

DBCP Technical Co-ordinator Report 2008- 2009

5.1 This report covers the activities of the Technical Co-ordinator of the DBCP (TC) for the period from 1 September 2008 to 31 August 2009. A status of the DBCP network and TC tasks completed is given, followed by a detailed report on TC tasks undertaken each month.

5.2 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. This year however a larger amount of time has been spent working with the Argo TC on transitioning knowledge about SOT. Also OceanSITES has taken more than 30% of the time during some periods in establishing the Project Office (logistics and data management). It is hoped that the Panel can understand this situation and sees the broader benefits.

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

- User assistance;
- Working on Metadata within JCOMMOPS database;
- Producing monthly maps (including Google Earth layers);
- DBCP Iridium Pilot Project Technical Coordination;
- Looking at GTS (new data and delays) and Quality-Control Relay traffic;
- Loading monthly Buoy Monitoring statistics into the JCOMMOPS database;
- Maintaining mailing lists, contact details and user groups on DBCP, JCOMMOPS, OceanSITES and JCOMM websites;
- Seeking new deployment opportunities and communicating them to buoy operators;
- Maintaining and updating websites (DBCP and OceanSITES);
- Producing reports and maps, as required, as well as a monthly report on work undertaken;
- JCOMMOPS - information system operations and maintenance (database, new web server, metadata uploads and reporting);
- Preparing for and attending meetings; and
- Familiarization with OceanSITES and setting up communications mechanisms
- Preparing for the DBCP Session.

DBCP Status and highlights (as of August 2009)

5.4 Present status of buoy platforms:

Country	Drifting Buoys	Drifting Buoys on GTS
AUSTRALIA	32	30
BERMUDA	1	0
BRAZIL	12	1
CANADA	33	28
EUROPE	101	88
FRANCE	75	12
INDIA	19	11
ITALY	16	4
JAPAN	17	13
NEW ZEALAND	20	7
NORWAY	4	2
SOUTH AFRICA	3	2
SOUTH KOREA	14	6
SPAIN	5	5
UK	13	10
USA	1667	1186
Total	2032	1405 (=69%)

Table 1: Drifting Buoys (mostly reporting via Argos) and those on the GTS by country for July 2009.

Country	Moored Buoys	Moored Buoys on GTS
AUSTRALIA	7	0
BR-FR-US	24	17
BRAZIL	3	3
CANADA	48	41
COLOMBIA	2	2
EUROPE	9	9
FINLAND	1	0
FRANCE	12	12
GERMANY	12	0
INDIA	7	7
IRELAND	7	4
ITALY	2	1
JAPAN	28	17
NEW ZEALAND	0	2
PERU	1	0
SOUTH KOREA	7	7
SPAIN	32	13

TAIWAN	1	0
UK	30	60
US-ASCLME	2	2
US-FR	1	1
USA	317	233
USA-IN	6	6
USA-INDO	1	0
Total	559	437 (=78%)

Table 2: Moored Buoys reporting via Argos and those on the GTS by Country for July 2009.
N.B New Zealand 'Mooring' = stationary drifting buoy.

5.5 Amongst the drifting and moored buoys reporting on the GTS in BUOY (and SHIP) message formats; the following variables were measured in July 2009. There was a growth in the number of buoys reporting Air Pressure globally this year, until April when the number dropped for three months in a row.

Variable	Any	Air P	P Tend.	SST	Air T	Hum.	Wind	Waves	Sub/T
Drifting Buoys	1405	600	544	1264	27	1	7	10	3
Moorings	437	284	226	339	349	197	337	297	88

Table 3. Drifting and Moored buoys – variables being reported on the GTS

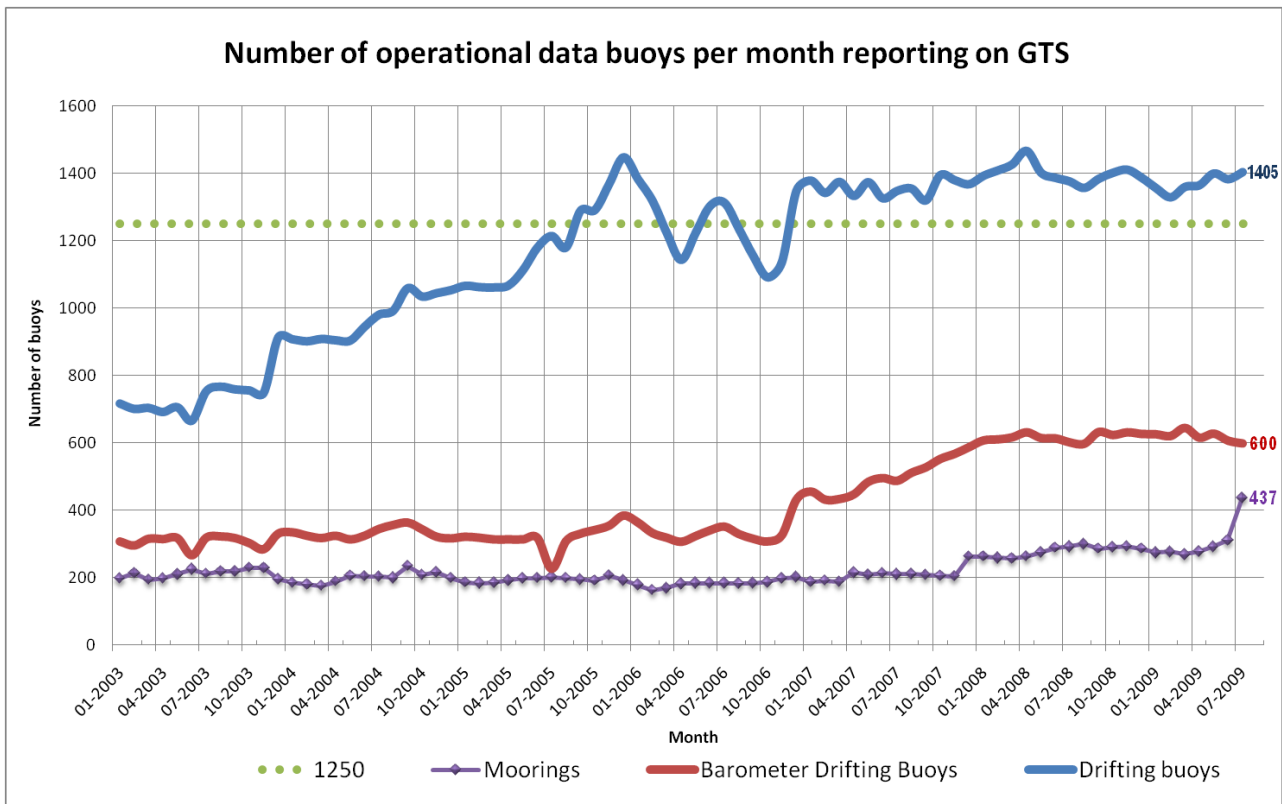
5.6 The JCOMM Observations Coordination Group's phased-in implementation plan, is to eventually equip at least 700 drifting buoys with barometers outside of the tropics, this goal was not quite achieved this year. This July the number in the higher latitudes (above 30 degrees N/S) was ~470, compared with 485 last July. There are peaks for these regions during the summer months, due to more opportunities to deploy and a lack of ice, but this does not allow for a sustainable growth in the buoy network.

