

**INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)**

DATA BUOY COOPERATION PANEL

TWENTY-SIXTH SESSION

OBAN, UNITED KINGDOM
27 – 30 SEPTEMBER 2010

**WORLD METEOROLOGICAL
ORGANIZATION**

DBCP-XXVI/Doc. 5
(31.VII.2010)

ITEM:5

ENGLISH ONLY

REPORT BY THE TECHNICAL COORDINATOR

(Submitted by Hester Viola, Technical Coordinator, DBCP)

Summary and purpose of the document

This document provides information on the work undertaken by the Technical Coordinator of the DBCP.

ACTION PROPOSED

The Panel will review the information contained in this report and comment and make decisions or recommendations as appropriate. See part A for the details of recommended actions.

Appendices:

- A Graph of evolution of percentage of drifting buoys recording Air pressure.
- B Buoy data quality summary

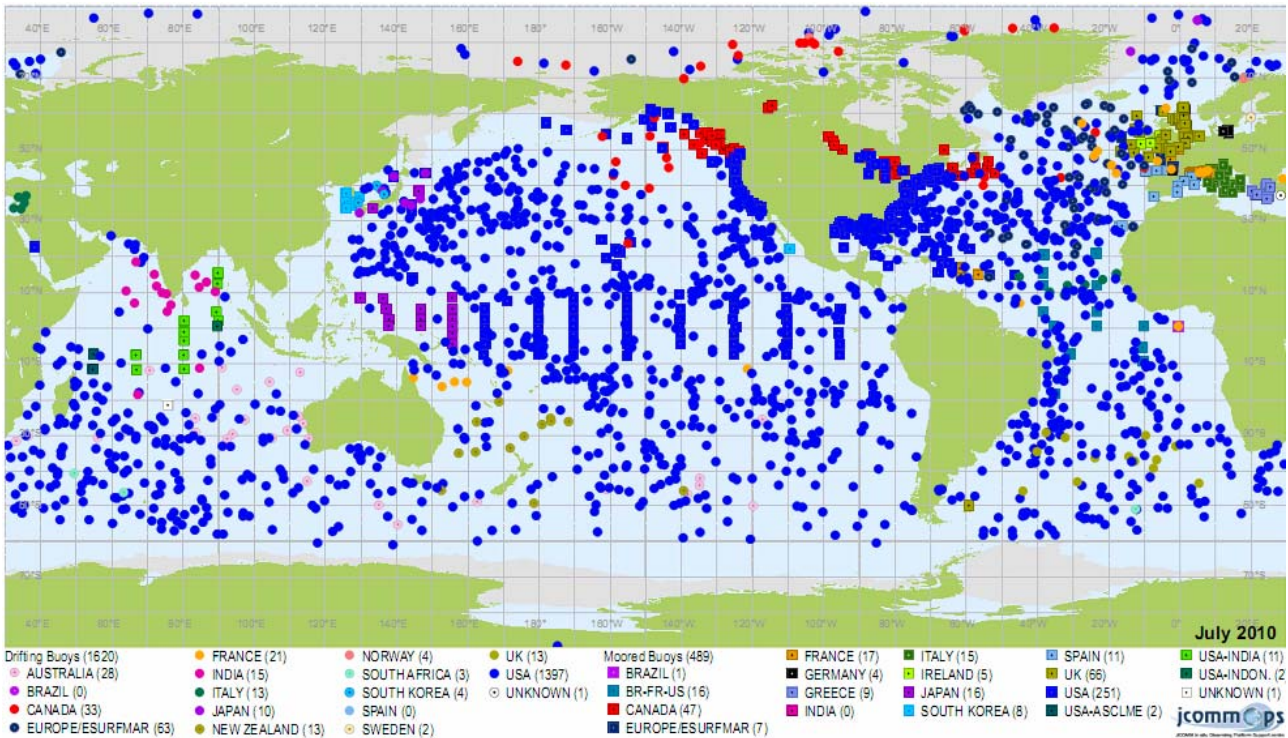
-A- DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT

5.1 During the period 1 September 2009 to 31 August 2010, Ms Hester Viola worked as the Technical Coordinator (TC) of the Data Buoy Cooperation Panel (DBCP). Ms Viola worked in Toulouse, France, at CLS, and was employed by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) up until July 2010, after which point she was employed via a short-term contract with the World Meteorological Organization (WMO). On average, the TC spends about one third of the time on OceanSITES matters, about 5% on JCOMM and JCOMMOPS issues, and about 5% working with the Argo TC. The remainder of time is spent on DBCP-related matters.

5.2 During the previous year, Ms Viola's time (relating to DBCP) was spent in the following ways:

- Assisting the Panel with technical and programmatic issues;
- Maintaining metadata in the JCOMMOPS database;
- Producing monthly maps;
- Tracking status of action items from previous DBCP sessions;
- Maintaining and updating websites (DBCP and OceanSITES);
- Maintaining mailing lists, contact details and user groups on DBCP, JCOMMOPS, OceanSITES and JCOMM websites;
- Looking at GTS (new data and delays) and Quality-Control Relay traffic;
- Seeking new deployment opportunities and communicating them to buoy operators;
- Producing reports and maps, as required, as well as a monthly report on work undertaken;
- Pilot Project and Action Group support;
- JCOMMOPS - information system operations and maintenance (database, metadata uploads and reporting). Designing the new tables for the JCOMMOPS database along with other JCOMMOPS staff members;
- Preparing for and attending meetings; and
- Support the OceanSITES Steering Team and Data Management Teams.

5.3 The TC outlined the current status of the data buoy network, noting that the total number of buoys globally was stable in the last year. The spread across the globe has been very consistent and even, although the northern Indian has begun to be quite sparse and the north Western Pacific is still not filled.. The total number of drifting buoys has been maintained well above 1250 and about half of those measuring Air Pressure.



Map 1: DBCP monthly status by country for July 2010. (Data Buoys reporting on the GTS via Météo-France)

5.3 She reported that amongst the drifting and moored buoys reporting on the GTS in BUOY (or BUFR) message format, the following variables were measured in June 2010. There was a bit of fluctuation in the number of drifting buoys reporting Air Pressure globally this year, with a peak of 697 in May 2010.

Variable	Any	Air P	P Tend.	SST	Air T	Hum.	Wind	Waves	Sub/T
Drifting Buoys	1588	674	632	1452	21	0	4	5	35
Moorings	444	269	233	324	326	197	310	284	88

Table 1. Drifting and Moored buoys – variables being reported on the GTS

5.4 The TC discussed her work during the inter-sessional period, highlighting certain key tasks completed during the year. Updates to the website and technical documents were completed in the inter-sessional period. She then highlighted some of the action items she focused on, which would be discussed further in agenda item 9.

5.5 The TC reminded the Panel of the different tools for checking buoy data quality and reporting issues with data quality. She informed the Panel that her report included a detailed description of the status and progress of the Panel's work for the last year, a written assessment of the buoy data quality for the last year and a full list of activities undertaken each month in support of the Panel, its Task Teams and Action groups. Some future plans were presented and the Panel was invited to comment on priority tasks for the TC Workplan.

5.6 Ms Viola then reminded the Panel that she was not going to continue in the post of Technical Coordinator after September 2010. She thanked the Panel for its support and excellent teamwork over the last four and a half years. She highlighted that it was pleasing that the recruitment of the Technical Coordinator position had recently commenced and that the post was a

permanent UNESCO post.

5.7 In addition to the workplan that already exists, routine tasks, and support for Action Groups and Task Teams, plus working on OceanSITES, the Panel concurred with the the following high priority tasks proposed by Ms Viola for the new Technical Coordinator:

- Working with JCOMMOPS colleagues to improve the design and functionality of the JCOMMOPS website and other web products such as
 - the QIR tool, to integrate all of JCOMMOPS QC feedback into one web page
 - Adapting the Google Earth products created for the Argo program to present Buoy metadata and trajectories for efficiently
- Adding extra metadata fields to GTS Data Flows, continue to assist with JCOMM-wide reviews of BUFR templates along with the JCOMM Task Team on Table Driven Codes.
 - Working with the JCOMM Task Team on Table Driven Codes and Panel members to incorporate more Buoy Metadata into the BUFR Template for Drifting and Moored buoys.
- Designing new products to track deployment plans and assist with creating new deployment opportunities within JCOMM
- Finalise integration of OceanSITES data/metadata into JCOMMOPS database
 - Ensure that routine network status can be reported in maps (with monthly, quarterly and live Google Earth views) and web products in coordination with the Global data assembly centres (GDACs)

5.8 **The meeting decided on the following action items:**

- (i.) DBCP to include drifter data in “The Oceanographer's and Marine Meteorologist's Cookbook for Submitting Data in Real Time and In Delayed Mode” cookbook From DMCG April 2010. Action 45 (ref. 7.1.1.1 (ii)); (**action; TT-DM; October 2010**);
- (ii.) Complete a final review of the new DBCP Technical Document 37 - entitled Guide to buoy data Quality Control tests to perform in real time by a GTS data processing Centre and reporting to the Chairperson of the Task Team on Data Management, Mrs Mayra Pazos (USA). (**action; Panel Members ; October 2010**);
- (iii.) . Concerning Quality Control of Salinity Data, once the DBCP has ascertained which processes apply to drifting and moored buoys, the appropriate tests and procedures can be added to DBCP Technical documents which already exist (**action; TT-IBP; DBCP-27**);
- (iv.) The new Technical Coordinator, once recruited to address the priority tasks agreed upon by the Panel under paragraph 5.7 above (**action; new TC; DBCP-27**).

-B- BACKGROUND INFORMATION

1 This report covers the activities of the Technical Co-ordinator of the DBCP (TC) for the period from 1 September 2009 to 31 August 2010. A status of the DBCP network and TC tasks completed is given, followed by a detailed report on TC tasks undertaken each month.

2 On average, the TC spends about one third of the time on OceanSITES matters, about 5% on JCOMM and JCOMMOPS issues, and about 5% working with the Argo TC. The remainder of time is spent on DBCP-related matters.

3 During the previous year, Ms Viola's time (relating to DBCP) was spent in the following ways:

- Assisting the Panel with technical and programmatic issues
- Maintaining metadata in the JCOMMOPS database.
- Producing monthly maps
- Tracking status of action items from previous DBCP sessions
- Maintaining and updating websites (DBCP and OceanSITES);
- Maintaining mailing lists, contact details and user groups on DBCP, JCOMMOPS, OceanSITES and JCOMM websites
- Looking at GTS (new data and delays) and Quality-Control Relay traffic;
- Seeking new deployment opportunities and communicating them to buoy operators;
- Producing reports and maps, as required, as well as a monthly report on work undertaken;
- Pilot Project and Action Group support
- JCOMMOPS - information system operations and maintenance (database, metadata uploads and reporting). Designing the new tables for the JCOMMOPS database along with other JCOMMOPS staff members.
- Preparing for and attending meetings; and
- Support the OceanSITES Steering Team and Data Management Teams

4. DBCP Status and highlights (as of August 2010)

4.1 Present status of the buoy network.

- For drifting buoys, there was a peak of over 1600 operational buoys on the GTS this June and a peak in the number of Barometer buoys in May which demonstrates a growth in the network and the strong commitment to maintaining the network.

Country	Drifting Buoys	Drifting Buoys on GTS
AUSTRALIA	35	28
BERMUDA	1	0
BRAZIL	4	0
CANADA	39	29
EUROPE	64	63
FRANCE	43	18
INDIA	28	15
ITALY	45	13
JAPAN	11	7
NEW ZEALAND	17	13
NORWAY	4	4
SOUTH AFRICA	4	3
SOUTH KOREA	4	2
SPAIN	7	0
UK	17	13
USA	1736	1382
Total	2059	1588 (=77%)

Table 1: Drifting Buoys (mostly reporting via Argos) and those on the GTS by country for July 2010

Country	Moored Buoys	Moored Buoys on GTS
AUSTRALIA	5	0
BR-FR-US	15	15
BRAZIL	1	1

CANADA	50	40
EUROPE	7	7
FINLAND	1	0
FRANCE	19	16
GERMANY	12	1
IRELAND	7	5
ITALY	15	14
JAPAN	26	14
PERU	1	0
SOUTH KOREA	7	7
SPAIN	21	11
UK	77	64
US-ASCLME	2	2
USA	319	234
USA-IN	10	9
USA-INDO	3	2
Total	598	444 = (74%)

Table 2: Moored Buoys reporting via Argos and those on the GTS by Country for July 2010.
N.B New Zealand 'Mooring' = stationary drifting buoy.

Year	Operational drifting buoys at JCOMMOPS	On GTS	% on GTS
July 1991	718	264	36.8%
July 1992	1162	474	40.8%
August 1993	1269	548	43.2%
September 1994	1246	587	47.1%
September 1995	1429	631	44.2 %
September 1996	1180	638	54.1%
September 1997	1159	581	50.1%
August 1998	1230	543	44.1%
July 1999	1270	728	57.3%
July 2000	1385	807	58.3%
July 2001	1338	763	57%
July 2002	919	459	49.9%
August 2003	1436	752	52.3%
July 2004	1727	950	55%
June 2005	2396	1157	48%
August 2006	2218	1237	55%
August 2007	2026	1295	64%
July 2008	2069	1377	66%
July 2009	2032	1405	69%
July 2010	2059	1588	77%

Table 3. Evolution of GTS Buoy data percentage

4.2 Amongst the drifting and moored buoys reporting on the GTS in BUOY message formats; the following variables were measured in June 2010. There was a bit of fluctuation in the number of drifting buoys reporting Air Pressure globally this year, with a peak of 697 in May 2010.

