

Task Team on Data Management Report

Chair: Mayra Pazos (GDP representative)

Members:

Bruce Bradshaw – RNODC representative

Bill Burnett – NDBC data manager

Jean Rolland – SOC representative

Pierre Blouch – Meteo-France

Yann Bernard – CLS data manager

Joan Stander – SAWS

Hester Viola – DBCP TC

Jeffrey Wingenroth – Technocean Inc.

Emily Daniels – Metocean

DBCP-26 Oban, UK, September 27 – September 30, 2010

Real Time Distribution of Data

- The DAC continues to distribute and monitor all data from AOML and Korean drifters going out on the GTS and makes sure only good data are being disseminated.
- During this last 12 months the DAC stopped the transmission of erroneous SST data on the GTS from a large number of SVP drifters. The manufacturer was contacted about this unusual situation.
- Several new GTS templates had to be created at CLS-France to distribute Pacific Gyre SVP salinity, Wind and ADOS drifters which did not conform with the DBCP-M2 format.
- NDBC continues to provide data analysis and quality control support to observations from moored buoys, coastal marine stations, water level stations, deep-ocean tsunameters, Tropical Ocean Atmospheric moored buoys in the equatorial Pacific, oil and gas platforms in the Gulf of Mexico and Integrated Ocean Observing Systems partner platforms (moored buoys and coastal stations) on the GTS in Real time.

Real Time Distribution of Data

- With regards to transition to BUFR and data flowing on the GTS in BUFR format, the Technical Coordinator worked with ISDM reviewing the differences between BUFR and BUOY messages received to assess the adoption by GTS uplink centers.
 - Some centers are sending no BUFR data for buoys at all. They were contacted to find out their plans to test and implement the encoding of data in BUFR format. They were reminded of the 2012 cut-off date.
- ISDM has been decoding BUFR data for two years. Inconsistencies with the retransmission of data to the GTS from a few Iridium equipped platforms were found and they are being addressed.
- Bulletin headers used for buoy data disseminated from Toulouse and CLS America in BUFR format need to be updated, the header “IOBX” will be used rather than “IOZX” by end of 2010.

Real Time Distribution of Data

- ISDM (MEDS RNODC-db) had a problem receiving some of the Iridium buoy data circulating on the GTS. ISDM stopped receiving messages from SSVX13 LFPW. The blackout occurred on September 24, 2009, and the routing problem was resolved in Washington on August 23, 2010. ISDM is not receiving messages from all of the presently active buoys. Pierre Blouch from Meteo-France offered help to recover the missing data during the blackout.

Real Time Distribution of Data

- Meteo-France reports that the distribution of BUFR messages onto the GTS should start during summer 2010 after the first SVP-B drifters ordered for E-SURFMAR having a resolution of 0.01K for SST are deployed. BUFR messages have been generated for more than one year but they were not distributed on the GTS until now.
- ISDM identified a recurring problem with Triton buoy data/thermistor chain transmitting on the GTS. Of all sensors attached to the Triton moorings, the ones at 250m depths often (>10%) reported suspiciously large temperature and salinity variations beyond normal climatological values. CLS corrected the GTS template to apply the checksum control on sensors at 250m and the fix was applied to all active TRITON buoys and all other Argos IDS.
- South Africa Weather Service's main concern remains to be the delayed time in real time. CLS has revealed a plan to upgrade their IS antenna network to achieve greater coverage over the oceans.