5.7 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). It may not be possible to support this scheme as much as in the past, due to budget constraints within NOAA. Buoy operators are encouraged to attempt to allocate a greater budget to buying SVPBs in coming years in order to overcome this and work towards the 700 requested by the JCOMM OCG.

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%

Table 4. Evolution of GTS Buoy data percentage

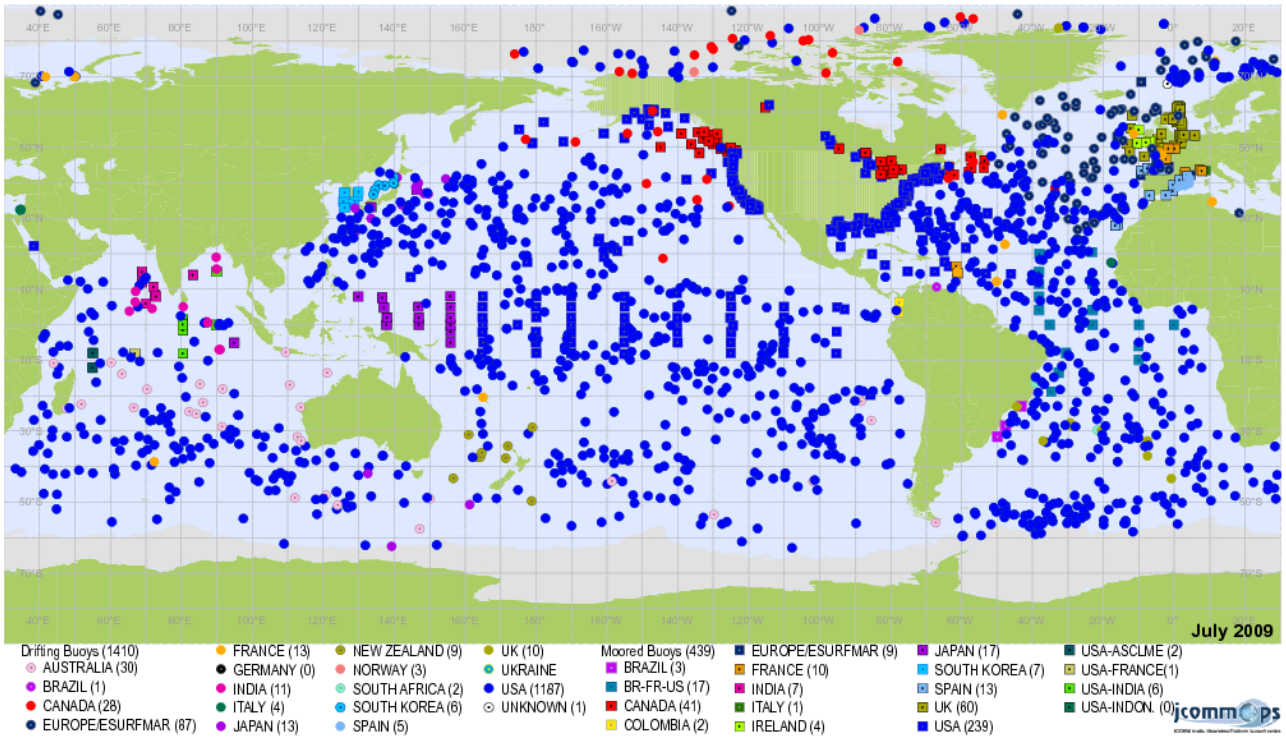
5.8 The graph below shows the number of operational drifting buoys over the last 18 years, which remained fairly stable in 2008-09 and well above the desired number of 1250.



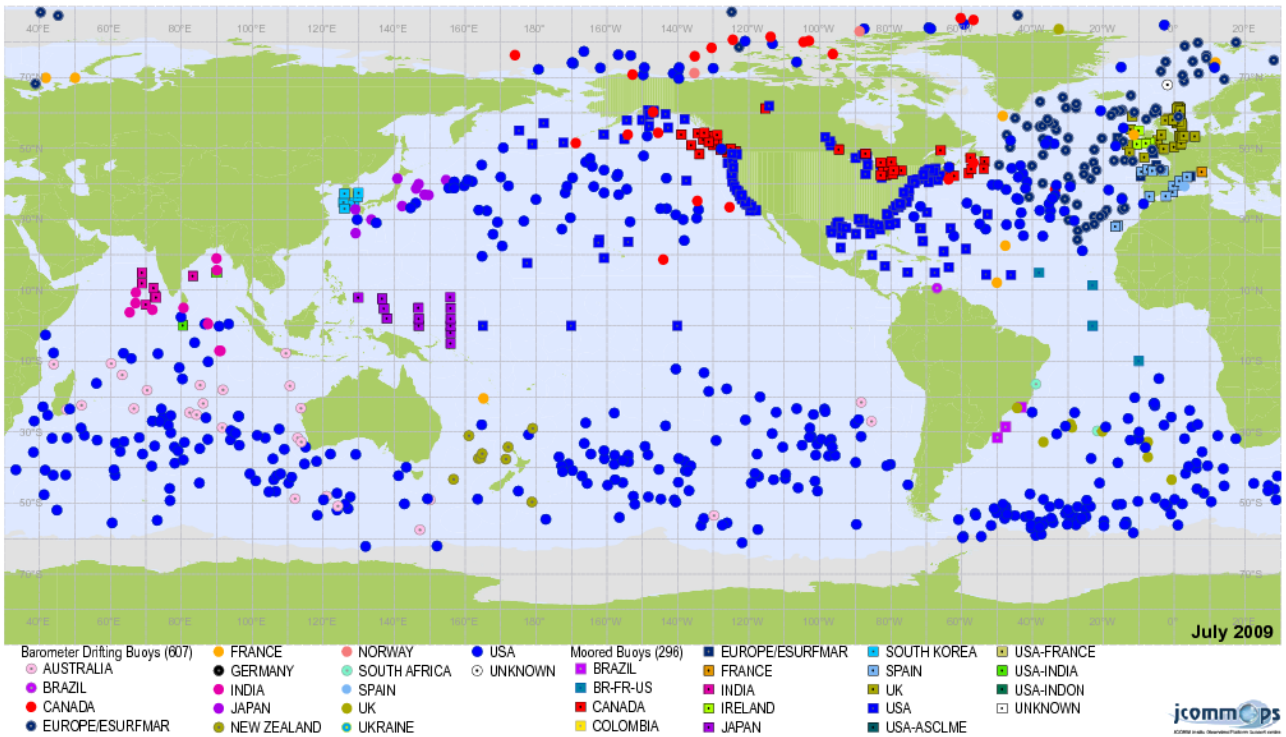
Graph 1: Monthly evolution of the number of operational drifting buoys reporting on GTS from January 2003 to July 2009 and those reporting air pressures. Operational Moored buoys are also included. (Data derived by statistics computed from GTS in situ marine data provided by Météo-France).