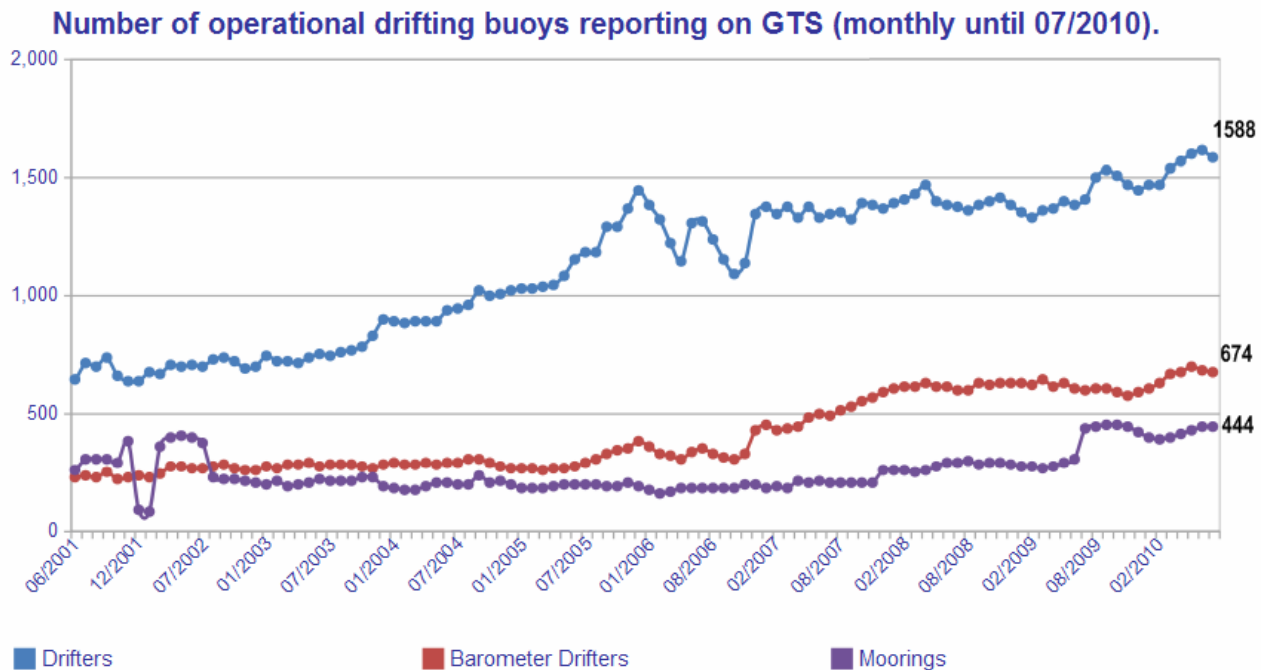
Variable	Any	Air P	P Tend.	SST	Air T	Hum.	Wind	Waves	Sub/T
Drifting Buoys	1588	674	632	1452	21	0	4	5	35
Moorings	444	269	233	324	326	197	310	284	88

Table 4. Drifting and Moored buoys – variables being reported on the GTS

4.3 The JCOMM Observations Coordination Group’s Implementation Goals, is to eventually equip at least 700 drifting buoys with barometers outside of the tropics. This goal was not quite achieved this year. This July the number in the higher latitudes (above 30 degrees N/S) was ~513, compared with 470 last July. Deployment opportunities are a limiting factor in achieving the 700 requested by the JCOMM OCG.

4.4 The Global Drifter Center, supported by NOAA, continues to offer the Barometer upgrade opportunity for standard SVP drifters for ~\$1000 per unit (see the following URL for details: http://www.jcommops.org/dbcp/svpb_upgrade.html).

4.5 Graph 1 shows the number of operational drifting buoys over the last 19 years, which increased from 2009-10 and well above the desired number of 1250.



GTS data as received by Meteo France. [View Network growth data](#) (.CSV)

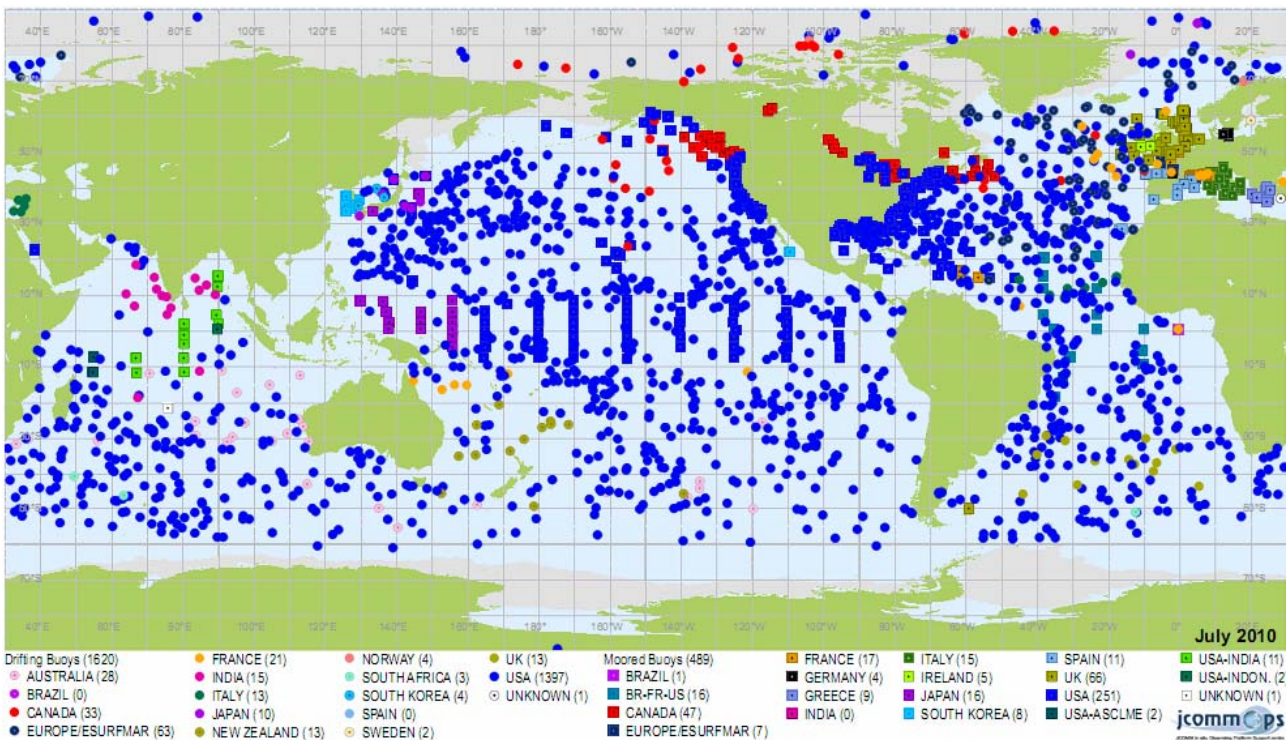
Graph 1: Monthly evolution of the number of operational drifting buoys reporting on GTS from January 2001 to July 2010 and those reporting air pressures. Operational Moored buoys are also included. (Data derived by statistics computed from GTS in situ marine data provided by Météo-France).

4.6 Graph 1 demonstrates that the number of drifting buoys has been maintained well above 1250 and about half of those measuring Air Pressure. The number of Barometer buoys had grown steadily throughout the intersessional period, though in the last three months that has leveled off a little. Last year the total percentage of Barometer buoys began decreasing in August (dipping at 39%) which was a concern. This year however the percentage has increased again and while it is not back to the levels seen early 2009 (~47%), it has remained at 43-44% for most of 2010. There

has been a significant increase in number of Barometer buoys in the southern Indian Ocean.

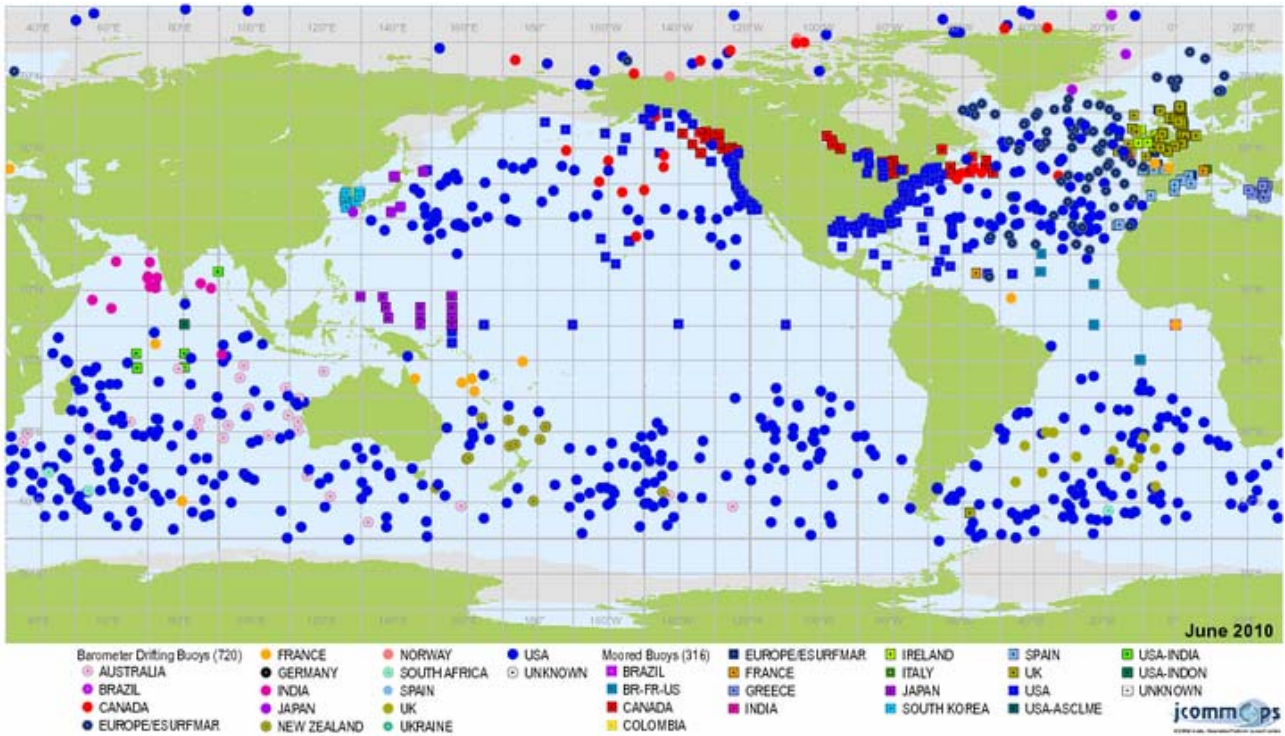
- Appendix A includes a graph of the evolution and fluctuations in percentage of Barometer Buoys from 2005-2010, demonstrating the progress made by the Panel in recent years.
- During the inter-sessional period, an interactive version of Graph 1 was added to the DBCP website¹. It is updated each month by JCOMMOPS. An equivalent text file is also available on the website.

4.7 Map 1 shows the buoy status at the end of July 2010. The spread of drifters has remained good throughout the inter-sessional period, although the northern Indian has begun to be quite sparse and the north Western Pacific is still not filled. Fortunately, the RAMA moored buoy array in the Indian Ocean has filled in many of the gaps and provided cruises for deployment of drifters, however the continuity of data is adversely impacted by vandalism and difficulties replacing platforms. Again this year, the spread across the Arctic region is better than it had been in the past. For the gulf of Guinea, many drifters were deployed in this region in the last year, however they appear to be moving away from the African continent currently. Many of the buoys deployed in this region last year (with help from the US Navy) were beached or failed.

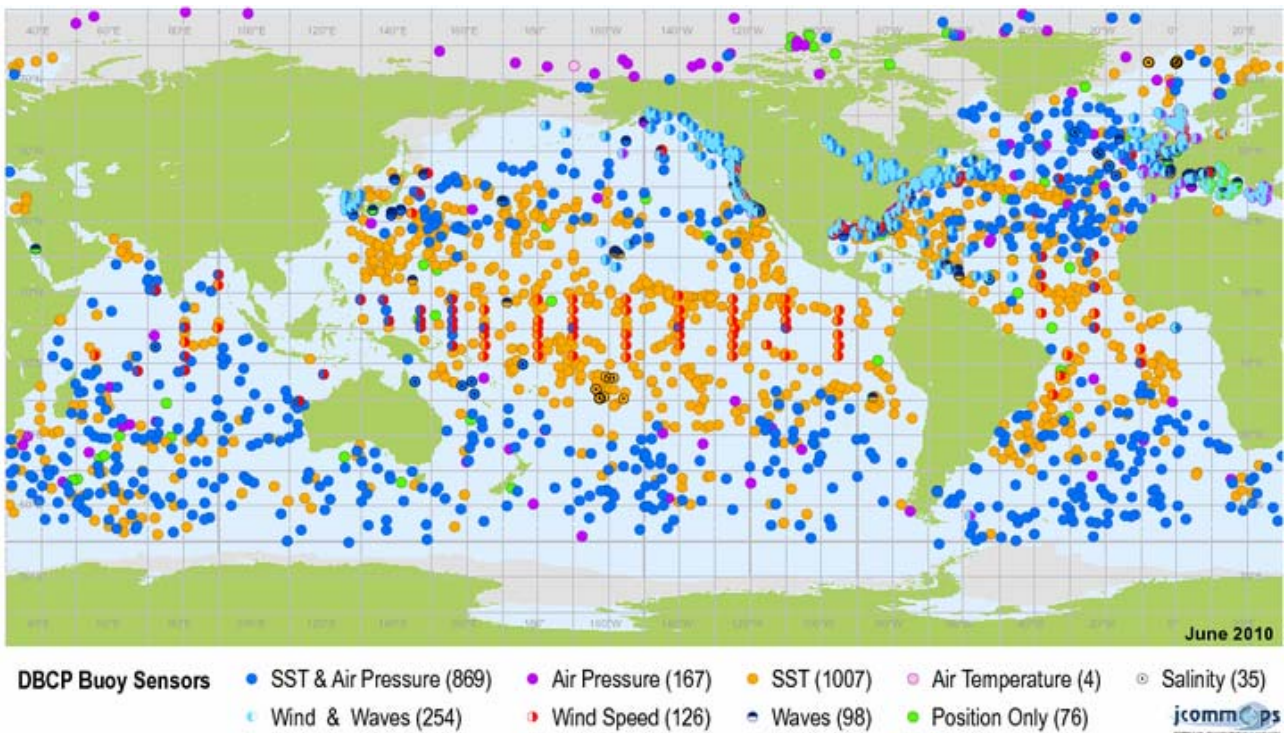


Map 1: DBCP monthly status by country for July 2010. (Data Buoys reporting on the GTS via Météo-France)

1 <http://dbcp.jcommops.org/network/status.html#main-bottom>



Map 2: DBCP Barometer Buoy monthly status by country for June 2010. (Data Buoys reporting Pressure measurements on the GTS via Météo-France)



Map 3: Drifting and moored buoys reporting SST, Air Pressure, Waves and Wind in June 2010. (Data Buoys reporting on the GTS via Météo-France)

5 Platforms in the Southern Ocean –Air Pressure

5.1 The Southern Ocean Buoy Programme, as part of the DBCP Implementation Strategy, aims to have 300 operational drifting buoys with barometers distributed across the Seas south of 40°S. Currently, the number of operational barometer buoys is around 195, which is the highest

July value ever. The total Number of buoys passing through the region at some point during the year was 314. It is clear from Map 3 (above) that a vast majority (80%) of buoys south of 40°S are recording air pressure.

