TT-MB report to DBCP-XXVI

1. Moored Buoy Metadata
2. WMO IDs and BUFR
3. Technical developments

Moored buoy metadata

- Between DBCP-25 and 26 the details of the metadata suggested to be collected were refined by
  - ensuring consistency with OceanSITES metadata
  - defining Meta-T categories (which indicate whether the information should be distributed with the observation report)
  - better specification of sampling/reporting times
  - include a metadata validity period record thus enabling a new metadata record to be specified when details (e.g. sensors) change
- With particular attention paid to the metadata needing to be reported for wave measurements in connection with the Pilot Project on Wave measurement Evaluation and Testing (PP-WET)
- Version 5.a. of the draft metadata specification was circulated in early July 2010

Role of JCOMMOPS

- Anticipated that JCOMMOPS would collect moored buoy metadata directly from platform operators
  - too many variables to collect with a web interface so file upload the preferred option
- JCOMMOPS would make the metadata available to users (web interface) and periodically forward it to the JCOMM ODAS Metadata Centre (long-term repository)

Moored buoy metadata

- At DBCP-26 we agreed the initial content (ver 1) for moored buoy metadata (subject to one final iteration)
  - however, in the absence of a TC have not been able to progress (so need to do so now)
- Also at DBCP-26 we were asked to investigate formats for the collection of moored buoy metadata
  - operators will compile their own metadata in a format that meets their asset management needs (tables, databases etc.)
  - but need a standard format for file upload to JCOMMOPS

Moored buoy metadata

- Possible formats for providing metadata to JCOMMOPS, e.g.
  - Self-describing
    - netcdf, BUFR (with descriptors), XML, tagged pairs, csv
  - Template-based
    - BUFR
- Proposal is to use netcdf (similar to OceanSITES)
- NDBC will lead on developing the SIF (standard input format) for the moored buoy metadata

Certification and calibration

- Action from DBCP-26 to investigate certification process and procedures for calibration
- What calibration information should be collected internationally as part of the metadata?
- No progress has been made on this but suggest we could ask individual moored buoy operators to provide a summary of their pre-deployment checks and calibrations
  - compile the information and look for (and encourage) the best practices and identify what needs to be recorded in metadata

WMO numbers

- Now have 7 figure WMO IDs for buoys < xxxx500 for moored buoys, > xxxx500 for drifters, so many more WMO IDs than when just 5 figures
- Far fewer moored buoys than drifters so no need to reuse numbers
- Recommendation is not to reuse WMO IDs for moored buoys which can confuse time-series records

BUFR

- For GTS distribution of moored buoy data we can use:
  - full templates – standard format but potentially with unused sequences that have to be padded out with 1s (many wasted bits)
  - shorter self-describing messages using descriptors – more efficient to transmit but more variability in messages on GTS

BUFR

- Possible approaches
  - basic template for common sequences with optional descriptors for additional sequences that may or may not be used
  - self describing message with additional descriptor to identify which template(s) it is a sub-set of
- Do the Panel have a view on which approach is preferred?

Moored buoy technology developments

- Report contains updates from/on
  - Environment Canada
  - Indian (NIOT) moored buoy programme US National Data Buoy Center
  - US Pacific Marine Environmental Laboratory
  - US NSF Ocean Observatories Initiative
  - UK Met Office

- Will be covered in Friday's national reports