5.9 Graph 1 shows that the number of drifting buoys has been maintained 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 levelled off a little.

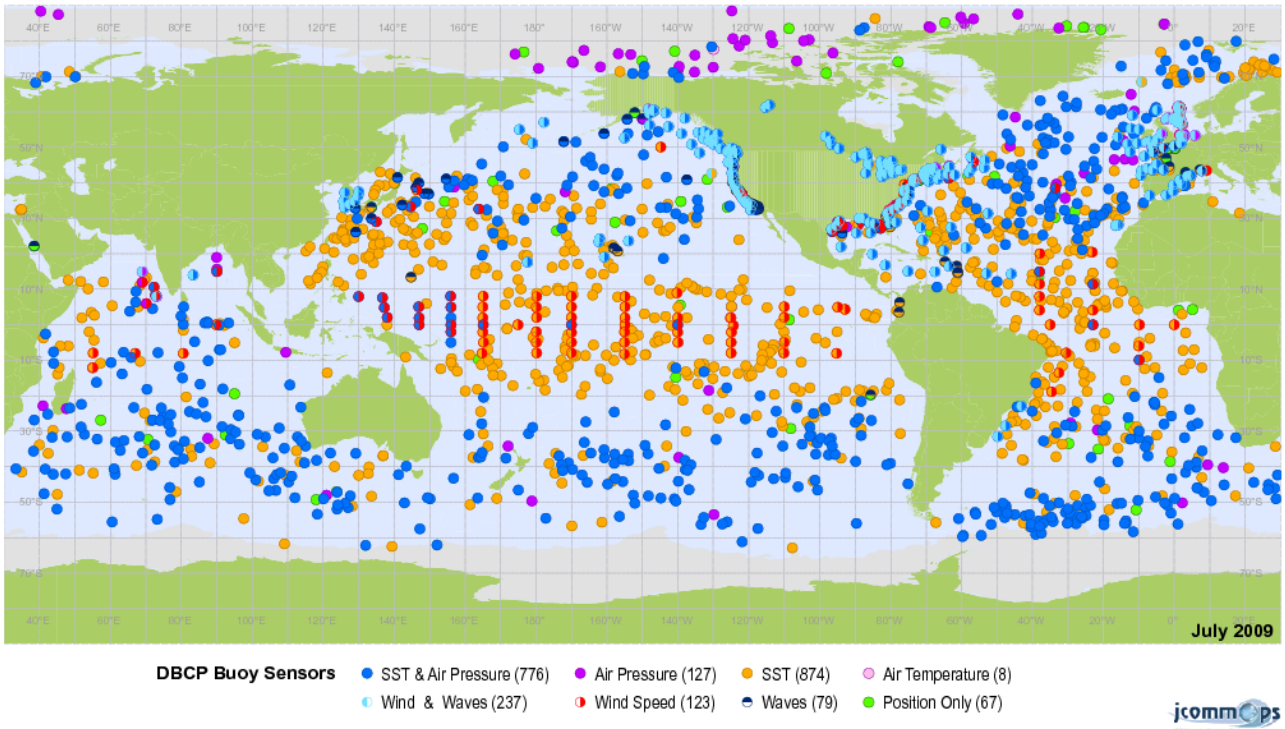
5.10 Map 1 below shows the buoy status at the end of July 2009. The spread has remained good throughout the intersessional period, although the eastern Pacific has begun to be quite sparse and the north Western Pacific remains almost a void. The RAMA moored buoy array in the Indian Ocean has filled in many of the past gaps and provided cruises for deployment of drifters. The spread across the Arctic region is better than it has been in the past. The gulf of Guinea is also better covered than ever before thanks to the efforts of the US Navy and the PIRATA cruises. Map 4 also shows the spread of data buoys with the calculated buoy density.



Map 1: DBCP monthly status by country for July 2009. (Data Buoys reporting on the GTS via Météo-France)

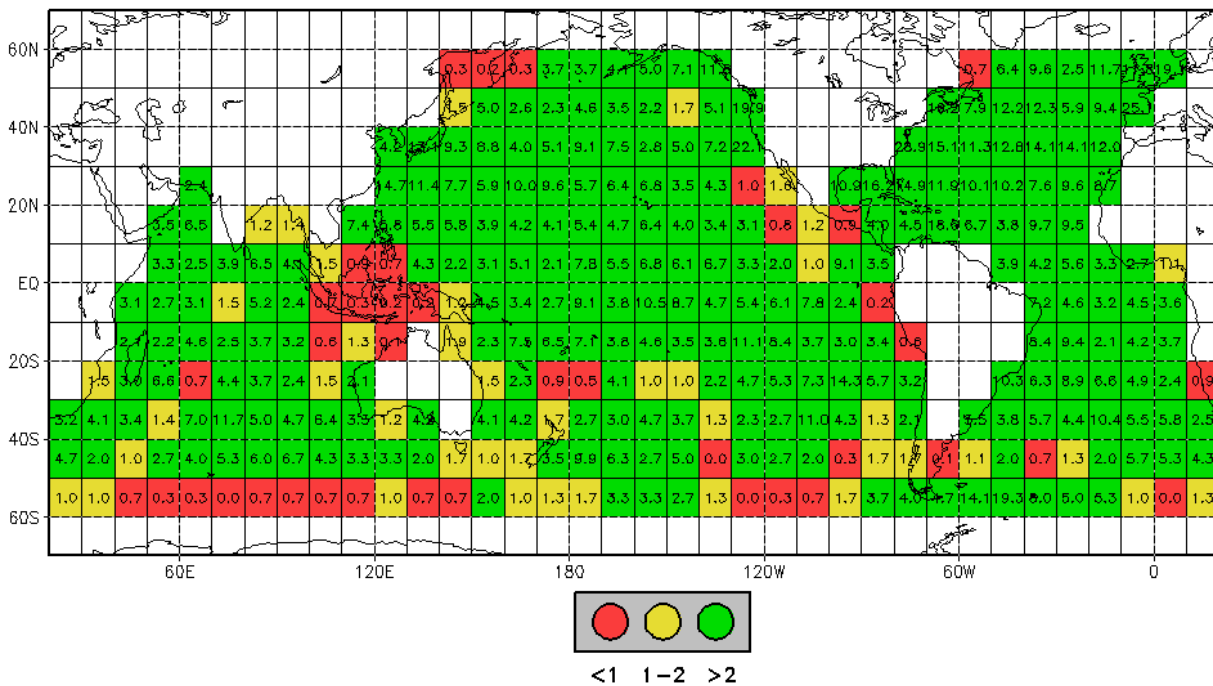


Map 2: DBCP Barometer Buoy monthly status by country for July 2009. (Data Buoys reporting Pressure measurements on the GTS via Météo-France)