- During the Inter-sessional period the number went up to a peak of 217 in March 2010 and stayed around that until May, which was approaching the goal of 300.

Month	Total number of Barometer buoys
AUG 2009	157
SEP 2009	150
OCT 2009	142
NOV 2009	145
DEC 2009	153
JAN 2010	166
FEB 2010	189
MAR 2010	217
APR 2010	210
MAY 2010	209
JUN 2010	202
JUL 2010	195

Table 5. Number of Barometer buoys in the Southern Ocean each month for the year to July 2010.

- The main participants were: NOAA / AOML, and University of Delaware United States of America; Bureau of Meteorology (BOM), Australia; Dunstaffnage Marine Laboratory, UK & Met Office, United Kingdom; Météo-France and CLS; New Zealand Meteorological Service; and South African Weather Service.

5.2 Plans from last year

- The deployment plans last year were for at least 180 buoys with Barometers (including 36 upgrades) to be deployed south of 40°S. The actual deployments totalled ~ 146 SVPBs, as notified to JCOMMOPS, and were as follows:
 - USA (Inc barometer upgrades) : 126
 - Australia: 54
 - UK: 7
 - New Zealand: 4
 - France: 2 (Argos-3 buoys)

5.3 Plans for next year

- Possible deployment ships are as follows:
 - SA Agulhas
 - Marion Dufresne
 - Marion and Gough Island supply vessels, Fishing vessels on Tristan Da Cunha.
 - British Antarctic Survey ships (LM Gould, E Shackleton)
 - Polarstern - this Antarctic summer season traveling from Bremerhaven to Wellington New Zealand, to Antarctica and back again
 - Along AX-18 (Buenos Aires-Cape Town) by NOAA,
 - Along IX-28 to Antarctica
 - NOAA research vessels

Country	Buoys purchased or planned	Additional upgrades	Total
Australia	5	5	10
France ^(*)	0	30	30
Germany	0	0	0
New Zealand	10		10
South Africa	18	25	43
UK	8	0	8 *
USA	~140	-	140
Total	188	60	241

Table 6: SOBP Proposed Commitments for the period August 2010 to July 2011
 * One buoy from last year

- The deployment plans for GDP are as follows, though the availability of deployment opportunities impact these plans during the year:
 - Southern Indian Ocean:
 - 30 SVPB's (along with Meteo France)
 - Southern Pacific Ocean:
 - 30 SVPB's (along with the MS NZ)
 - 15 SVPB's (aboard the LM Gould)
 - Southern Atlantic Ocean:
 - 10 SVPB's (along with Argentina Navy)
 - 25 SVPB's (along with SAWS)
 - Drake Passage:
 - 25-40 SVPB's (with NOAA Fisheries)

6 Map Products

6.1 Dynamic maps:

Monthly:

- Maintained monthly dynamic map: <http://w4.jcommops.org/WebSite/DBCP>
- Google Earth Monthly DBCP Map
<http://www.jcommops.org/FTPRoot/DBCP/status/DBCP.KMZ>
- JCOMMOPS Maintains a dynamic map of all JCOMM observing systems
<http://w4.jcommops.org/WebSite/JCOMM>

Daily:

- Maintained daily dynamic map (drifter trajectories):
http://w4.jcommops.org/WebSite/DBCP_RT
- Google Earth Daily DBCP MAP
http://www.jcommops.org/FTPRoot/DBCP/status/dbcp_daily.kmz

6.2 Static maps:

- DBCP

The DBCP maps produced by the Technical Coordinator were consolidated into one web page, for maps going back to the start of 2007. <http://www.icommops.org/dbcp/dbcpmaps.html>,

PDF and PNG Files are also accessible directly from <http://www.icommops.org/FTPRoot/DBCP/Maps/2010/>, which includes

- Buoy by Country
- Barometer Drifting Buoys by Country
- SST, Barometer, Wind and Wave Buoys (All Sensors)
- GTS Delays
- Iridium and Argos-3 Buoys by Country

- JCOMM

PDF and PNG Files are accessible directly from <http://www.icommops.org/FTPRoot/JCOMM/Maps/>

- All in situ marine observations:
http://wo.icommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/map?type=GTSM_FMT
- Sub-surface salinity and temperature profiles (now included in a single map):
http://wo.icommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/map?type=GTSM_SZ
- All Floats, Drifting and Moored Buoys:
<http://wo.icommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/map?type=BUOYS>
- All Floats, Drifting and Moored Buoys - Polar areas:
http://wo.icommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/map?type=BUOYS_POLES

- OceanSITES

PDF and PNG Files are also directly accessible from <http://www.icommops.org/FTPRoot/OceanSITES/maps/>, which includes:

- OceanSITES platforms sharing data on the GTS (Produced Monthly):
e.g. <http://www.icommops.org/FTPRoot/OceanSITES/maps/2010/201006-OCEANSITES-GTS.png>
- OceanSITES platforms sharing data on the Global Data Assembly Centres (Produced Quarterly):
e.g. <http://www.icommops.org/FTPRoot/OceanSITES/maps/2010/201005-OCEANSITES-GDAC-blueocean.png>
- All active and current sites:
http://www.icommops.org/FTPRoot/OceanSITES/maps/200908_CURRENT.pdf
- Google Earth File:
http://www.icommops.org/FTPRoot/OceanSITES/status/200908_oceansites_locations.kmz
- All planned and discontinued sites:
http://www.icommops.org/FTPRoot/OceanSITES/maps/200908_VISION.pdf

7 DBCP Brochure.

The DBCP two page brochure is available via the website.

8 DBCP Website.

The revised DBCP website was finalised and has been maintained during the inter-sessional period.

9 Documents

The Technical coordinator drafted and finalised several documents on behalf of the Panel:

- A new document was compiled, with inputs from Panel members, on Sea Surface Salinity Quality Control processes for potential use on Data Buoy observations. The document aims to provide processes and approaches to real-time and delayed mode quality control of Sea Surface Salinity data, for review by the DBCP community. It brings together the best practice and suggested approaches to quality controlling salinity data from various programmes and for several different types of observing platforms. Once the DBCP has ascertained which processes apply to drifting and moored buoys, the appropriate tests and procedures can be added to DBCP Technical documents which already exist.
- Working with the JCOMM Task Team on table driven code forms, to develop documents for the WMO Inter Program Expert Team on Data Representation and Codes (IPET/DR&C) concerning BUFR templates, as well as the updates to BUFR code tables and Master Table 10.
- Final draft of the DBCP Technical Document 37 - entitled Guide to buoy data Quality Control tests to perform in real time by a GTS data processing Centre. Incorporated inputs from DBCP Task Teams and finalized the document. It aims to summarise the Quality Control processes that need to be considered and followed by centers planning to distribute drifting and moored buoy measurements, in real time, on the Global Telecommunications System (GTS) of WMO. This document is submitted to the Panel for final review.
- Draft document defining requirements and possible solutions for a cooperation between GHRSSST (Diurnal Variability Working Group) and the DBCP for discussion during the GHRSSST Scientific Steering Committee meeting in June (Attended by David Meldrum).
- Meeting reports from OceanSITES meetings.

10 DBCP action groups

- The TC liaised with DBCP Action Group coordinators and replied to questions from them, prepared DBCP reports for AG meetings (to be presented by the DBCP representative at the meeting) and attended meetings on behalf of the DBCP;
- Attended Action Group meetings, i.e., OceanSITES, IBPIO and NPDBAP. Provided status reports to other action group meetings, ISABP and E-SURFMAR DB TAG.

11 Q.C. Guidelines

- Created new users in the web application for entry of Quality feedback, at <http://wo.jcommops.org/cgi-bin/WebObjects/QCRelay>.
- The QIR mechanism has been well utilised this year with over 200 messages sent via the online tool and several more direct to the mailing list dbcp-qc@jcommops.org.
- The quality of buoy data, air pressure and sea surface temperature remained very good this year. The RMS values for air pressure on both drifters and moorings increased significantly in the last year. Details are presented in Appendix B.

12 Buoy Monitoring Statistics

- These statistics, provided by the U.K. Met Office, NCEP, Météo-France, Australian BOM, ECMWF and Canada (locations) were uploaded when received into the JCOMMOPS database. These are queried using the tools provided on the following websites:

<http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/statsSeries?prog=DBCP>
<http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/histogram?prog=DBCP>.

- Meteo France has updated its web page showing QC information, this is available at http://surfmar.meteo.fr/wikisurf/index.php/QC_Tools

13 WMO / Argos number cross-reference list

- A monthly list of active buoy WMO numbers is available via JCOMMOPS through a dynamic web page which permits querying the JCOMMOPS database (<http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/wmo>); and
- a file updated daily which can be downloaded from the JCOMMOPS ftp site. http://www.jcommops.org/FTPRoot/JCOMMOPS/GTS/wmo/wmo_list.txt. Or http://www.jcommops.org/FTPRoot/JCOMMOPS/GTS/wmo/wmo_list_reduced.txt (*with only one contact per buoy*)
- In line with the text file created for the Iridium Pilot project (available from <http://www.jcommops.org/dbcp/iridium-pp/>) the TC created a procedure to export a text file of Argos-3 buoys deployed and active. (http://www.jcommops.org/FTPRoot/DBCP/status/argos3-pp/buoys_argos3pp.csv)

14 XML files containing JCOMMOPS database content

- The Daily Update is available from, either <ftp://ftp.jcommops.org/XML/> OR <http://www.jcommops.org/FTPRoot/XML/>
- The Monthly, Full extract of the whole metadata database for buoys is produced on the first of each month and is available from: either <ftp://ftp.jcommops.org/XML/FULL/> OR <http://www.jcommops.org/FTPRoot/XML/FULL/>
- There are CSV files also <<http://www.jcommops.org/FTPRoot/CSV/>> (semi-colon delimited text) in the same place.

15 Future Tasks

15.1 The Panel is reminded that Hester Viola will finish at the end of September 2010.

15.2 Please accept a big thank you, for your support and excellent teamwork over the last four and a half years. It is pleasing that the recruitment of the Technical Coordinator position recently commenced and that the post will be a permanent UNESCO post, meaning greater permanency and better conditions for the TC plus more stability for the Panel. Further information will be given on the recruitment process in agenda item 11.

15.3 In addition to the workplan that already exists, routine tasks, and support for Action Groups and Task Teams, plus working on OceanSITES, the TC suggests the following high priority tasks for the new Technical Coordinator:

- Working with JCOMMOPS colleagues to improve the design and functionality of the JCOMMOPS website and other web products such as
 - the QIR tool, to integrate all of JCOMMOPS QC feedback into one web page
 - Adapting the Google Earth products created for the Argo program to present Buoy metadata and trajectories for efficiently
- Adding extra metadata fields to GTS Data Flows, continue to assist with JCOMM-wide reviews of BUFR templates along with the JCOMM Task Team on Table Driven Codes.
 - Working with the JCOMM Task Team on Table Driven Codes and Panel members to incorporate more Buoy Metadata into the BUFR Template for Drifting and Moored

buoys.

- Designing new products to track deployment plans and assist with creating new deployment opportunities within JCOMM
- Finalise integration of OceanSITES data/metadata into JCOMMOPS database
 - Ensure that routine network status can be reported in maps (with monthly, quarterly and live Google Earth views) and web products in coordination with the Global data assembly centres (GDACs)

16 Specific, non-routine tasks undertaken during the inter-sessional period by the TC DBCP (listed chronologically)

16.1 DBCP Technical Coordinator – Tasks undertaken August 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Began reviewing action Items from DBCP-24.
- Wrote documents for DBCP-25.
- Sent out letters to POGO, JCOMM and OOPC concerning the new OceanSITES Executive Committee.
- Prepared documents for the OceanSITES 2009.
- Assisted CLS in finding Buoys to display during the Argos 30 year celebration

Database & Metadata

- Loaded NDBC metadata into the JCOMMOPS database.
- Loaded buoy monitoring statistics and checked statistics for all countries over the year.
- Documented Google Earth (and eventually Google Ocean) metadata requirements for DBCP and OceanSITES and the sources of metadata from within the JCOMMOPS database.

