

# 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

Kelly Stroker – DBCP-TC

Emily Daniels – Metocean

DBCPC-27, Geneva, Switzerland - September 26 – 30, 2011

# Receive and Review Reports from the Data Management Centers

➤ The two data centers specializing in buoy data, Meteo-France (SOC)/DB (Pierre Blouch) and ISDM, Canada, RNODC/DB (Bruce Bradshaw) compared GTS bulletin headers they actually receive and are working on the differences they found. It was agreed :

- To have these checks produced by automatic procedures
- Repeat the cross checks every 6 months
- Make results available on the web through Meteo-France QC-Tools and published by the Technical Coordinator on the JCOMMOPS website

# 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, taking immediate action after recommendations from the QC centers are received.
- **Meteo-France** QC-tools allow now to query drifters using either their 5 or 7 digit WMO number to check GTS data against model outputs. The 7-digit WMO number are mandatory for buoys having already their 3<sup>rd</sup> or 4<sup>th</sup> digits different from “0” and reporting through BUFR only
- QC-tools allows now to monitor transmission delays for individual buoys. Graphs showing this parameter over the last two weeks period may be displayed the same way as for the other measured parameters. Monthly statistics for transmission delays are also available.
- Reports of Sea Surface Salinity (SSS) on the GTS have increased during this past year. This parameter can also be monitored using QC-tools, as well as graphs of differences with Mercator model outputs for SSS over the past 15 days, and monthly statistics

# Real Time Distribution of Data (Cont.)

- **Meteo-France** has been providing the Coriolis center on a weekly basis drifter sensor observations, current data deduced from positions and collocated winds and winds stress for all buoys reporting on the GTS with drogue on only. Work on adding two additional tests is ongoing to determine drogue presence to then distribute all data, but flag the undrogued data. For the moment, drifter data are only used for the validation of the models, but in the near future, it could be assimilated into the models.
- **Meteo-France** reported that by the beginning of July 2011, SBD iridium data from 97 drifting buoys were processed at on real time. Hourly observations messages from these buoys are sent on the GTS either in FM18-BUOY or in FM94-BUFR code

# Real Time Distribution of Data (Cont.)

- **NDBC** reported that during this period, they provided 24x7x365 data analysis and quality control support for 115 NDBC moored buoy platforms, 51 coastal marine stations, 221 water level stations, 39 deep-ocean tsunameters, 55 Tropical Ocean Atmospheric moored buoys in the equatorial Pacific, 40 oil and gas platforms in the Gulf of Mexico and 250 Integrated Ocean Observing Systems (IOOS) partner platforms (moored buoys and coastal stations). Through this effort, NDBC provided over 12 million quality-controlled observations to the Global Telecommunications System (GTS) in real-time
- **NDBC** began to implement the new techniques to support the archive of climate observations. Starting in January 2011, NDBC began using Open Geospatial Consortium Inc. standards and Sensor Observation Services to provide all their archived observations in the National Oceanographic Data Centers (NODC) approved netCDF format.

# Real Time Distribution of Data (Cont.)

## 2010-2011 GTS processing enhancements at CLS

- Upon a request from Expert Team on WIS-GTS Operation and Implementation (ET-OI), BUFR headers for buoys have been changed from IOZXiiLFVW to IOBXiiLFVW on the 20<sup>th</sup> of April 2011 at 12H00 UTC.
- Improvements on the precision of the software module SAL\_78 which computes salinity values with conductivity and sea temperature especially for BUFR have been made. This work was made in collaboration with Dr. Iwao UEKI from JAMSTEC.
- Implementation of the GTS processing template for salinity drifters of ICM (Instituto de Ciencias del Mar, Barcelona, Spain).
- GTS statistics by WMO areas are available at CLS since August 15, 2011. CLS is waiting the new DBCP TC to find a solution to publish these statistics on the JCOMMOPS website.

