should be made publicly available straight away where possible although data can be embargoed for up to 2 years to allow scientists time to work up their data
- Embargo starts at the time of **'collection'**
- In exceptional circumstances, an embargo period may be extended (eg. PhD-specific data)
- Once an embargo period has expired, data are available to anybody for whatever use (Open Government License)



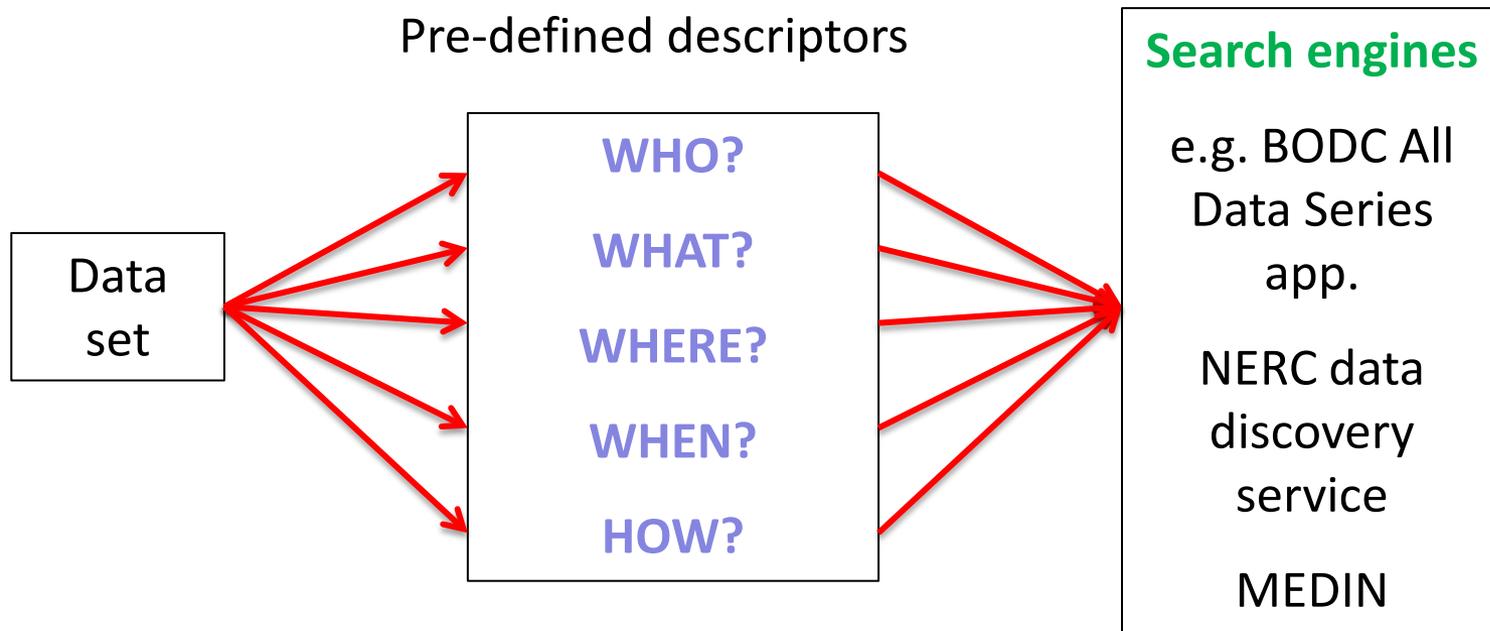
# Cruise data management timeline





# BODC relational database

SQL (structured query language) programming language





# Cruise data management

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- Data about data (what, when, where and how) is called 'Metadata'
- Oceanographic data is useless without knowing what, when, where and how it was collected
- Metadata makes data sets discoverable and ensures their long-term curation (no need to refer back to the originators)
- Therefore, it is essential to collect good metadata on a cruise
- It is the **PSO's responsibility** to ensure that metadata are logged and collated on board
- It is the **PSO's responsibility** to ensure the resulting data and metadata are submitted to BODC (in accordance with the NERC data policy)