Map 3: Drifting and moored buoys reporting SST, Air Pressure, Waves and Wind in July 2009. (Data Buoys reporting on the GTS via Météo-France)

Averaged Monthly EBD: APR2009–JUN2009



Map 4: NOAA Equivalent Buoy Density map for April- June 2009
 Also available via : OPENDAP: <http://osmc.noaa.gov:8180/thredds/dodsC/ebd> & Web Coverage Service: <http://osmc.noaa.gov:8180/thredds/wcs/ebd>.

JCOMMOPS status report

5.11 Latest developments in JCOMMOPS activities

- Systems
 - Redevelopment of GIS file production for easier maintenance
 - One server replaced and set up, metadata loading and processing scripts transitioned to this new server. Web Server, FTP Server and GIS Software upgraded. Changes made in response to system upgrades within the Argos System.
 - Testing a new database server to upgrade an older machine, so that CLS can more easily administer the server.
 - Finished Drafting new structure/navigation of the new JCOMMOPS website.
- Metadata
 - New Argo metadata monitored to enrich float search engine and data monitoring pages (GDACS index files).
 - Improved (metadata) text file export/loading.
 - Redesigned database to handle SOT MASK data, developed proper loading/export scripts.
 - Argo Deployment Planning interface gradually improved.
 - Scripts developed to track problems on GDACs Argo data (e.g. duplicates) and feed the AIC monthly report.
- Support & Feedback
 - Creation of an [Argo Support/Feedback Centre](#)
 - Maintained existing mailing lists. Added new lists.
- Network Status reports & Maps
 - Completed the SOOP Annual Survey for 2006 and 2007. After the XBT Fall Rate Equation Meeting in March 2008, it was decided that all SOOP annual Metadata should be exported to text files for the last 7 years to be used by NODC for cross-referencing and assessment of which fall rate equation coefficients for data from those SOOP operators who did not record that with the data.
 - New monthly maps produced for all programmes
 - New design and standardisation for monthly maps, including a GOOS/JCOMM map. Use of pdf layer features for high resolution maps
 - New and improved Google Earth files layers (daily and monthly updates)
 - Updated and new DBCP Maps page <http://www.icommops.org/dbcp/dbcpmaps>
 - Argo Network density/age data layers production automated (outputs for Google Earth).
 - Enhanced the ODAS metadata export tool (XML) for all JCOMMOPS platforms.
 - New OceanSITES products developed and placed on www.oceansites.org and <http://www.icommops.org/FTPRoot/OceanSITES/>.
- Real-time data flow and telecommunications and Quality Control:
 - Attended monthly meetings with CLS Argos and User Office representatives.
 - Delays improved for all Argos real-time platforms during the last two years. Monitoring tools have been developed at CLS. Continually provided feedback on buoys with bad locations to CLS. DBCP Iridium tests have been successful for many countries. <http://www.icommops.org/dbcp/iridium-pp> status in text file. Delays are extremely short (~10 minutes)

- Worked with CLS to ensure that recurring location problems with drifting buoys were resolved.
- Provided information to and Assisted many new programs and nations in sharing data onto the GTS (Colombia, Peru, South Korea, Antarctic/Arctic research programs).
- Added many additional users to the BUOY/VOS Quality Control tool. Usage of this tool has increased in the last two years. Updated the interface with minor changes.
- Routine feedback from Altimetry QC analyses (by Coriolis) included.
- Standardization of Data Formats and Table driven code forms:
 - Worked with JCOMM members and the DMPA task team on table driven codes to provide input and any revisions to JCOMM BUFR template/s for WMO Expert Team on Data Representation & Codes (ET/DR&C). Discussed work on Master Table 10 with WMO and Bob Keeley Compiled document on status of JCOMM templates and proposed changes to code tables, addition of elements and sequences and one additional code table to support JCOMM data users.
 - Finalized proposed new Master Table 10 and accompanying changes to code tables to put to the for the ET/DR&C.
 - Attendance at the ET/DR&C on behalf of JCOMM. Presented updates to Master Table 10 for oceanographic data in BUFR and presented a draft of a new BUFR template for XBT data (based on requirements documented in March 2008). Submitted various requests for updates to code table definitions and BUFR descriptors.
 - Finished writing requirements and functional specifications for the new JCOMMOPS website
 - Finalized real-time Google Earth files for all programmes.

5.12 Future Plans for JCOMMOPS development

- Improve the design and functionality of the JCOMMOPS web page plus integrate the QIR tool to seamlessly include all of JCOMMOPS QC feedback on one webpage
- Adapt/secure all SOT web products (in particular the QC Relay tool).
- Implement the REAL/MASK SOT scheme.
- Guide GDACs on enhancing index files (to complete metadata on Argo/OceanSITES)
- Coordinate Updates to (technical document) publications and creation of best practice documents. Work on Common Practices documents.
- Lead discussions about incorporating more Metadata into the BUFR Templates for all data types
- Design new products to track deployment plans and assist with creating new deployment opportunities within JCOMM;
- Ensure that platform operators using Argos are aware of the benefits of sharing their data on the GTS and the capacity developed with Iridium within CLS
- Improve the usability and functionality of current Google Maps products.
- Improve metadata retrieval, storage and queries (web services)
- Expand routine production of network density products for all observing networks.
- JCOMMOPS has identified the need for international and technical coordination (full time job) around all ship/cruise related activities in order to:
 - Facilitate maintenance and operations of global arrays through logistics coordination when required.
 - Further develop cooperation between programmes (e.g. shared cruises, ship time).

- Further develop Float/buoy donor programmes and identify new regional deployment opportunities.
- Arrange retrieval of beached instruments when necessary.

Most Argo, DCBP, SOT national programmes do not need much assistance for the organization of their deployments (or ship recruitment).

However, with this additional dedicated resource, JCOMMOPS can help more in sharing the information on the planned cruises across all of the programmes and in the coordination of logistics.

This would help in demonstrating the concrete support from JCOMM to national programmes. For many oceanographers involved in GOOS, JCOMM is still quite an intangible body.