Data Sharing (Quality control and data timeliness) & GTS

- Reviewed the BUFR template for XBT with comments from the Expert Team on Data Representation and Codes. Uploaded newest version to the JCOMM website.
- Provided details to South Africa (I Hunter) about how battery voltage is captured in GTS messages and passed his concerns onto the Task Team on Data Management.
- Worked with the Expert Team on Data Representation and Codes (E Cervena) and Met Éireann to begin implementing the BUFR template for moored buoys. Some modifications may be needed (which can occur when a more general review of metadata requirements for moorings in undertaken later in 2009)

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database
 - Sent a request to project participants about the key success factors for the Pilot Project in order to prioritise the analysis performed in 2009-10. Compiled responses into a document.
- Argos 3
- Waves

Documentation & Information Exchange

- Finalised new pages into www.jcomm.info for [OPA](#), [DBCP](#) and [OceanSITES](#).
- Finalised a draft of the new DBCP website http://www.jcommops.org/dbcp/dbcp_new and sent link to the Executive board for comment.
- Compiled a draft Technical Document (DBCP #37?) entitled "Guide To Data Quality Control Tests To Perform By A Gts Processing Center"
- Created update to DBCP Technical Document #3 - "Guide to Data Collection and Location Services Using Argos" as requested by the DBCP to WMO – reviewed by CLS and the Panel.
- Placed Australian deployment plans [online](#).
- Finalised updates to the SVPB design manual (DBCP Technical Document #4) to add some information about Iridium Message Formats (now at Version 2.2)
- Provided reminders about existing deployment opportunities and the Barometer Upgrade scheme.

Task Team & Action Group support

- Sought inputs on the Southern Ocean Buoy program for 2009-10
- Provided inputs to Task Team reports for DBCP-25.
- Sent the DM Cookbook (The Oceanographer's and Marine Meteorologist's Cookbook for Submitting Data in Real Time and In Delayed Mode) to Task Team on Data Management for interest and feedback.
- OceanSITES
 - Sent out letters to POGO, JCOMM and OOPC concerning the new OceanSITES Executive Committee
 - Contacted several DACs to monitor data flow and ensure metadata provision with new datasets.
 - Interacted with representatives from both GDACs to resolve some file management and naming issues.
 - Developed letters of invitation for several attendees for financial support or visas.
 - Developed documents for the meeting in September
 - Finalised agenda for the meetings and entered information on the meeting website.
 - Completed inputs to the promotion evaluation of Nancy Galbraith for WHOI (R Weller)
 - Updated status documents: Compiled the documents received into Ocean Basin documents and published them on the website www.oceansites.org/network.
 - see: <http://www.jcommops.org/FTPRoot/OceanSITES/maps/> for current status and vision maps.

16.2 DBCP Technical Coordinator – Tasks undertaken September 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Produced a document for the Expert Team on Data Representation and Codes.([IPETDRC agenda item 3.3-2](#) which was held 15-17 September, 2009) and a Presentation for E Charpentier to use for the meeting.
- Reviewed Action Items from DBCP-24 and provided up-to-date status for DBCP-25 meeting documents
- Finalised documents for DBCP-25. Provided an abstract for the Science and Technology workshop about Metadata Management (deferred until 2010). Uploaded background documents onto meeting website.

- Prepared presentations for DBCP-25.
- Attended DBCP-25. (see Mission report [here](#)) and IBPIO, NPDBAP and other meetings
-
- OceanSITES meetings. Venice, Italy. (see Mission report [here](#))
 - Attended and presented activities of the Project Office and some data management issues to and organised some aspects of the meeting of the OceanSITES Steering and Data Management Teams.
 - Compiled action plan for the both teams. Entered presentations onto <http://www.jcomm.info/oceansites2009>
 - Attended and took minutes for the Executive Committee meeting.
- Attended the OceanObs 09 conference, Venice Italy. (see Mission report [here](#))
 - Attended a side-meeting about the POGO research cruise database, then met with Steve Diggs about cruise data held at Scripps
 - Attended side-meeting about arrangements for JCOMM III.

Database & Metadata

- Loaded NDBC metadata into the JCOMMOPS database.
- Reviewed document compiled by Bob Keeley and Scott Woodruff for the revisions to the VOS template.
- Reviewed the message format proposed for SHIP AIS in reference to the revisions required to the VOS BUFR template.

Data Sharing (Quality control and data timeliness) & GTS

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database
 - Provided details about WMO number allocation, and GTS dissemination to JouBeh for sharing IABP Iridium data.
- Argos 3
- Waves

Documentation & Information Exchange

- Finalised new pages on www.jcomm.info for [OPA](#), [DBCP](#) and [OceanSITES](#).
- Finalised a draft of the new DBCP website http://www.jcommops.org/dbcp/dbcp_new, requested comments and review by Panel members.
- Provided input to JCOMMIII background document 6.4 on JCOMMOPS and network monitoring.
- Began drafting position description for TC post at UNESCO.
- Inputted to final draft of the OceanObs Community Whitepaper on metadata. Provided inputs for OceanObs plenary about future data management (S Hankin)
- Uploaded documents for the JTA meeting
- Contacted the operations manager for the DART Network (C Kohler at NDBC) about upcoming cruises. No information is available now, but will be by the end of the year for 2010.
- Update the [DBCP Picasa photo album](#) with caption information provided by Meteo France.

Task Team & Action Group support

- OceanSITES

- Uploaded meeting documents onto www.jcomm.info
- Provided updated logistical information and sent reminders about the meeting, to meeting attendees
- Contacted people who were responsible for action items from the 2008 meeting to request a status update from them. Updated the action plan from 2008 in preparation for the meeting and placed it on Google Documents for participants to share and to update directly.
- Reviewed the website and requested several updates
- Finalised notes for OceanSITES Data Management Team meeting.
- Requested documentation from new sites in order to include them on the status maps before OceanObs 09.
- Finalized maps for the OceanObs Poster for OceanSITES.
- Created a [Picasa photo album for OceanSITES](#) image sharing
- Updated status documents: Compiled the documents received into Ocean Basin documents and published them on the website.
 - Updated into a spreadsheet for review by all OceanSITES participants and PIs. The list is available as an Excel Sheet, as maps (PDF and PNG) and in Google Earth format:
http://www.jcommops.org/FTPRoot/OceanSITES/documents/oceansites_station_data_20090803.xls.
 - Prepared Draft maps showing those active sites (with some planned sites and some discontinued).
 1. **PDF:**
http://www.jcommops.org/FTPRoot/OceanSITES/maps/200908_CURRENT.pdf
http://www.jcommops.org/FTPRoot/OceanSITES/maps/200908_VISION.pdf
 2. **PNG:**
http://www.jcommops.org/FTPRoot/OceanSITES/maps/200908_CURRENT.png
http://www.jcommops.org/FTPRoot/OceanSITES/maps/200908_VISION.png
 3. **Google Earth (.kmz):**
http://www.jcommops.org/FTPRoot/OceanSITES/status/200908_oceansites_locations.kmz

16.3 DBCP Technical Coordinator – Tasks undertaken October 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Reviewed Action Items from DBCP-25 and OceanSITES meetings
- Preparation for JCOMM III
 - Drafted presentation for Side-meeting about JCOMMOPS
 - provided input (maps and charts) to other various other presentations.
- Reviewed IPET DRC revision of document

Database & Metadata

- Loaded NDBC metadata into the JCOMMOPS database.
- Improved the daily Google Earth creation scripts to speed up the queries behind.
- Improved processing speed on creation of DBCP status files (monthly and daily)
- Discussed deployment information management with Environment Canada (C Marshall and C Gallage)

- Updated metadata for all RAMA moorings
- Met with CLS about upgrading and optimizing the JCOMMOPS database in future.

Data Sharing (Quality control and data timeliness) & GTS

- Followed up with WMO (A Shimazaki) about approval of new Instrument type codes for marine mammals and Argo platforms.
- Provided details to Environment Canada on the data coming from Ocean Station PAPA

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database.
- Argos 3
 - Provided links from the DBCP website to the Pilot project presentation to DBCP-25 and the document. Discussed with CLS about having a project website available.
- Waves
 - Provided inputs to the PP-WET for the website on www.jcomm.info/wet.

Documentation & Information Exchange

- Requested that the DBCP Panel members review the draft website. Completed the final revisions to the new DBCP website based on feedback and published the page to the url <http://www.jcommops.org/dbcp/>.
- Published the new version of the website on www.jcommops.org/dbcp/.
 - With a few notes:
 1. The draft URL www.jcommops.org/dbcp/dbcp_new/ will now redirect to www.jcommops.org/dbcp/
 2. The draft files under www.jcommops.org/dbcp/dbcp_new will be deleted in coming days, so please do not refer to those in future.
 3. The search engine may continue to refer to the draft site (www.jcommops.org/dbcp/dbcp_new) for a few weeks until it updates automatically with the location of the current web pages.
 4. Many sections of the site will continue to evolve and any additional information can easily be added, so please let me know if you need additions or modifications.
- Finalised the OceanObs09 CWP for JCOMMOPS with M Belbeoch
- Drafted post description for Temporary Post creation at UNESCO for the TC position.
- Uploaded the Korean version of the DBCP anti-vandalism leaflet to the [DBCP website](#)
- Provided a document to CLS about the observing systems present in the Russian region for use by the Russian representative in a presentation to the government, encouraging the development of more ocean observations and international cooperation.
- Reviewed all DBCP and OceanSITES web pages to find broken links (using the website www.deadlinks.com)

Task Team & Action Group support

- OceanSITES
 - Continued to plan the Data Model to store all OceanSITES metadata in the JCOMMOPS database.
 - Drafted the report for the OceanSITES Steering Team meeting including all contact details of participants and action plans.
 - Prepared Executive committee minutes and sent out for review. Added Executive

- Committee members to the www.jcomm.info groups
- Documented the process for approving and adopting a new site in OceanSITES and sent out for review
 - Sent out request to all members asking if there is any documentation on Quality Control or Assurance for Biogeochemical datasets.
 - Reviewed the Data Management Team meeting report draft and provided comments.
 - Contacted INCOIS DAC about file naming conventions
 - Updated status documents:
 - Updated into a spreadsheet with new sites
http://www.icommops.org/FTPRoot/OceanSITES/documents/oceansites_station_data_2009.xls
 - Updated maps on <http://www.icommops.org/FTPRoot/OceanSITES/maps/>
 - Prepared monthly map showing those sites which are sharing data on the GTS.
<http://www.jcommops.org/FTPRoot/OceanSITES/maps/2009/>

16.4 DBCP Technical Coordinator – Tasks undertaken November 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.icommops.org/DBCP/dbcpmaps.html>
- Reviewed Action Items from DBCP-25 and OceanSITES meetings
- Attendance at JCOMM III, Marrakech, Morocco. Mission report [here](#)
 - Drafted presentation for Side-meeting about JCOMMOPS
 - Participated in a teleconference with the new Executive Secretary of IOC
- Reviewed IPET DRC revision of document with Bob Keeley, E Charpentier and Scott Woodruff and discussed the BUFR template for VOS. Discussed the future tasks for BUFR template developments. Compiled notes on decisions made and sent them to the TT on Table driven codes.
- Attended the 2nd workshop on the use of OGC standards in meteorology and oceanography (Toulouse) details: <http://www.meteo.fr/cic/meetings/gis-ogc/>
- Met with T Habermann, NOAA/NGDC about approaches to metadata sharing from JCOMMOPS using ISO standards.
- Provided travel plans 2010 to the DBCP executive board for comment.

Database & Metadata

- Compiled a list of useful and available metadata about from various information sources for Cruise information and deployment opportunities. Reviewed the list with M Belbeoch and sent to S Diggs (CCHDO, SIO) for comment.
- Participated in a brainstorm with JCOMMOPS staff to review the database model to better manage metadata and store information in a more integrated way, to support the new website.
- Discussions with Derrick Snowden about NOAA and OSMC metadata management and plans for the OSMC tasks in the coming year.

Data Sharing (Quality control and data timeliness) & GTS

- Contacted several Russian organisations to see if they are operating drifting or ice buoys at the moment or if there are any plans to do so in future. Response from AARI, but no buoys.
- Provided details of data sharing on the GTS to Norway
- Assisted IFREMER with various queries about WMO Ids
- Reviewed final XBT template and discussed the approach to updating it with the Chair of IPET DRC (S Elliot)

- Provided details on DBCP technical coordination activities for 2009 for NOAA/UCAR.
- Sent information about skills and a resume to IOC for the new Executive Secretary.

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database.
 - Reviewed New iridium format proposed by Meteo France
 - Contacted Navocean about the possibility in the next year or so to deploy drifting buoys from the air, particularly for the Iridium buoys
- Argos 3
 - Entered deployment metadata entered into database
 - Created a procedure to export a text file of Argos-3 buoys deployed and active.
(http://www.jcommops.org/FTPRoot/DBCP/status/argos3-pp/buoys_argos3pp.csv)

Documentation & Information Exchange

- Sent out the story about Drifter 14550 which travelled from the Indian Ocean to the Cape of South Africa and was re-deployed.
- Provided feedback on the website www.iceplan.org and requested additional information about various cruises in 2010-11 from the web master.
- Sent out information about a cruise (Walther Herwig, March 2010) in the north atlantic to the GDP and E-SURFMAR

Task Team & Action Group support

- Contacted GDP and SAWS about possibility of using the deployment opportunities offered by Kenya.
- OceanSITES
 - Continued to plan the Data Model to store all OceanSITES metadata in the JCOMMOPS database.
 - Updated details of contacts in OceanSITES Steering Team including all contact details of PIs and operators. Added those people to the email distribution list.
 - Updated contact details for the Executive committee on www.jcomm.info groups, and the mailing list.
 - Sent out reminder to all members and other external mailing lists asking if there is any documentation on Quality Control or Assurance for Biogeochemical datasets.
 - Sent out details of positions open at SIO
 - Contacted DACs not providing data to see if there had been any progress. Provided a list of key contacts for each DAC to the DMT co-chairs.