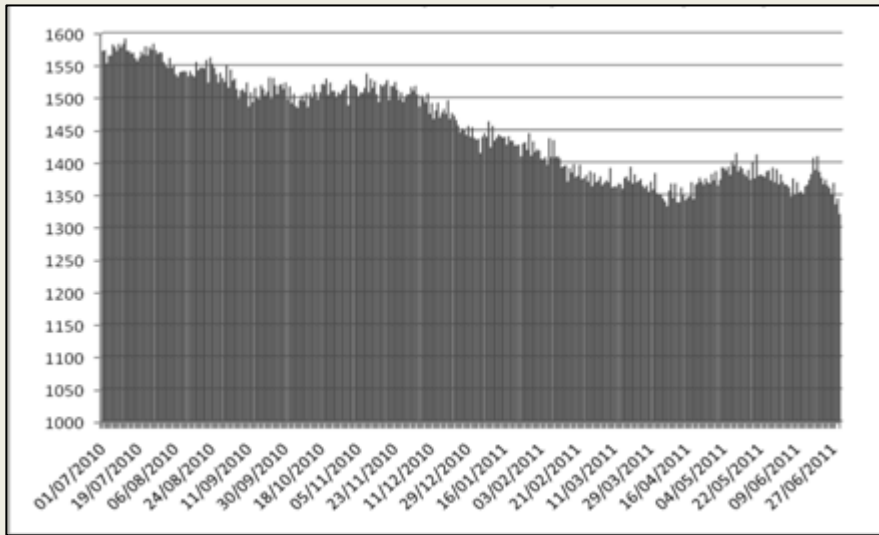
# Real Time Distribution of Data (Cont.)

## 2010-2011 GTS processing enhancements at CLS

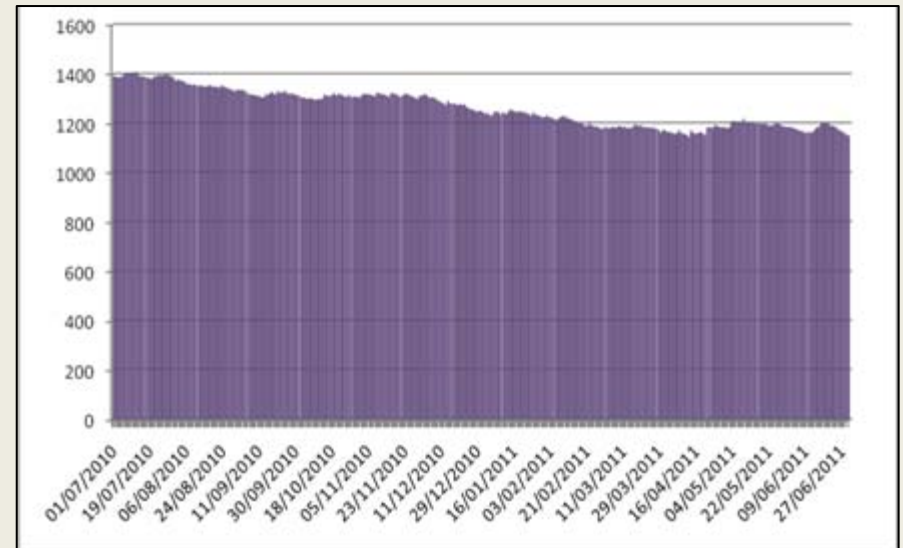
- BUFR coding for SYNOP observations is in course of validation. Deadline = end of 2011.
- CLS is working on the implementation of the latest BUFR version (V.4) in the Argos-GTS processing center. Deadline is by the end of 2011.
- New options in the CFG tool (allows PI to modify automatically GTS settings by emails and XML files) available before the end of 2011:
  - Bulletins headers (T1T2A1A2ii)
  - Drogue depth (ZdZdZd)
  - Drogue type (XtXt)

# CLS- Statistics from the GTS

Number of WMO Platforms  
processed per day  
June 2010 – Jun 2011



Number of drifters on GTS  
processed per day  
June 2010 – Jun 2011



Graphs provided by CLS-France



# Delayed mode Distribution and Archiving of Data

- The **Drifter Data Assembly Center (DAC)** at AOML, submitted to ISDM, an updated version of the SVP data set for the period July 2007 through December 2010, for archival and distribution. ISDM expects to have it available through the web by the end of September 2011.

[www.aoml.noaa.gov/phod/dac/meds.html](http://www.aoml.noaa.gov/phod/dac/meds.html)

- The historical Quality-controlled interpolated drifter data through June 2011 can be downloaded from the DAC web page: [www.aoml.noaa.gov/phod/dac/dacdata.php](http://www.aoml.noaa.gov/phod/dac/dacdata.php)

- The Directory file with metadata information as well as deployment information on near real time is available from the DAC web page:

[www.aoml.noaa.gov/phod/dac/dacdata.php](http://www.aoml.noaa.gov/phod/dac/dacdata.php)

<http://www.aoml.noaa.gov/phod/dac/deployed.html>

# Delayed mode Distribution and Archiving of Data

- DAC has been providing a version of the deployment log file on the web as a .csv file on the ftp server, as requested at DBCP-26 in Oban. It is available at:  
<ftp://ftp.aoml.noaa.gov/phod/pub/pazos/deplog/deployed.csv>
- The DAC has maintained a table, regularly updated and posted on the web showing ADB comparison study results as a response to an action item from DBCP-26, Oban, 2010  
[www.aoml.noaa.gov/phod/dac/dacdata.php](http://www.aoml.noaa.gov/phod/dac/dacdata.php) , under “other presentations, posters and links”