5.13 Maps

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>
- Google Earth for JCOMM : <http://www.jcommops.org/FTPRoot/JCOMM/Status/jcommops.kmz>

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

Static maps:

DBCP

The DBCP maps produced by the Technical Coordinator have been consolidated into one web page, for maps going back to the start of 2007.

<http://www.jcommops.org/dbcp/dbcpmaps.html>, (see Appendix B for a screenshot).

PDF and PNG Files are also accessible directly from <http://www.jcommops.org/FTPRoot/DBCP/Maps/2009/>

which includes

- Buoy by Country
- Barometer Drifting Buoys by Country
- SST, Barometer, Wind and Wave Buoys (All Sensors)
- GTS Delays
- Iridium Buoys by Country (78 Active Buoys) - also see <http://www.jcommops.org/dbcp/iridium-pp/>

JCOMM

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

All in situ marine observations:

http://wo.jcommops.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.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/map?type=GTSM_SZ

All Floats, Drifting and Moored Buoys:

<http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/map?type=BUOYS>

All Floats, Drifting and Moored Buoys - Polar areas:

http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/map?type=BUOYS_POLES

OceanSITES

PDF and PNG Files are also accessible directly from

<http://www.jcommops.org/FTPRoot/OceanSITES/maps/>

All active and current sites:

http://www.jcommops.org/FTPRoot/OceanSITES/maps/200908_CURRENT.pdf

Google Earth File:

http://www.jcommops.org/FTPRoot/OceanSITES/status/200908_oceansites_locations.kmz

All planned and discontinued sites:

http://www.jcommops.org/FTPRoot/OceanSITES/maps/200908_VISION.pdf

5.14 DBCP Brochure.

- A finalised version of the DBCP two page brochure is available. See appendix A

5.15 DBCP Website.

- A draft version of the revised DBCP website will be demonstrated during the session. See appendix B

5.16 DBCP Content on the JCOMM Website.

- Some information about the DBCP was entered onto the JCOMM website. <http://www.jcomm.info> under the Observations Program Area. See Appendix B

5.17 Pilot projects

- Iridium
 - The Pilot Project is evaluating and demonstrating the operational use of Iridium Satellite data telecommunication technology for the real-time collection of drifter data under various conditions. The project website contains further information, and can be located at: <http://www.jcommops.org/DBCP/iridium-pp>.
 - Full metadata is available for the platforms in a text file updated each day; and
 - The raw messages from the participating platforms can be viewed in Google Mail (contact the TC for details).
 - There were 78 platforms active in August 2009 (Another 70 had been retired, failed or faded). Added to the project website and ensured that map and status files automatically update each day.
 - Ensured that participants notify new deployments, especially if they are not using the Iridium Processing services at CLS or Meteo France; and

- Began preparing a document to outline the success factors necessary to define the kind of analysis of results that will be needed in the coming year.
- Attended the meetings of the DBCP WET and WMD pilot projects.
- Set up the Argos 3 Pilot Project email address.

5.18 Deployment Opportunities

- Sought information for and sent out deployment opportunities in the monthly DBCP email. Updated parts of the JCOMMOPS website concerning new deployment opportunities.

5.19 Documents

- Finalized the revisions to DBCP Publication No. 3. (to be updated on the WMO website)
- Added information about Iridium Data File formats to DBCP Publication No. 4
- Created a new document entitled "Guide to Data Quality Control Tests to Perform by a GTS Processing Center".
- Prepared documents for the WMO Expert Team on Data Representation and Codes (ET/DR&C) on BUFR templates, as well as the updates to BUFR code tables and Master Table 10.
- Contributed to papers for OceanObs'09 on JCOMMOPS and Metadata management.
- Prepared a flow chart to show the steps involved in arranging GTS distribution of data for the [Cookbook for Submitting Data in Real Time and In Delayed Mode \("data cookbook"\)](#) and reviewed entries in the JCOMM Catalog of Standards and Best Practices. See Appendix C.

5.20 JCOMMOPS programs, OPSC, SOT and OceanSITES

- Continued to transition knowledge on SOT to the Argo TC. Completed the 2008 SOOP Annual line sampling report draft.
- Worked on OceanSITES project office tasks and attended related meetings.

5.21 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, E-SURFMAR DB TAG, IBPIO and NPDBAP.

5.22 Q.C. Guidelines

- Due to issues with spam and resourcing changes at the Icelandic met office the QC email address was transitioned to dbcp-qc@jcommops.org. The recipients of this email were updated at that point. The old address now forwards automatically to the new one.
- 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.

5.23 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

5.24 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)
- During the intersessional period the files created in the past to extract the JCOMMOPS ODAS metadata to XML was updated for use by the NMDIS information system. The daily files now only contain information about platforms which were modified recently.
 - 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.

5.25 Platforms in the Southern Ocean – Air Pressure

- 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 160, which means this target is not yet achieved
- During the Intersessional period the number went up to a peak of 211 in March 2009, which was approaching the goal of 300, better than this month. This seasonal variability will always occur in polar regions

Month	Total number of Barometer buoys
AUG 2008	161
SEP 2008	167
OCT 2008	152
NOV 2008	164
DEC 2008	167
JAN 2009	186
FEB 2009	202
MAR 2009	211
APR 2009	195
MAY 2009	182
JUN 2009	173
JUL 2009	161

Table 5. Number of Barometer buoys in the Southern Ocean each month for the year to July 2009.

- It is clear from Map 3 (above) that a vast majority (80%) of buoys south of 40°S are recording air pressure.
- The main participants were:
 - NOAA / AOML, and University of Delaware United States of America;
 - Alfred Wegener Institute, Germany;
 - Bureau of Meteorology (BOM), Australia;

- Dunstaffnage Marine Laboratory, UK & Met Office, United Kingdom;
 - Météo-France;
 - New Zealand Meteorological Service; and
 - South African Weather Service.
- The deployment plans last year were for at least 190 buoys with Barometers (including 42 upgrades) to be deployed south of 40°S. The Global Drifter Center commented on the fact that deployment opportunities are very unpredictable in the region, so firm commitments were difficult as was the exact numbers of SVPB buoys versus SVPs. The actual deployments totaled ~ 130 SVPBs, as notified to JCOMMOPS, and were as follows:
 - USA (Inc barometer upgrades) : 118
 - Australia: 5
 - UK: 2
 - New Zealand: 4
 - France: 2 (CO2 buoys)
 This will allow the level to be maintained well above the required number.