16.5 DBCP Technical Coordinator – Tasks undertaken December 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Performance assessment interview with K Alverson. Entered self assessment and finalized review.
- Travel plans completed for 2010
- Attended the Advanced Research Workshop on the Operational System in the Caspian sea for protection of Infrastructure and the Environment in Ferrara, Italy, where I presented on behalf of WMO. [Mission Report here](#).

Database & Metadata

- Worked with JCOMMOPS staff on new Database design incorporating Cruise information from

Seadatanet (POGO) and CCHDO/Scripps (Repeat Hydrography)

- Began to discuss and document how JCOMMOPS could assist and be assisted by the Satellite (HRSST) and modeling communities via QC feedback mechanisms and how DBCP could put forward a proposal for funding pilot drifters designed to suit Satellite data needs.
- Contacted Env. Canada (C Gallage) about providing metadata for 4 drifting buoys which were unidentified – entered deployment details as provided.
- Discussed Cruise metadata requirements with CCHDO/Scripps (S Diggs) and discussed the best ways to cooperate between the different metadata providers – to get deployment opportunities for JCOMMOPS. Compiled a Data flow diagram and a summary of how information is stored currently in JCOMMOPS - focused on the metadata providers, users and proposed interactions between each database.

Data Sharing (Quality control and data timeliness) & GTS

- Provided inputs to WMO on additional entries for the Code tables concerning “Buoy Type” and “Location System” used in GTS messages (based on feedback from the JCOMM Task Team on Table driven Codes)
- Provided inputs to the BUFR VOS Template being developed by the JCOMM Task Team on Table driven Codes
- Contacted WMO about an error in the BUFR Template for XBT data and the need to update the version online. Uploaded current versions to the JCOMM website.
- Worked with South African Weather Service (S Mkatshwa) on WMO id allocation rules.
- Noticed an issue with Observations in the NOAA OSMC database and sent a query to the database administrator about it – there were drifting and moored buoys listed as reporting precipitation in the Med and Black Seas (in error)
- Reviewed a new product from ISDM (based on request from B Bradshaw) showing data last month, and provided feedback. <http://isdms.gc.ca/isdms-gdsi/drib-bder/MonthlyKML/MonthlyKML.htm>

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database.
 - Sent out deployment notification for UKMO and IABP, and sent instructions to SAWS and IABP/JMA on what deployment information is needed for the project.
 - Published new iridium format proposed by Meteo France. <http://www.jcommops.org/dbcp/iridium-pp/findings>. Put links to all current formats on the front page.
 - Highlighted a potential problem with Iridium buoy transmission delays. Metocean and Meteo France provided feedback and information about the problem – which were one offs.
 - Provided details to the Project Team on the analyses of importance to the project participants in beginning the Assessment of the project in 2010.

Documentation & Information Exchange

- Provided inputs to the CLS Argos Forum (Argos 30th edition)
- Sent information to DBCP members about the GO-SHIP program, as it lists all planned cruises on its new website: <http://www.go-ship.org/CruisePlans.html>. A map of the cruises which are regularly undertaken is [here](#)
e.g. The US Repeat Hydrography program will complete the Southern Ocean S04P section in 2011. This will extend from McMurdo to Punta Arenas along 67° S with southward (Pacific) extensions along P14, P15, P16, P18. See map (pdf 120 KB attached). This should provide more deployment opportunities in future.

- Finalised documents for OceanSITES QC best practices - <http://www.icommops.org/dbcp/community/standards#QC> for the OceanSITES Working Group on Quality Control of Biogeochemical data
- Sent details of the Advanced Research Workshop on the Operational System in the Caspian sea for protection of Infrastructure and the Environment in Ferrara to WMO and IOC.
- Compiled list of prioritized tasks to complete for 2009-10 based on existing list and outcomes of the DBCP-25 session. Forwarded these to the DBCP Executive for review and comment.

Task Team & Action Group support

- OceanSITES
 - Contacted DACs not providing data to see if there had been any progress. Provided a list of key contacts for each DAC to the DMT co-chairs.
 - Checked on financial commitments and invoicing for OceanSITES had been properly reflected in the DBCP budgets.
 - Finalised documents for OceanSITES QC best practices - <http://www.icommops.org/dbcp/community/standards#QC> on behalf of the OceanSITES Working Group on Quality Control of Biogeochemical data
 - Participated in a teleconference for the Data Management Team.
 - Contacted Scripps (Karen Baker) about data management and documentation for site.
 - Sent out requests for documentation from many PIs who expressed a desire to be part of OceanSITES. Provided a template for the documentation needed initially. (CalCOFI, Faroes Current Meter, HAUSGARTEN etc).

16.6 DBCP Technical Coordinator – Tasks undertaken January 2010

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.icommops.org/DBCP/dbcpmaps.html>
- Reviewed all action items from DBCP and OceanSITES meetings
- Met with Yves Desaubies about JCOMMOPS and tasks for his work as Scientific Adviser

Database & Metadata

- Requested information from CLS Japan about CO2 buoys and asked if their data could be shared on the GTS. Yatomi will contact the JAMSTEC PI to investigate.

Data Sharing (Quality control and data timeliness) & GTS

- Began reviewing the list of additional metadata to be included in the Data Buoy data streams via BUFR specifically how to report C-MAN buoys which currently report in TESAC format
- Added a link on the DBCP website under data - to the tool "iQuam - quality monitor for in situ sea surface temperature", this is an online monitoring tool developed at NESDIS/STAR the link is: <http://www.star.nesdis.noaa.gov/sod/sst/iquam/>

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database.
 - Sent out deployment notification for UKMO and IABP, and sent instructions to SAWS and IABP/JMA on what deployment information is needed for the project.
 - Published revised iridium formats proposed by Meteo France.
<http://www.icommops.org/dbcp/iridium-pp/findings>.

- Provided details to the Project Team on the analyses of importance to the project participants in beginning the Assessment of the project in 2010.

Documentation & Information Exchange

- Provided inputs to the GOOS project office for a display for Oceanology 2010 and the GSSC in London in march.
- Updated and reviewed list of prioritized tasks to complete for [2009-10](#) based on existing list and outcomes of the DBCP-25 session. Forwarded these to the DBCP Executive for review and comment. Finalised the work plan document with Actions and Recommendations from the last meeting for the final report.
- Put together information for the DBCP Annual report 2009
- Worked with Shaun Dolk and David Meldrum to investigate if extra drifters could be provided at Cape Town, to deploy from the Earnest Shackleton.
- Reviewed content about JCOMMOPS for the latest JCOMM newsletter
- Provided some information about Drifters in the North Pacific for CNES Education Program (Danielle De Staerke) for student to Adopt drifters.
-

Task Team & Action Group support

- Reviewed the newest version of the Metadata requirements for Moored Buoys to discuss with the Task Team on Moored Buoys.
- OceanSITES
 - Reminded PIs who expressed a desire to be part of OceanSITES. to return filled in template for the documentation needed initially. Collated those received in preparation for review by the Steering Team.
 - Made some changes made to the **Data Policy** and **Data Access** documents based on a decision by the Executive Board to require all raw data to be shared ASAP from telemetered sites. Sent out the new documents for review by the Steering and Data Management Teams.
 - Participated in the Data Management Team (DMT) web meeting about file naming conventions.
 - Provided DMT meeting 2009 report to the website.
 - Prepared letters of invitation to the DMT meeting in Paris
 - Began organizing the venue for the DMT meeting in Paris in March 2010, to be held at IOC.

16.7 DBCP Technical Coordinator – Tasks undertaken February 2010

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Reviewed all action items from OceanSITES meetings
- Finalised inputs to the DBCP annual report
- Set goals for UNESCO performance management (2010-11)

Data Sharing (Quality control and data timeliness) & GTS

- Continued reviewing the list of additional metadata to be included in the Data Buoy data streams via BUFR, for presentation to the JCOMM Task Team on Table Driven Code Forms - including
 - extended (7 digit) WMO IDs for buoys
 - Meta-t category 1 and 2 requirements
 - JCOMMOPS metadata requirements
 - how to report C-MAN buoys which currently report in TESAC format and other moorings using BATHY

- DBCP Task Team on Moored Buoy requirements (Meta-T category 1)
- OceanSITES requirements
- Feedback from UK on metadata needed for Climate applications (Ingleby and Kent/Berry) and ETMC comments (Woodruff)
- Assisted the Argo TC with finding bulletin header numbers for Argo BUFR messages in the Manual on the GTS
- Reviewed the proposals as approved by the IPET DR&C for presentation to the CBS (Code tables 0 02 149 etc)
- Provided information about Wave measurements made by DBCP buoys globally for Olaf Lautenschlaeger who was seeking data in the Tanzania / Zanzibar Channel next to Bagamoyo
- Contacted PMEL (P Freitag) about how data from the new FLEX moorings (using Iridium) will be shared on the GTS and offered to help find a solution.
-

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database.
 - Worked with SAWS on deployment information for 2 buoys.

Documentation & Information Exchange

- Sent out requests for deployment opportunity and cruise information to DBCP and to NDBC (for DART cruises)

Task Team & Action Group support

- Added to the newest version of the Metadata requirements for Moored Buoys to discuss with the Task Team on Moored Buoys based on requirements of PMEL and UK MO (from discussions on BUFR templates).
- OceanSITES
 - Contacted University of Hawaii (R Lukas) about possibility of sharing data from HOT sites and acting as a DAC for OceanSITES
 - Reminded PIs who expressed a desire to be part of OceanSITES. to return filled in template for the documentation needed initially.
 - Reviewed outcomes of February virtual meeting of the DMT and provided feedback.
 - Managed attendees for DMT meeting in Paris in March 2010.

16.8 DBCP Technical Coordinator – Tasks undertaken March 2010

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Mission to Paris for
 - [IMDIS](#) and
 - [OceanSITES Data Management Team](#) meetings. Chaired sessions in the absence of Bill Burnett.
 - Also met with B Lee and W Watson-Wright : [report here](#).
- Collated status for actions from the 2009 OceanSITES Meetings. Organized agenda, registration and web site for the OceanSITES Data Management Team meeting. Uploaded preparatory documents.
- Participated by telephone, in OceanSITES Teleconference and also in IOC general staff meeting.
- Wrote a DBCP status document for the Argo Steering Team meeting.

- Began contacting DBCP members about actions allocated to them to see if assistance was needed in completing the actions.

Database & Metadata

- Reviewed how OceanSITES metadata could be included in the BUFR template for Buoy data.
- Updated WMO ID metadata in the JCOMMOPS database for German buoys which had changed from CALLsigns (BSH001, BSH002) to buoy WMO codes (66021, 66022 etc)

Data Sharing (Quality control and data timeliness) & GTS

- Requested that the statistics provided by Meteo France on the GTS data they receive, include WAVEOB messages. Realised that some Wave buoy messages were missing from the data received at Meteo France (E.g. Australian wave buoys) so contacted the GTS focal points (D Paulais, J Anquetil, K Wong) to see if that could be remedied.
- Review of BUFR template for buoys
 - With respect to wave information, contact Jean Bidlot and others about concerns expressed about the definition of wave period of (including Swell and Wind waves) and Average Wave Period. The items of concern were : 022011 (Period of waves), 022012 (Period of wind waves), 022013 (Period of swell waves) which are in BUOY and SHIP BUFR templates and 022074 (Average wave period) which is in the BUOY and WAVEOB templates. Requested clarification of the definitions and observational requirements.
- Provided information to the Israeli Met Service about GTS data and referred to WMO.
- Review of BUFR Template for VOS with Bob Keeley
 - Included elements for comments from UKMO
- Sent finalized version of the BUFR template for XBT data to the JCOMM TDCF team for review WMO (A Shimazaki) Version 9.2. see:
http://www.jcomm.info/index.php?option=com_oe&task=viewDoclistRecord&doclistID=76
- Sent information from PMEL to CLS America to see if they could assist in inserting data from Iridium TAO moorings being tested (FLEX system instead of ATLAS) asking for options for telecommunications and GTS processing costs.

Pilot Projects

- Iridium PP
 - Reviewed and Commented on an Article by JouBeh Technologies entitled “End-to-End Processing and Transmission of Environment Data to the Global Telecommunications System using the Iridium Satellite System.” (for submission to the Canadian Meteorological and Oceanography Society Bulletin)
 - Entered deployment details into JCOMMOPS database.
- Meta-T
 - Contacted Lin Shao Hua , NMDIS China, as the website address <http://www.odas.org.cn/> was not working.

Documentation & Information Exchange

- Sent out requests for deployment opportunity and cruise information to DBCP and to NDBC (for DART cruises)
- Provided inputs to IOC for the DBCP annual report for 2009
- Provided estimates of costs of various types of buoys (purchase and maintenance) and ship time to WMO (E Charpentier) for WIO Workshop.
- Sent information about Aurora Australis cruise plans to GDP (and DBCP) with a google earth map showing the region it is transiting.