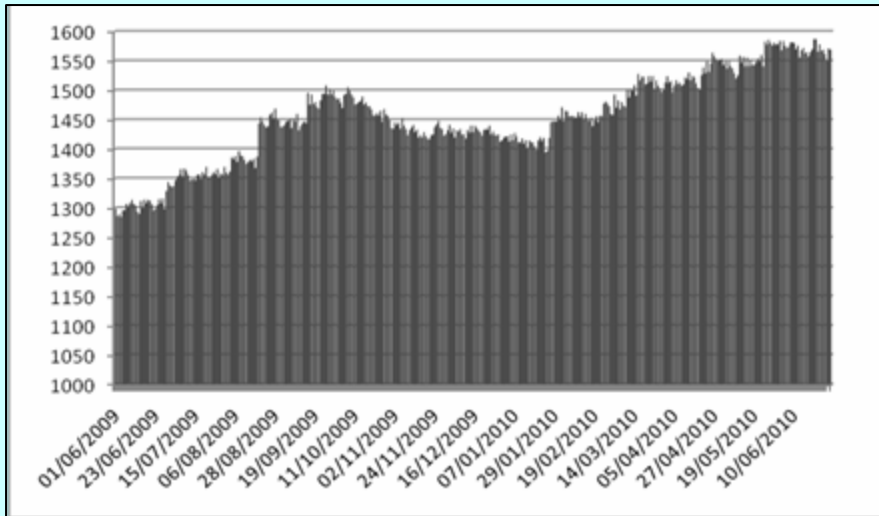
Real Time Distribution of Data

CLS-France reports:

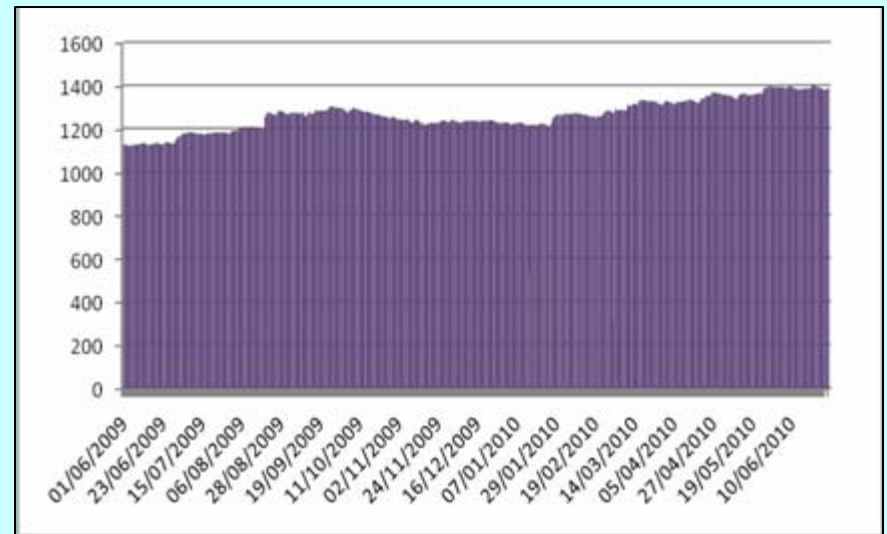
- The average GTS delivery time has been 18 min improved between June 2000 and June 2010. This improvement is explained by:
 - A sixth operational Argos satellite in August 2009 (NOAA NP)
 - Improvements on CLS Argos-GTS processing system (shorter time of processing, faster bulletins compilation before sending)
 - Best management of settings on processing templates especially on the time of observation computing.
- BUFR coding for SYNOP observations is in course of validation. Deadline = end of 2010
- Integration of GPS positions in GTS observations for all buoys that have a GPS with an automatic switch on Argos location, when GPS fails.
- Developments are in course to provide statistics on operational GTS monitoring tool by ocean basin. Deadline = DBCP XXVI meeting.

Statistics from the GTS

Number of WMO Platforms
processed per day
June 1, 2009 – Jun 10, 2010



Number of drifters on GTS
processed per day
June 1, 2009 – Jun 10, 2010



Graphs provided by CLS-France

Delayed mode Distribution and Archiving of Data

- The DAC is preparing the next drifter data update to send to ISDM for archiving, and distribution. It will cover the period from July 2007 through December 2009.
- Interpolated drifter data through March 2010 can be downloaded from the DAC web site.

www.aoml.noaa.gov/phod/dac/dacdata.php

- ISDM reported that SVP drifter data submissions from AOML will be processed and available at their web site in a more timely fashion due to improved processing systems.

www.meds-sdmm.dfo-mpo.gc.ca

- Several functional updates to the ISDM RNOCD/DB web site have been completed. Work is nearly complete on a new monthly Goggle Earth KML data product, which will include buoy tracks and a new observed data graphical products as well as improved inventory level meta-data.