Country	Buoys purchased or planned	Additional upgrades	Total
Australia	5	7	12
France (*)	1	18	19
Germany		-	-
New Zealand	8	10	18
South Africa	20	0	20
UK	10	1	11
USA	~100	-	100
Total	144	36	180

Table 6: SOBP Proposed Commitments for the period August 2009 to July 2010

- Possible deployment ships are as follows:
 - Marion Dufresne, Gough Island supply vessel, Fishing vessels on Tristan Da Cunha available.
 - Polarstern - this Antarctic summer season travelling 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

5.26 Future Tasks

In addition to the workplan that already exists, routine tasks, and support for Action Groups and Task Teams, plus working on OceanSITES, the TC plans to:

- Working with JCOMMOPS colleagues to improve the design and functionality of the QIR tool to integrate all of JCOMMOPS QC feedback into one web page
- Redesigning and rewriting the DBCP website.
- Adding extra metadata fields to GTS Data Flows, JCOMM-wide reviews of BUFR templates
 - o Leading discussion about incorporating 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
- Integration of OceanSITES data/metadata into JCOMMOPS database
- Test and provide content for the new web site for JCOMMOPS
- Work with Panel members to improve documentation of common ("Best") practices and an appropriate catalog
- Assessing impacts of outcomes from OceanObs'09 on the buoy network and program goals

5.27 Specific, non-routine tasks undertaken during the intersessional period by the TC DBCP (listed chronologically)

5.27.1 September and October 2008

Reporting, Meetings, Presentations & Administration

- Produced monthly maps. Produced a custom map for NOAA (C Clark).
- Prepared for and presented to DBCP-24
- Continued with DBCP Technical Document 3 updates
- Attended the TTQM, IBPIO, NPDBAP meetings at DBCP-24
- Reviewed the document future employment about options for the TC
- Assisted Nick Adamo (IOC) with some maps for a presentation. Reviewed an NSF proposal by IOC for funding of an Arctic OOS.
- Attended the meeting of the Expert Team on Data Representation and Codes.
 - Presented a progress report and several proposals for BUFR templates on behalf of IOC and JCOMM.
 - Presented an update to definitions of the BUFR Master Table 10 Oceanographic Data on behalf of the JCOMM Data Management Programme Area.

Database & Metadata

- Extensive metadata cleaning and updates to data loading scripts. Updated the processes loading platform data from the Argos System. Manually entered buoy metadata into the JCOMMOPS database for several programs
- Compiled information about the Southern Ocean Buoy Programme
- Added several people to the user group for the QC Relay tool
- Worked with M Belbeoch on Ship callsign masking procedures. Set up a secure FTP site for the Ship callsigns Masked by Europe and Australia
- Discussed BUFR templates and next steps for the Meta-T Pilot Project with Derrick Snowden

- Discussion with Jeff Wingenroth on buoy metadata to be supplied as a text file from Technocean's database.

Data Sharing (Quality control and data timeliness) & GTS

- BUFR
 - Updated the BUFR template for XBTs based on feedback from the ETDR&C. Provided additional information to WMO in order to implement the proposed changes and additions to code tables.
 - Provided the DART BUFR template to panel members for review.
- Assisted CLS with contacting Japan about TRITON buoy GTS bulletins which were previously only sending new data when all TAO buoys send merged bulletins for the day
- Contacted Germany AWI about duplicated use of Argos Ids by Drifters and Argo Floats concurrently.
- Highlighted problems with locations on Argos buoys operated by Navocean.
- Manually forwarded QC Relay emails to ship operators where not included in Publication 47 or the JCOMMOPS database.
- Provided advice to Peru, South Korea and University of Delaware about sharing data on the GTS
- Reviewed a summary of differences in Country statistics and platforms on the GTS between the OSMC and JCOMMOPS. Discussed differences with NOAA (Derrick Snowden)

Pilot Projects

- Iridium PP
 - Updated the website for plans and <http://www.jcommops.org/dbcp/iridium-pp/>
 - Prepared agenda and compiled Minutes of side-meeting
 - Updated Terms of Reference and passed to participants to review
 - Included new deployments in database and followed up with operators who had not notified of deployments.
 - Compiled a table for future commitments to assess maintenance and coverage of the network in 2009.

Documentation & Information Exchange

- Reformatted the DBCP Brochure onto 4 pages and updated the text based on input from the Panel.
[http://www.jcommops.org/FTPRoot/DBCP/meetings/2008/dbcp/DBCP24_Doc_10_1\(A_nnex\)_brochure.pdf](http://www.jcommops.org/FTPRoot/DBCP/meetings/2008/dbcp/DBCP24_Doc_10_1(A_nnex)_brochure.pdf) (outdated)
- Created a document for side meeting on the GHRSSST data requirements
- Updated buoy manufacturer website
- Assisted CNES by providing a series of buoy identification numbers for buoys in the Atlantic for the Argonautica educational program.
- Began a matrix to identify documents of Best Practice and identify gaps. Contacted manufacturers to request new documentation and updates to those existing.
- Shared deployment opportunities from German ships SONNE, METEOR & MERIAN with Buoy operators.

- Discussed DBCP website with IOC (T Gross and B Lee) requesting a login to the website for creating new pages and if it is possible to use the graphic designers to make the new site look good.
- Wrote a message for the SOT chair to send about changes in JCOMMOPS
- Reviewed updated SVPB reference manual (from Andy Sybrandy) and uploaded onto website (now at version 2.1)

Task Team & Action Group support

- Participated in a side-meeting on Moored Buoy metadata with the TTMB
- Discussed the TTDM presentation for DBCP with Mayra Pazos
- OceanSITES
 - Discussions with Bill Burnett to finalise the OceanSITES form to be used to register sites for the GDACs and GTS data dissemination.
 - Provided additional input on update to (GDAC) metadata form for OceanSITES metadata input with Bill Burnett and worked with data management team to fill out a form
 - Met with Uwe Send to discuss updates to WhitePapers and email lists to be created.
 - Continued Oceansites web review for broken links and structure.

5.27.2 November 2008

Reporting, Meetings, Presentations & Administration

- Produced monthly maps. Fixed issue with the Latitude grid being offset to the North
- Mission reports for Geneva, Cape Town and San Diego meetings
- Prepared Priority list of tasks and updated based on feedback.
<http://www.jcommops.org/FTPRoot/JCOMMOPS/planning/DBCPTC-to-do-list-2008-2009.xls>
- Updated Action Group maps for extension to E-SURFMAR and RAMA
- Began compiling meeting list and travel budget information for 2009, to support planning within IOC and to manage DBCP Travel Funding.
- Contacted Manufacturers to get updated information about pricing of Argos and Iridium drifters then passed this information to a buoy operator (Prof. Dr. Arne Koertzinger, Kiel, Leibniz Institute of Marine Sciences) - follow up required to ensure data is shared.
- Participated by phone in the IOC Ocean Observing section monthly meeting, discussing Ocean Obs 09 and input to JCOMM MAN.
- Drafted text for 2 Community White Paper Abstracts for OceanObs 09. Agreed to contribute to 4 : DBCP, Data Management of Surface Drifters, Metadata Management and JCOMMOPS.