Task Team & Action Group support

- Completed a review of metadata requirements by DBCP Task Team on Moored Buoys and sent out revised version for comment
- Provided written report for the ISABP meeting in Buenos Aires (Will not attend as it is only one day of meetings)
- OceanSITES
 - Data management Team meeting :
 - Drafted meeting report from the Data Management Team meeting on behalf of the Co-chairs who could not attend
 - Met with Derrick Snowden to plan the agenda for the meeting.
 - Prepared presentations on behalf of the Co-chairs who could not attend.
 - Finalised action list from the Data Management Team meeting
 - Prepared Project Office status report for the meeting.
 - Collected status reports and responses on progress of data sets made available from OceanSITES DACs in preparation for the Data Management Team meeting.
 - Finalised the Steering Team report from 2009, based on feedback received from the Co-chairs.
 - Sent some images and graphics to Wendy Watson Wright for a presentation on ocean observations.
 - Followed up with IFREMER on potential financial contributions for the OceanSITES Project Office.
 - Added some new planned sites to the site list.

16.9 DBCP Technical Coordinator – Tasks undertaken April 2010

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Reviewed action items from DBCP-25 and followed up with individuals
- Wrote draft of meeting report for OceanSITES DMT meeting
- Compiled action item list for the OceanSITES DMT meeting

Database & Metadata

- Deployment opportunities – SCOR working group proposal for Steve Diggs
- Provided maps and statistics to Kara Miller (NOAA) about DBCP and OceanSITES buoys, for a review by the NOAA Pacific International Regional Office (PIRO) in Honolulu
- Continued review of the Moored Buoy metadata list as compiled for the Task Team on Moored buoys
 - Reformatted the list into an excel file for ease of use. Contacted the team with a query about additional fields to be added (for sampling period/time of each obs)
- Reviewed metadata records under construction by NOAA and provided feedback on completeness and <http://www.ngdc.noaa.gov/metadata/published/19115/OCO/1list.html>. Offered to create a similar record for all DBCP buoys and OceanSITES as a whole.
- Assisted M Belbeoch in preparing metadata files to load into the JCOMMOPS database, for the SOOP Annual Line Sampling report (2009).

Data Sharing (Quality control and data timeliness) & GTS

- Assisted Norway with sourcing WMO IDs and requested deployment metadata for the buoys
- Reviewed the latest version of the BUFR template for VOS and made modifications.
 - Worked with Bob Keeley on how to make certain elements of the template optional.
 - Sent a query to the Chair of the WMO IPET Expert Team on Data Representation and Codes to ask how best to make elements of the template optional.
- Worked with Cubic I (CLS Japan) and JAMSTEC to get WMO ids for 2 CO2 buoys to send data to the GTS.

Pilot Projects

- Iridium PP
 - Began to set up a download (POP) for all mail received in the PP for use in analysis phase, but encountered technical difficulties at gmail end. Resolved later by Google helpdesk.
- Argos 3
 - Entered metadata about buoys as provided by CLS
- Waves
- High Resolution SST
 - Began to develop a document for the next GHRSSST Scientific Steering Team Meeting in June (Peru) consulting with all involved.

Documentation & Information Exchange

- NDBC DART cruise information sent out to the DBCP and Argo, including a google earth file of the proposed track.
- Provided DBCP with details about a Spanish round the world cruise Malaspina 2010
- Worked with S Diggs to draft a proposal to SCOR to set up a working group aiming at acquiring and coordinating research vessel cruise metadata, especially for upcoming cruises. <http://www.scor-int.org/wkgrpinfo.htm>.
- Prepared a summary and approximate page count of archives of for 29 different documents to *possibly* be scanned (13 DBCP Session/Meeting Reports, 2 Additional Meeting reports, 13 Technical Documents - one with a small supplement) by NOAA
- Incorporated comments from the Task Team on Data Management for the Document no. 37 "Guide to data quality control tests to perform by a GTS processing center" and finalized the draft. ([Draft](#))
- Began documents for DBCP-26 and sent out request for information from the participants of the Southern Ocean Buoy Program.

Task Team & Action Group support

- TT on Moored Buoys (see database and metadata above)
- OceanSITES
 - Wrote report from Data Management Team meeting
 - Compiled action list for 2010.
 - Re-drafted report from the Steering Team meeting in 2009 for final review by the Co-chairs
 - Discussed Site/Platform naming with many members for the Data Management Team
 - Sent requests to
 - JAMSTEC to provide metadata files for OceanSITES data in preparation for sharing data on the GDAC in NetCDF format

- Carbon Data Center (CDIAC) to provide metadata files to begin documenting the metadata required to develop the NetCDF file for all Carbon data streams
- Data Management Team
 - Updated the Data Management Team email list members and membership (on www.jcomm.info) to include new people.
 - Uploaded meeting documents to the JCOMM website.
 - Reviewed and provided feedback on the User Manual 1.2 draft.

16.10 DBCP Technical Coordinator – Tasks undertaken May 2010

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Reviewed action items from DBCP-25 and followed up with individuals
- Provided details for preparing a contract via WMO for the period 16/08/2010 – 30/09/2010
- Assisted in writing a proposal for JCOMMOPS to develop the “RRR WMO Database of user requirements and observing system capabilities”

Database & Metadata

- Reviewed metadata records for all DBCP buoys and OceanSITES as a whole and began drafting a record for DBCP. Metadata is being managed in a FGDC template so needs to be converted or translated into ISO.
 - Requested assistance from NOAA for this translation
 - reviewed the results of the translation performed by NOAA
 - revised the input file accordingly to comply with ISO requirements.
- Added new manufacturers to the list for DBCP (Envirtech & TechWorks Marine)
- Entered metadata for new RAMA buoys deployed by India for the USA.
- Entered metadata for GDP Salinity drifters deployed in the Pacific

Data Sharing (Quality control and data timeliness) & GTS

- Assisted Italy (Envirtech) with sharing their data on the GTS.
 - Sent request to Meteo France to include the appropriate GTS Headers in the monthly statistics provided to JCOMMOPS so the Italian buoys could appear on the monthly map (starting May)
- Assisted Brazil with the process for obtaining a WMO ID.
- Sent a request to UK VOS and US VOS managers about a buoy sending FM13 (SHIP) data with "mooring-like" callsigns (31001,31002,31003,31004,31005 etc depending on the year and month i.e. 3YYMM) as it was causing conflicts with PIRATA buoys.
 - The US VOS focal point followed up with the ship, but this is ongoing.
- BUFR
 - BUOY Template
 - Provided notes on additional metadata and modifications (requested by data providers and users) for buoy data to Bob Keeley for him to review in anticipation of creating and revised and enhanced template.
 - XBT - Discussed the update to the BUFR template for XBT with WMO and sent out notifications to the community that it had been updated officially (and put news article on the JCOMMOPS/SOOP [websites](#))
 - BUFR template for VOS:
 - Responded to the Chair of the WMO IPET Expert Team on Data Representation and Codes about how best to make elements of the template

- optional
 - assisted Bob Keeley in implementing the suggested approach.
- Reviewed two documents (5.3.1 and 5.3.2) about BUFR templates for the JCOMM Secretariat (E Cabrera) in preparation for the Expert Team on Wind Waves and Storm Surges meeting (Toronto, 18-22 May 2010)
- Sent some information about BUFR/CREX to Sonardyne and CSnet International, who are working on installing a Tsunameter in the Mediterranean (off Cyprus) and will need to share data on the GTS. Suggested further contact points in ITP and GLOSS.
- Began analyzing discrepancies between BUOY and BUFR messages received at ISDM Canada –
 - began to resolve some issues and provided some feedback to ISDM.
 - This is ongoing and will be a large task, but some recommendations should be ready by DBCP-26.
 - Updated the list of [GTS bulletin Headers](#) used for buoys based on the JCOMMOPS database and information provided by ISDM and CLS

Pilot Projects

- Iridium PP
 - Worked with SAWS and India to resolve notification issues with newly deployed buoys.
 - Added announcement of the 2-year-old BOM Buoy to the website.
 - Sent reminder about the aims and time lines for analyzing the iridium data from the project, in order to develop a document for DBCP-26.
 - Entered metadata and created a new program in the JCOMMOPS database for the New Zealand Pilot Project buoys deployed in the Tasman sea
 - Corresponded with Paul Freitag and Bill Woodward about capacity of CLS America to share iridium data from FLEX moorings (the new ATLAS buoy being tested) onto the GTS, costs and capabilities.
- Argos 3
 - Entered metadata about buoys as provided by CLS
- Waves
 - Reminded Meteo France about the requirement to receive statistics each month on the WAVEOB messages (FM65/MMXX) disseminated from Australia under Header SWWE01 AMMC which are not reported to JCOMMOPS
- High Resolution SST
 - Continued to develop a document for the next GHRSSST Scientific Steering Team Meeting in June (Peru) .
 - Provided advice to Gary Corlett on the use of WMO ids for OceanSITES and the conflicts with sub area 48.

Documentation & Information Exchange

- Continued documents for DBCP-26
- Collated responses from and Reminded participants of the Southern Ocean Buoy Program.
- Assisted Sergey Motyzhev with a project review on the Iridium buoys and recommendation for a proposal
- Updated the description of the graph “Network Growth over time” on <http://www.jcommops.org/dbcp/network/status.html> to explain the content more clearly

Task Team & Action Group support

- IABP

- assisted Japan with WMO IDs and advice on data (Air Temp vs SST)
- sent a presentation (with notes) for the upcoming IABP -20 for I Rigor to present on behalf of the DBCP.
- E-SURFMAR
 - Provided report for the 7th DB-TAG meeting on DBCP status and an update on recent activities. A PowerPoint file and PDF with Notes available from <http://www.icommops.org/FTPRoot/DBCP/meetings/2010/esurfmar-dbtag/>.
- OceanSITES
 - Data flow and Metadata for GDACs
 - Provided information about the function of a DAC and requirements for sharing OceanSITES data on the GDACS to the data manager in Germany for the OceanSITES platform: Kiel276 (Joanna Waniek)
 - Followed up with the Carbon Data Center on providing metadata for sites to be shared on the OceanSITES GDACs in due course.
 - Followed up with the Japanese DAC representatives about providing metadata for sites to be shared on the OceanSITES GDACs in due course
 - Drafted a paragraph about the DMT meeting to be included in the DBCP-26 preparatory document by the WMO Secretariat.
 - Assisted Woods Hole (WHOI, Nan Galbraith) with file naming (site code and platform codes) for existing and new sites.
 - Reviewed Bill Burnett's comments on the draft report for the Data Management Team Meeting and put in latest action list and finalised for distribution to the team.
 - Sent information about funding commitment from Australia to the Co-chairs and WMO for information. Encourage Co-chairs to investigate asking PIs to do the same globally and encourage small contributions to the Project Office.
 - Sent out [documentation](#) on proposed New Sites to be reviewed by the Steering Team, along with the Site Approval Process

16.11 DBCP Technical Coordinator – Tasks undertaken June 2010

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.icommops.org/DBCP/dbcpmaps.html>
- Created a poster for the GHRSSST meeting in late June for DBCP/JCOMMOPS and GHRSSST Cooperation
- Provided notes on the DBCP/JCOMMOPS and GHRSSST Cooperation opportunities for David Meldrum for preparing the presentation for the GHRSSST Scientific Steering Committee meeting in June.
- Sent out reminders about Action Items for DBCP to many panel members, seeking input on the status of the items. Updated the work plan with current status.
- Began DBCP 26 documents
 - Provided inputs to Task Team Chairs
 - Provided figures to the Chair to update the DBCP Implementation Strategy
 - Summaries of meetings attended to WMO Secretariat.
- Completed Check-out procedure for UNESCO.
- Organized files and documents in the office and finalized documents for the WMO contract starting August

Database & Metadata

- Worked with JCOMMOPS staff on data model for updated database to be implemented in late 2010-11

- Sat in on teleconference for the “RRR WMO Database of user requirements and observing system capabilities” proposals

Data Sharing (Quality control and data timeliness) & GTS

- Finished drafting a document to describe existing Quality Control Procedures for Salinity as provided by DBCP members. Sent out to the Task teams on Data Management and Best Practices to review
- Contacted JMA about a problem of transmitting data in BUFR format with false WMO ID numbers – they replied to say they would look into the problem.
- ISDM has identified a recurring problem with Triton buoy/thermistor chain transmitting on the GTS. Of all sensors attached to the Triton moorings, the ones at 250 m depth often (>10%) report suspiciously large temperature and salinity variations that are beyond normal climatological values. Followed up with CLS and CLS Japan (iCubic) : Problem was resolved by CLS Japan for all active buoys. Entered metadata for TRITON buoys based on information provided.
- BUFR
 - BUOY Template
 - Provided notes on additional metadata and modifications (requested by data providers and users) for buoy data to the Chair of the JCOMM Task Team on Table Driven Code forms, Bob Keeley for him to review including
 - Requirements for additions or changes to the template based on various peoples requests/comments/questions and also based on the Meta-T data stream assessments from a few years ago, plus the requirements of JCOMMOPS more generally.
 - Several unresolved questions
 - Continued analyzing discrepancies between BUOY and BUFR messages received at ISDM Canada –
 - began to resolve some issues and provided some feedback to ISDM.
 - This is ongoing and will be a large task, compiled recommendations for DBCP-26.
 - Updated the list of [GTS bulletin Headers](#) used for buoys based on the JCOMMOPS database and information provided by ISDM and CLS
 - XBT template
 - Resolved some final issues (with numbering of sequences) with the template and generated version 9.3 which was posted on jcomm.info and updated on the WMO website.
 - BUFR template for VOS:
 - Sent draft to the IPET ET DR&C for comment
- Contacted the Hellenic Centre for Marine Research to resolve the GTS data flow for the POSEIDON buoys (including the OceanSITES platform E1M3A)

Pilot Projects

- Iridium PP
 - Drafted Iridium PP document for DBCP 26 to provide to David Meldrum
 - Spoke with Paul Hill about Iridium Services offered at JouBeh and
- Argos 3
- Waves
- High Resolution SST
 - Finalised notes for D Meldrum to incorporate into the presentation to the GHRSSST Scientific Steering Team Meeting in June (Peru)
 - Reviewed the presentation

- Prepared a poster for DBCP /JCOMMOPS/GHRSST interactions

Documentation & Information Exchange

- Posted notice on the DBCP website about the TC Recruitment process.