Delayed mode Distribution and Archiving of Data

- Meteo-France would like to reiterate that their purpose for handling delayed mode data is mainly for quality control. Comparisons are performed to issue black lists and monthly statistics available on the web www.meteo.shom.fr/qctools

Remember: All data buoys (drifting and moored) are referring to the 7-digit WMO numbers in Meteo-France archives when using *qctools*, following the conversion rules described by WMO office.

ex: WMO 62163 becomes 6200163 in the query form

- NDBC met with NOAA's NODC to establish new techniques to support the archive of climate observations. Taking advantage of new techniques will enable a new degree of interoperability within and between NDBC and NODC. By the end of January 2011, NDBC will begin archiving all 2011 and beyond observations using netCDF.

Format Issues

- Lack of standardization in Argos data formats raised last year is still an issue for both processing in real time (GTS) and decoding and processing data in delayed mode
 - TTDM encourages manufacturers to promote standard formats: DBCP-M2 concept can be easily adapted for other sensors
 - It is recommended that in cases where additional data are needed in the message, the message should have the “standard” data in the front portion of the message and the user-specific data behind that.
- Meteo-France reports that Iridium SBD formats for drifting buoys were updated in the frame of DBCP Iridium Pilot Project
 - The main change was the introduction of a format identifier (one byte) at the beginning of each message type.
 - List of available formats and their descriptions are published on the Iridium-PP website.

www.jcommops.org/dbcp/iridium-pp

Review roles of Archiving Centers

- **ISDM** reported that there has not been any progress beyond the exchange of data center reports between SOC (Jean Rolland) and RNODC/DB (Bruce Bradshaw) which were included as annex to the 2009 report. During the last DMCG meeting (April 8-9, 2010, Ostend, Belgium) it was recommended that members from this group contact ISDM and SOC to coordinate respective organization's activities.
- **Meteo-France** believes the coordination between SOC and ISDM is a positive evolution and wishes to continue the effort to build a mirror system in which ISDM and Meteo-France would work in the same way, with the same collected data, the same archive, in order to have a full back-up system, with the exception of the data distribution from their site. ISDM runs a portal to make the data available which Meteo-France would not be able to do, at least for now.

Pending Action Items from DBCP-25

- DBCP-25 item 8.8.2 to make NWP/Ocean model output available to buoy operators over the web to:
 - i) To check data quality before sending to the GTS upon deployment and
 - ii) To check data that had been removed from the GTS to assess if it had improved over time and can be released to the GTS again

Meteo-France reported they have developed some internal tools that are used for E-SURFMAR operations, but that technical problems avoid making them available on the web and

Internal tools also exist at Meteo-France to extract model data from Meteo-France model analysis at a given location for a given short period of time that might be occasionally provided to buoy operators upon request.

Action Items

- Promote standardization of data transmission formats using DBCP-M2 concept.
- Assist Pierre Blouch and Jon Turton in preparing a methodology to compare non-GTS buoy data with NWP/Ocean models, open to anyone via the web.
- Review the DM Cookbook (The Oceanographer's and Marine Meteorologist's Cookbook for Submitting Data in Real time and in Delayed Mode)
- Review the SSS QC document and finalize
- Continue, with support of the TC, to assess the adoption of BUFR by GTS nodes and ensure that all data that is expected is definitely received at modelling and archiving centers (especially ISDM, NODC and ECMWF) by reviewing the differences between BUFR and BUOY messages received at each center.
- Assist in reviewing the Buoy template for BUFR, which will be updated in 2010-11 to include new requirements for observations, as well as the additional metadata identified as critical.
- Encourage the two Buoy Data Management centers (ISDM and SOC) to continue liaising between themselves.

Many thanks to all who provided
input to TTDM report
And for taking time to prepare and
review the documents