Technology, Database & Metadata

- Received metadata from Technocean on Argos buoys manufactured in 2008. Uploaded some metadata into the JCOMMOPS database.
- Developed a new website page to display the DBCP monthly map archive (and latest maps) with a link to the PDF files for each. Emailed the panel to seek

feedback. Lots of good feedback provided. Will make this operational in December.

- Reviewed a summary of differences in Country statistics and platforms on the GTS between the OSMC and JCOMMOPS. Discussed differences with NOAA (Derrick Snowden)
- Began to document requirements for a new JCOMMOPS website with M Belbeoch. Menu structures and general layout were specified. A document will be produced to pass to Laurent Cros in December.

Data Sharing (Quality control and data timeliness) & GTS

- Manually forwarded QC Relay emails to ship operators where not included in Publication 47 or the JCOMMOPS database.
- Designed a diagram to describe the process of sharing data on the GTS for Argos and Iridium Buoys, based on input by C. Geiger, University of Delaware (Antarctic Buoy Operator)

Pilot Projects

- Iridium PP
 - Updated the website for plans and <http://www.icommops.org/dbcp/iridium-pp/>
- Prepared agenda and compiled Minutes of side-meeting
 - Updated Terms of Reference and passed to participants to review
 - Included new deployments in database.
 - Compiled a table for future commitments to assess maintenance and coverage of the network in 2009.

Documentation & Information Exchange

- Reformatted the DBCP Brochure onto 2 pages and updated the text based on input from the Panel. Another Draft nearly complete
- Developed matrix to identify documents of Best Practice and identify gaps. Contacted manufacturers to request new documentation and updates to those existing.
- Discussed DBCP website with IOC (T Gross and B Lee) requesting a login to the website for creating new pages and if it is possible to use the graphic designers to make the new site look good. Reviewed the JOOMLA functionality to become familiar with how to publish content on www.JCOMM.info
- Contacted KNMI (A van Londen) re deployment opportunities from VOS ships (no reply to date)
- Sourced information about Arctic Buoy deployment opportunities for Meteo France and IABP.
- Discussed the possibility of Antarctic Buoy deployments with a scientist who will be on the cruise of the Diamant early next year. Shared opportunity with GDP, but they thought it was too soon – may try again next year.
- Sent recent DBCP Technical Documents (Paper and CD ROM) to the Plymouth National Biological Library.
- Continued with DBCP Technical Document 3 updates
- Organisational tasks within CLS
 - JCOMMOPS migrated Email to MS Outlook Exchange

- Provided details to CLS Graphic Designer for updates of Business cards, envelopes and door label - to include OceanSITES (Hester) and SOT (Mathieu)

Task Team & Action Group support

- OceanSITES
 - Reviewed the GDAC metadata form as filled out by NDBC
 - Reviewed contents of the Site Catalog and data now available at GDACs
 - Provided some input for GCOS Progress Report to be delivered to the UNFCCC (A. Fisher) on OceanSITES status.
 - Contacted Tony Knap, Bermuda to request information about funding through POGO. No additional funds are available.
 - Visit to Scripps Institution of Oceanography, La Jolla, USA:
 - Met with Uwe Send to discuss updates to WhitePapers and email lists to be created. Began creating new email lists and discussing with IFREMER about moving the Data Management list to JCOMMOPS.
 - Attended the *Changing Times*: an international Ocean Carbon and Biogeochemistry Time Series Workshop.
 - Attended the meeting of the OceanSITES Steering Team (sub-group) to discuss preparations for the Changing Times workshop.
 - Discussed deployment opportunities with Steve Diggs, CDIAC.
 - Defined email aliases needed for the Project Office and configured email to send from the address projectoffice@oceansites.org for project office correspondence.
 - Downloaded a complete copy of the WHOI website and mapping files provided on an FTP site by WHOI (P White) to complete web review and look at how to transition the mapping and website management to JCOMMOPS.
 - Sent out some requests to existing OceanSITES participants to update their metadata documentation (White Papers) and review accuracy of web addresses on the OceanSITES website.

5.27.3 December 2008

Reporting, Meetings, Presentations & Administration

- Produced monthly maps and improved the process by :
 - All of the maps produced each month at JCOMMOPS are in both PNG and PDF file formats. I created a new script to convert all PDF maps created into PNG format automatically to save time
 - The same script also automatically generates the [web page with the currently available maps](#) (i.e. last month). This page now has a link to the [Google Earth](#) file of DBCP
 - Added new functionality with layers in PDF files and communicated this to the Panel with the Monthly Map email
 - Within the PDF files there are *Layers* which can be toggled on and off, for example to view Moored Buoys only.
 - Developed some [instructions on how to use this Layer function](#) in Adobe Acrobat which are available at:

- Undertook mid-term discussion and performance review with IOC Supervisor (based on 2 yearly cycle 2007-2009)
- Prepared travel plan and budgets for 2009
- Presented and attended a meeting with representatives from CLS' Oceanographic Section about use of Drifter and Argo data with Satellite Altimetry.
- Registered and provided an abstract for the [Tropical Atlantic and PIRATA](#) meeting to be held in Toulouse in Feb 2009.

Database & Metadata

- Entered metadata for Japanese buoys and TAO moorings.
- Followed up with CLS User Services about several Navoceano Buoys which were reporting strange locations onto the GTS.
- Provided some information about sources of Metadata to Robert Smith (UK MO)

Data Sharing (Quality control and data timeliness) & GTS

- Provided input to IPAB on the process for setting up a drifter using Argos or Iridium with GTS dissemination and corrected some text.
- Discussed the annual OSMC meeting (to be held in Feb 2009) and JCOMMOPS web map services with D Snowden (NOAA)
- Developed a full flow chart of the steps involved in setting up telecommunications for a buoy and putting data onto the GTS. It will need to go to the Panel for review before being submitted to assist in the JCOMM data management cookbook document and in identifying the steps involved in the full process and best practice. (see the image below)
- Followed up with the AWI Germany buoy manager about Argos IDs that are being used by Data Buoys and Argo Floats concurrently to ask that this does not happen again with instructions on how to better avoid it in future
- Updated some contact details for European programs to ensure the QC feedback works properly.

Pilot Projects

- Iridium PP
 - Updated the [website](#) for plans
 - Included new deployments in database and followed up with operators who had not notified of deployments.
 - Contacted James Duke (Navoceano) about possible participation in the Project. They may be interested down the track after some tests on Argo Floats.
- Argos 3
 - Reviewed the documents prepared by CLS for the DBCP Argos 3 pilot project (Manufacturers book to be published in early 2009 and Terms of Reference)
 - Set up the Argos 3 pilot project email list argos3-pp@jcommops.org

Documentation & Information Exchange

- Started to document navigation and user requirements for the new JCOMMOPS website.
- Completed a draft of DBCP Doc 3 Argos Location System and passed to CLS for review.