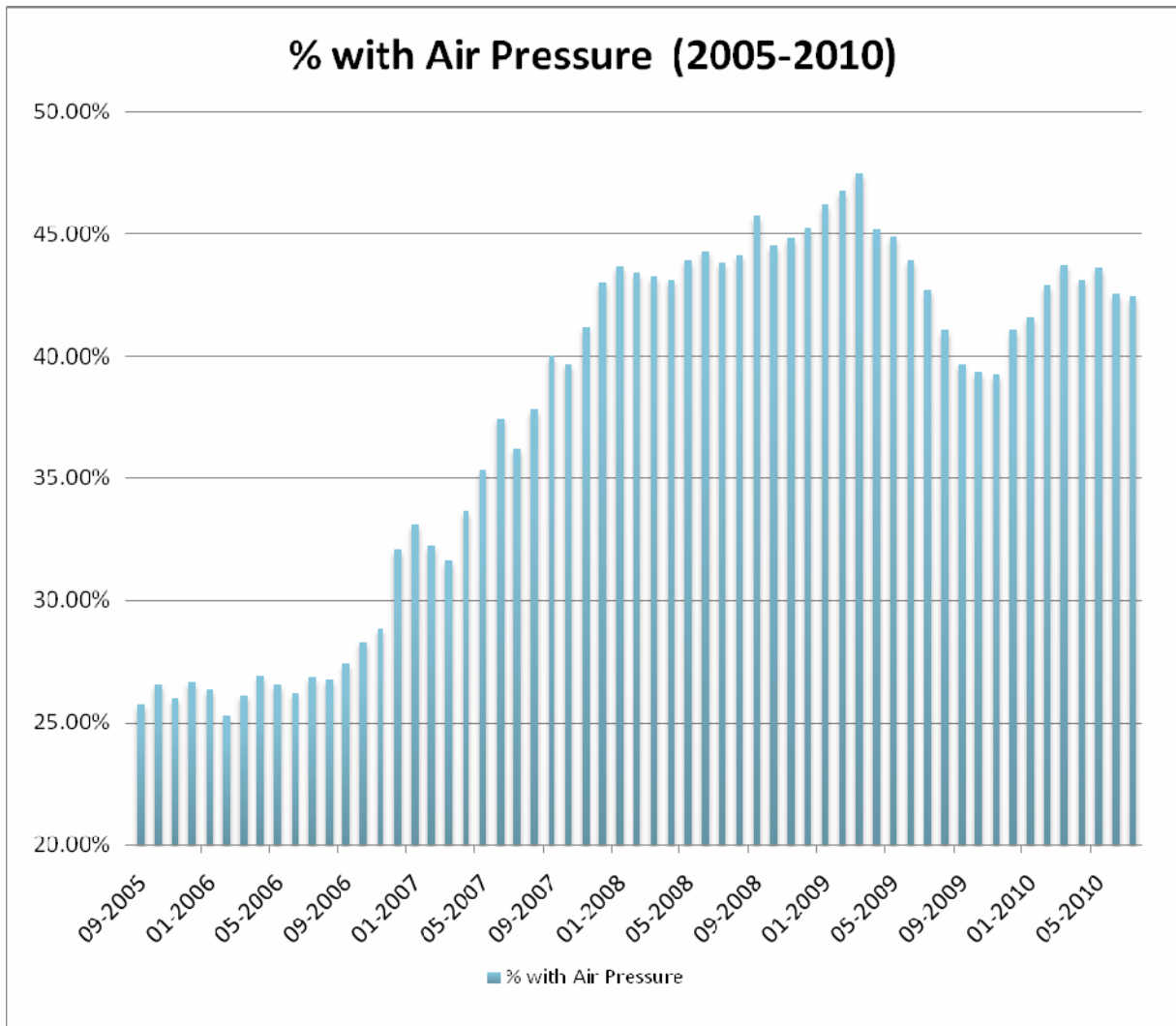
Task Team & Action Group support

- Drafted inputs to Task Teams for DBCP-26 and sent to chairs.
- TT-Moored Buoys:
 - assisted the team by putting together an Excel spreadsheet of Metadata fields they had agreed on and sent to the Chair.
- OceanSITES
 - Finalised the Steering Team report from 2009 following the review by the Co-Chairs. Sent out the document to the OceanSITES teams for review.
 - Provided last minute changes to the Data Management Team meeting report draft.
 - Contacted the Hellenic Centre for Marine Research to resolve the GTS data flow for the POSEIDON buoys (including the OceanSITES platform E1M3A)

Appendices:2

APPENDIX A

EVOLUTION IN AIR PRESSURE PERCENTAGE GLOBALLY (2005-2010)



Graph 2: Monthly evolution of the percentage of operational drifting buoys reporting air pressure on GTS from late 2005 to July 2010

APPENDIX B

QUALITY OF BUOY DATA

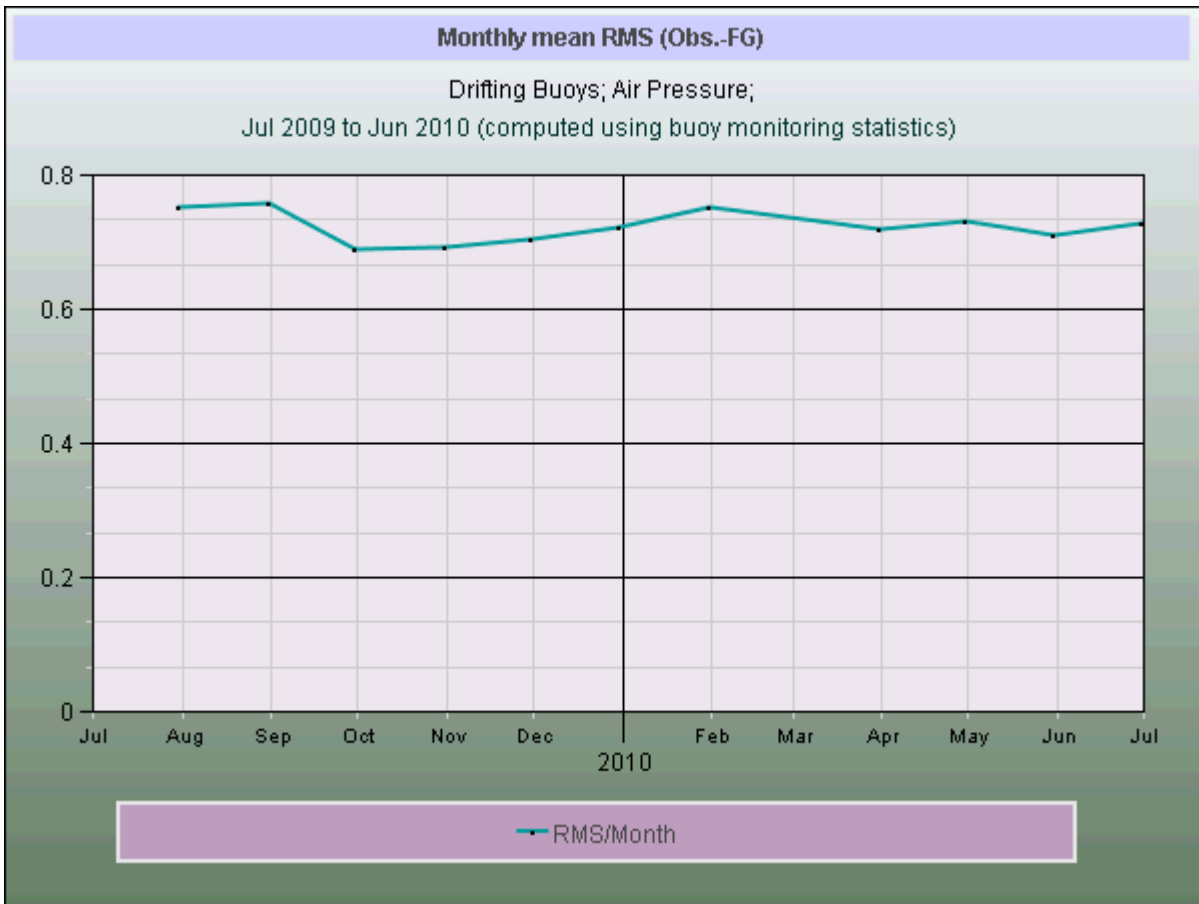


Figure 1: Drifting buoy Air Pressure Quality Control

The RMS (Obs.-FG) for drifting buoy air pressure data based on ECMWF buoy monitoring statistics for the period July 2009 to June 2010 remained below 0.8 for all of 2010 and below 0.7 for much of the inter-session period.

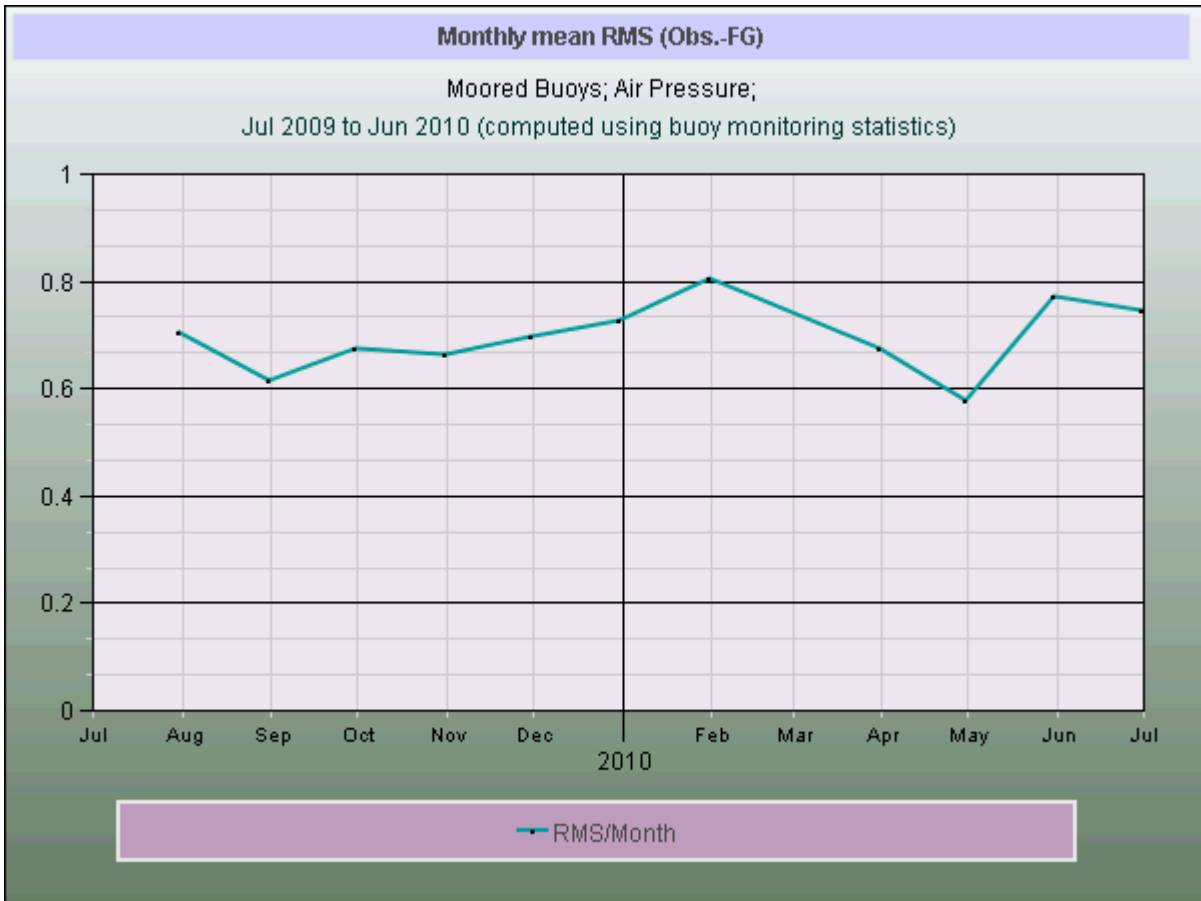
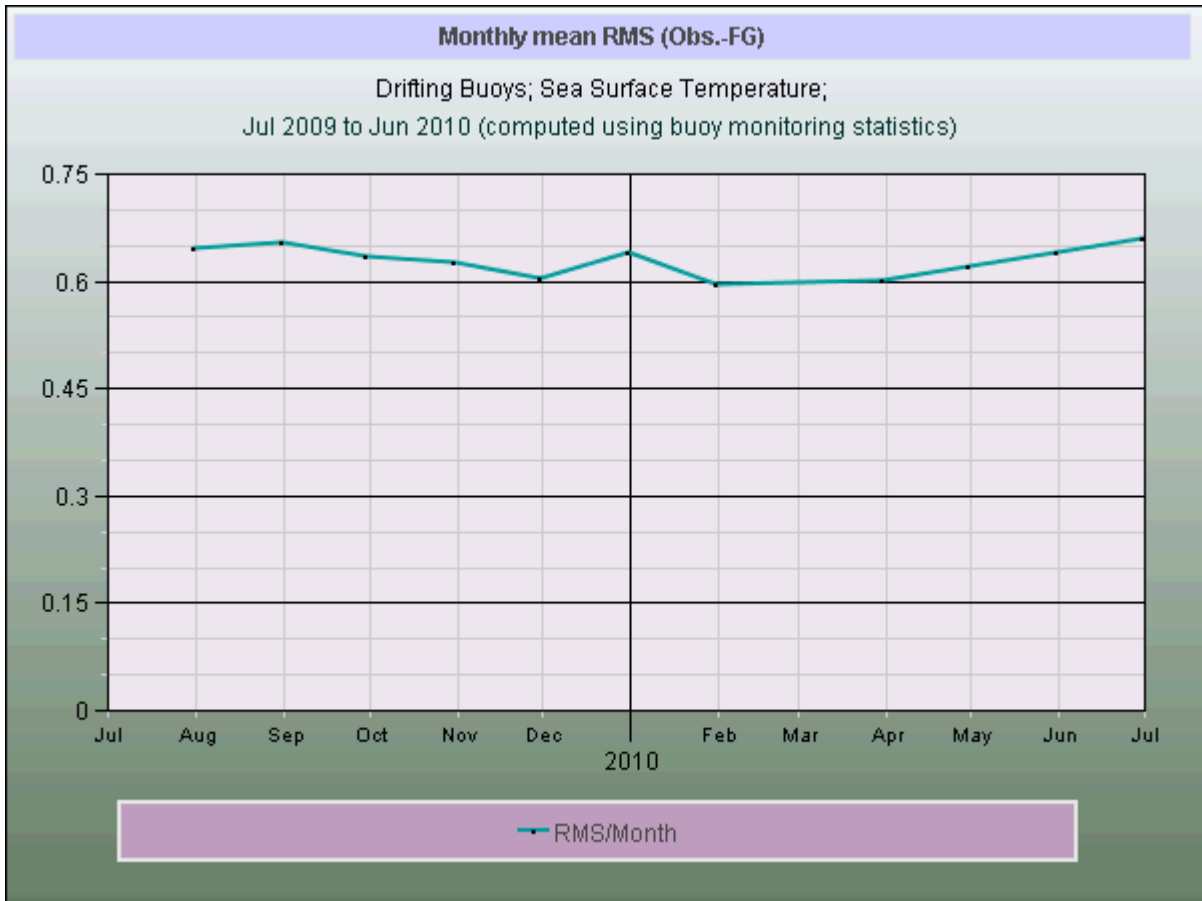