# Delayed mode Distribution and Archiving of Data

- **ISDM** will be presenting a new online archive with historical data from 1978 to present, later this year. Typical surface parameters will be available for download and visualization. Online mapping and inventory applications will support data discovery, visualization and data download. Monthly summary statistics and interactive track maps will be available on demand

# Format Issues

- There were several problems this year with Argos PMTs used as PTTs but their format was not changed and they remained set up at CLS-America as PMTs, causing decoding errors and confusion. Also, many of these PMTs were in the manufacturers testing program, and remained there, even after the drifters were deployed, this caused concern when data from recently deployed drifters could not be found. With the help of CLS-America, the problem was sorted out, data was found and transferred from the manufacturers testing program to the user's program, and the format was changed.
- Iridium buoys should use pilot project (PP-iridium) formats. New formats maybe created if present ones are unsuitable. Meteo-France would be glad to maintain the list and description of these data formats
- **REMINDER:** BUFR allows to report SST with a resolution of 0.01K (instead of 0.1K) through FM18-BUOY format. This is essential for the PP-HRSST project

# Non-GTS data Comparison to models

- Meteo-France reports there has not been any progress with regards to the comparisons of non-GTS buoy data with NWP/ocean models open to anyone via the web. Meteo-France internal tools are correctly working assuming several conditions are met. For technical reasons, it is not planned yet to make these tools available on the web, however, Meteo-France offers to provide results of occasional requests sent by e-mail

# Other Issues

- **ISDM** has a page which summarizes and provides access to the most recent month of GTS DRIBU data. The page provides access to a Google Earth KML file with drift tracks, meta-data, CSV data download and data graphics/plots. The URL is <http://isdm.gc.ca/isdm-gdsi/drib-bder/KML/MonthlyKML-eng.htm>
- Regarding the coordination between SOC and ISDM, it was reported at IODE (iode21\_doc35.pdf) in February that SOC and ISDM would work at assembling a workshop based on the recommendations contained in the **Report by the Ad Hoc Task Team on Responsible National Ocean Data Centers (RNODCs) and Specialized Oceanography Data Centers (SOCs)** . No progress to report at this time
- The Panel is reminded that BUFR will be the only way to communicate on the GTS after 2012
- **CLS/CLS America** transmit all drifter data on GTS in both, BUOY and BUFR formats

# Action Items

- Continue to promote standardization of data transmission formats using DBCP-M2 concept
- Convert all 5-digits WMO numbers to use the equivalent 7-digit WMO number to refer to drifters in all metadata files (e.g. GDP deployment log, JCOMMOPS cross-reference lists, etc)
- The Technical Coordinator (TC) should continue to 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 (Continuation of DBCP-25 Action 8.8.2). The Panel requests the TC to report any progress made with respect to related web tools by the next DBCP Session (*action; TC DBCP; DBCP-28*)
- The cross reference list of WMO IDs vs. Transmitter ID provided by JCOMMOPS on the web is very useful. However, due to the Technical Coordinator's position having been vacant, it was last updated on October 13, 2010. The Panel requests the list to be updated ASAP

[ftp://ftp.JCOMMOPS.org/JCOMMOPS/GTS/wmo/wmo\\_list.txt](ftp://ftp.JCOMMOPS.org/JCOMMOPS/GTS/wmo/wmo_list.txt)

# Action Items

- TC should publish the results after cross-checks of GTS Bulletin Headers received/sent between ISDM and Meteo-France have been performed, on the JCOMMOPS web site
- ✓ TT-DM Reviewed the SSS QC document and sent to TT-IBP, it was finalized and submitted for publication



# Recommendations to the Panel

- The TT-DM recommends to continue reusing WMO numbers for moored buoys but not to reuse the 7 digit WMO numbers for drifters until it becomes absolutely necessary, probably in some years from now
- Convert all 5-digits WMO numbers to use the equivalent 7-digit WMO number to refer to drifters in all metadata files (e.g. GDP deployment log, JCOMMOPS cross-reference lists, etc.)
- Communicate to the different centres they will stop receiving BUOY reports from drifters using 7-digit WMO numbers because they will only be distributed in BUFR format
- To provide data to the centres in NETCDF besides BUFR format
- Inform all GTS focal points that BUFR subcategory for missing value is being changed from the currently used value of 255 to 25, to conform with WMO rules

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