# Plan on-board data management

- Appoint a cruise participant as a data manager
- Devise an event (station) log
- Devise sample labeling strategies
- Compile template log sheets
- Ensure all participants are recording metadata
- Copy central metadata and data for local post-cruise access
- Please feel free to contact your BODC data manager for advice and assistance

## Examples of central metadata

- Event log
- Cruise diary
- Bridge log
- Sample log sheets
- Instrument log sheets
- Technical log sheets
- Sensor calibration sheets
- Technical reports
- Sensor make/models/serial numbers

For more information see:

[https://www.bodc.ac.uk/data/information\\_and\\_inventories/cruise\\_inventory/](https://www.bodc.ac.uk/data/information_and_inventories/cruise_inventory/)





# Cruise Summary Report (CSR)

- Requirement by Intergovernmental Oceanographic Commission (IOC)
- Submitted 7 days after the cruise
- Summary of cruise datasets
- Submitted with a cruise track chart
- Available on BODC website

The screenshot displays the BODC website interface for the 'Cruise inventory' section. The main heading is 'RRS James Cook JC032' with a sub-heading 'Cruise summary report'. The page includes a navigation menu on the left with options like 'Where to find data', 'Online delivery', and 'Biological data'. The main content area is divided into sections: 'Cruise Info.', 'Objectives', 'Chief scientist', 'Project', 'Coordinating body', 'Cruise report', 'Ocean/sea areas', and 'Physical oceanography'. The 'Cruise Info.' section provides key details: Cruise period (2009-03-07 to 2009-04-21), Status (Completed), Port of departure (Montevideo, Uruguay), Port of return (Walvis Bay, Namibia), and Purpose (Research). The 'Objectives' section describes the project's goal to study climate change by comparing new data with historical measurements. The 'Physical oceanography' section lists various measurements such as surface and underway oxygen, discrete oxygen, and underway surface measurements, each with a quantity and description.

For CSR form and guide see:

[https://www.bodc.ac.uk/data/information\\_and\\_inventories/cruise\\_inventory/](https://www.bodc.ac.uk/data/information_and_inventories/cruise_inventory/)



# Cruise Report

- Required by the United Nations Convention on the Law of the Seas (UNCLOS)
- Submitted 6 months after the cruise
- Detailed, technical description of all cruise activities
- Supports diplomatic clearance for future cruises in foreign waters
- Publication standard (usually published by leading institute)
- Available on BODC website

## Typical report contents

- Cruise summary
- Event log
- Individual scientific cruise reports
- Useful operational information
  - CTD sensors/serial nos.
  - Mooring designs
  - Surfmet sensors/serial nos.
- NMF technical reports
- NMF technical log sheets

For cruise report guide see:

[https://www.bodc.ac.uk/data/information\\_and\\_inventories/cruise\\_inventory/](https://www.bodc.ac.uk/data/information_and_inventories/cruise_inventory/)



# Submitting data to BODC

- In general, BODC should have a copy of the finalised data as soon after the end of data 'collection' as is possible
- In depth information on submission available at BODC website (see [https://www.bodc.ac.uk/data/data\\_submission/](https://www.bodc.ac.uk/data/data_submission/))



- Generally submissions include:
  - Finalised data (plus raw data)
  - Descriptions of parameters and units
  - Methods (to publication standard)
  - Information on calibrations

Phaeocystis?  
Phaeophytin?

Chl a	Phae	Oxy
4.36	3.23	232.4740
8.4038	5.36	191.3738
2.195	95.376	231.484
0.63893	5.279	229.3840



# Summary

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- BODC is a national facility concerned with looking after and distributing NERC-funded data (in accordance with the NERC data policy)
- BODC must have good metadata to ensure the long-term curation of this data and make it discoverable
- It is the PSO's responsibility to ensure the collection of metadata during a cruise
- It is the PSO's responsibility to ensure data and metadata are submitted to BODC after the cruise (in accordance with the NERC data policy)
- It is advisable to devise a data management plan prior to the cruise to ensure metadata collation
- Cruise summary reports should be delivered to BODC within 7 days of the cruise and cruise reports should be delivered to BODC within 6 months of the cruise
- In general, BODC should have a copy of the finalised data as soon as data 'collection' as possible.