Figure2: Moored buoy Air Pressure Quality Control

The RMS (Obs.-FG) for moored buoy air pressure data based on ECMWF buoy monitoring statistics for the period July 2009 to June 2010 remained between 0.58 and 0.81 for the last year, which indicates that it is remaining steady over time.



Figure

3a: Drifting buoy SST Quality Control

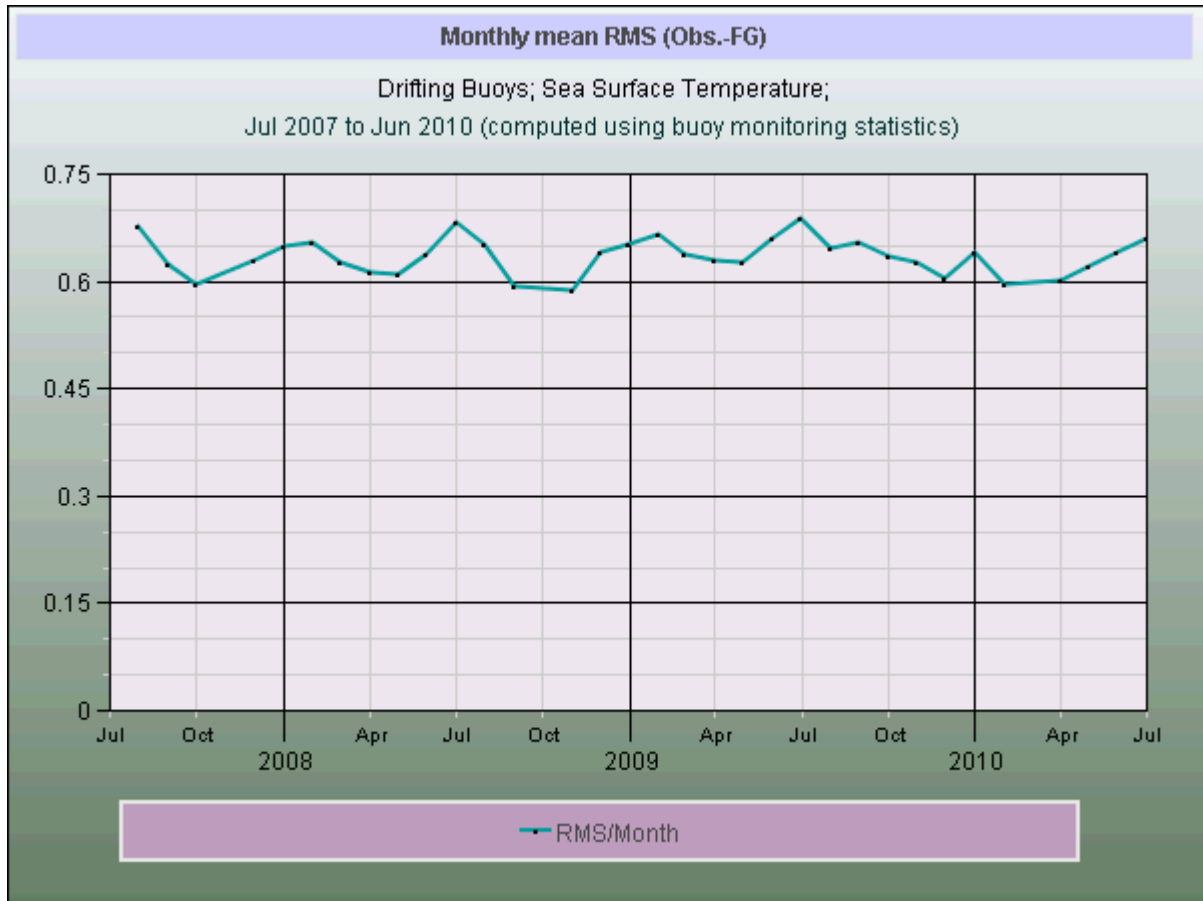


Figure 3b: Drifting buoy SST Quality Control (2007-2010)

The RMS (Obs.-FG) for drifting buoy SST data based on NCEP buoy monitoring statistics for the period July 2009 to June 2010 remained consistent with recent years at around 0.64 during the last year, though a clear seasonal signal can be seen if several years of RMS statistics are plotted (See figure 3b).

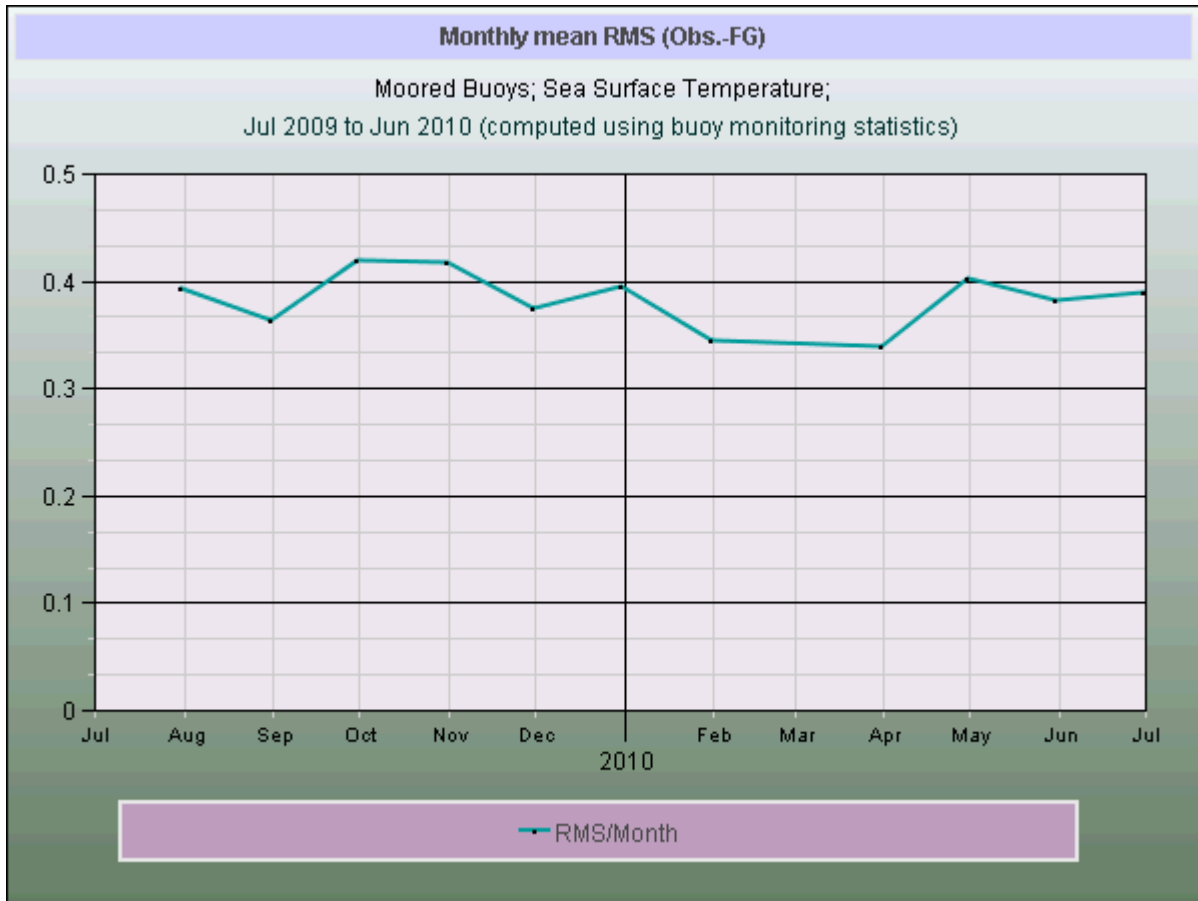


Figure 4 Moored buoy SST Quality Control

The RMS (Obs.-FG) for moored buoy SST data based on NCEP buoy monitoring statistics for the period July 2009 to June 2010 fluctuated in the last year but remained lower than a several years ago, averaging around 0.39.

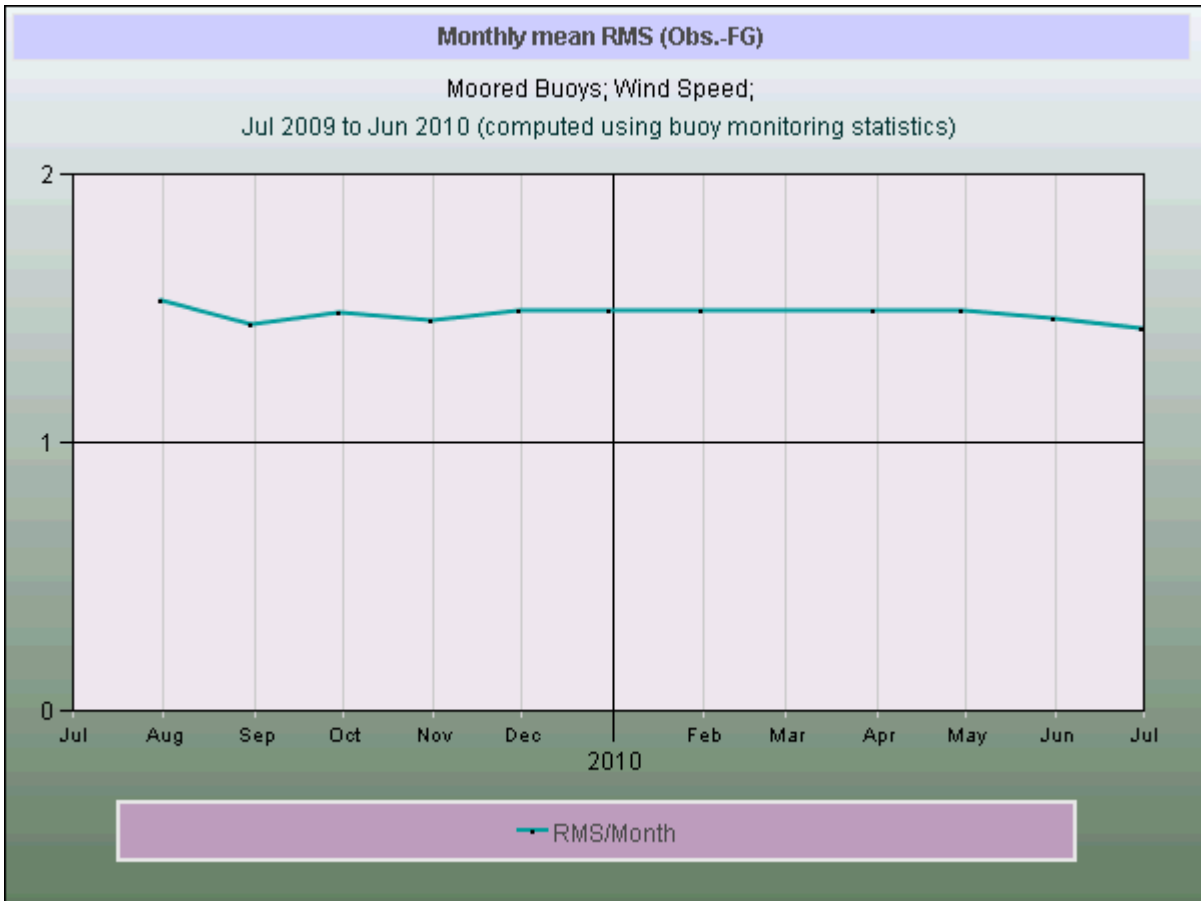


Figure 5: Moored buoy Wind Speed Quality Control

The evolution of mean RMS(Obs-FG) per month for Moored Buoys Wind Speed data (from ECMWF statistics) demonstrates that the agreement between buoys and the model has remained very steady ,after a significant drop last year.