- Reformatted the DBCP Brochure onto 2 pages and updated the text based on input from the Panel. This will be submitted for review by the panel in Jan 2009.
- Drafted a Data Buoy Cooperation Panel Data Policy, which will be submitted for review by the panel. See: http://www.jcommops.org/dbcp/data_policy.
 - Provided this link to IODE for its SURVEY OF THE DATA AND INFORMATION MANAGEMENT PLANS OF IOC AND IOC-RELATED PROGRAMMES AND PROJECTS

Task Team & Action Group support

- OceanSITES
 - Web site review – began editing JCOMMOPS copy of the website for updates and additions
 - New Email lists created and populated for communications on OceanSITES matters
 - oceansites-dmt@jcommops.org OceanSITES Data Management Team. (active team members)
 - oceansites-dminfo@jcommops.org OceanSITES Data Manager news (non-active members only)
 - oceansites-st@jcommops.org
 - oceansites-guests@jcommops.org
 - Reviewed members of the existing OceanSITES data management mailing list to see which ones should appear on the new lists to be maintained at JCOMMOPS.
 - Reviewed the “Changing Times” Time Series workshop final report
 - Drafted a document on “What it means to be an OceanSITES site” for the participants of the “Changing Times” Ocean Time-series workshop and for IOCCP.
 - Reviewed site catalog naming and contents of data holdings
 - Collated email and documents to send out requests to PIs for each ocean basin to request that they confirm their ongoing interest and commitment to OceanSITES by updating the Whitepaper documentation prepared for your site(s) prior to 2006.
 - Compiled a 6-monthly report on activities completed (and commenced) for the Co-chairs
 - Requested that the OceanSITES data access and data policy documents be put onto the Website

5.27.4 January 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Meeting with Uwe Send in Paris
- Reviewed actions from the SOT IV meeting
- Prepared presentation for the [Tropical Atlantic and PIRATA](#) meeting to be held in Toulouse in Feb 2009.
- Reviewed the planned agenda for the NOAA OSMC Technical meeting adding items related to JCOMMOPS and metadata

- Provided some information and documentation to Mike Sparrow about deployment of drifting buoys in Antarctic waters and the Guidance on dumping at sea.

Database & Metadata

- Entered metadata ASCLME/NOAA cooperative moorings in the central Indian Ocean within the RAM A array, based on input from PMEL.
- Requested information from NDBC about TAO mooring deployments (servicing) as received in the past from PMEL.

Data Sharing (Quality control and data timeliness) & GTS

- Requested updated metadata for Spanish moored buoy network to be on the GTS BUFR format
- Updated the BUFR template for XBT data and worked through it with Bob Keeley. More changes were needed.
- Contacted the JCOMM DMPA Task Team on Table Driven Codes to explain the status of all JCOMM BUFR templates and the work required in coming months.
 - Monitored discussions about XBT unique identifiers in relation to BUFR templates.
- Sent out information to the JCOMM DMPA task team on Table Driven Codes to update them on the activity related to the XBT template and status of other templates
- Assisted someone at Coastal Ocean Science, Bedford Institute of Oceanography, Fisheries and Ocean Canada with information about how to share data from Iridium Beacons on the GTS.

Pilot Projects

- Iridium PP
 - Included new deployments in database and followed up with operators who had not notified of deployments.
 - Provided information about manufacturers for Iridium Buoys to South African Weather Service.
 - Updated buoy status for dead buoys based on information from operators
- Argos 3
 - Reviewed the documents prepared by the steering team chair for the Argos 3 pilot project
 - Maintained the Argos 3 pilot project email list argos3-pp@jcommops.org

Documentation & Information Exchange

- Reformatted the DBCP Brochure onto 2 pages and updated the text based on input from the Panel. Submitted to Panel for review. Good feedback received. Some feedback was easily added/changed, so more difficult.

Task Team & Action Group support

- OceanSITES
 - Web site review – began editing JCOMMOPS copy of the website for updates and additions

- Prepared an agenda for and met with Uwe Send to discuss Project Office coordination tasks, including
 - documentation and metadata for OceanSITES,
 - the OceanSITES website and database at JCOMMOPS.
 - support for Real-time data management
 - the OceanSITES meeting plans for 2009.
 - New Sites: Reviewed the “Changing Times” Time Series workshop station list (with Maria Hood) inventory of sites, preparing a spreadsheet of comments and an assessment (Y/N) of whether OceanSITES will follow up or not, with the timeseries sites.
 - Site Catalogue naming.
 - Funding and Travel
- Reminded PIs to send through the updated Whitepaper documentation. Began reviewing the documents sent
- Began to design Database model to hold the information for each site within the JCOMMOPS database.

5.27.5 February 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Attended the Tropical Atlantic and PIRATA meetings at Meteo France in Toulouse, presenting about DBCP and JCOMMOPS.
- Prepared documents for and reviewed items to discuss at the OSMC Technical Meeting in February.
- Attendance and presentation at the annual meeting of the NOAA Observing System Monitoring System on the 24th and 25th of February, at NGDC, Boulder Colorado to discuss data management and metadata, as well as the status of the Buoy Network. Attended information session with Derrick Snowden, chair of the Meta-T pilot project and staff at NGDC about SensorML, Sensor Web Enablement, ISO standards for Metadata management. ([Mission report](#)) Also met briefly with Scott Woodruff.
- Contacted SA Instrumentation (Gavin Fleming) about an [article](#) written about Sensor Web Enablement which referred to Ocean Observations. Requested further detail, for input to the Meta-T project, but he referred to a [US website](#) showing IOOS data which Derrick Snowden already knew about (see also <http://www.oostethys.org/>).
- Reviewed actions from the SOT IV meeting, worked on reports to be drafted by JCOMMOPS and on behalf of the Task Team on Coding, and completed various action items
- Continued to work with M Belbeoch on work for SOT and knowledge transfer. Updated callsign masking files and explained the process to M Belbeoch for input to the report for the SOT TT on CallSign Masking.
- Sent requests to SOOPIP operators to provide metadata for the 2008 Annual SOOP Line Sampling Report. Sent documents to Derrick Snowden about the development of the SOOP database and SOOP Line Sampling Indicators application for use during the OSMC meeting.

Database & Metadata

- Entered metadata for ASCLME/NOAA cooperative moorings in the central Indian Ocean within the RAMA array, based on input from PMEL (P Freitag).
- Requested information from PMEL/NDBC about TAO mooring deployments (servicing) as received in the past from PMEL (P Freitag, B Burnett).
- Documented the process undertaken for the SOOP Annual Survey for AOML (S Pochyn) to explain the database contents and the analysis completed, based on a request to understand how the sampling success was assessed. Encouraged her to use the existing tools.

Data Sharing (Quality control and data timeliness) & GTS

- Continued to work on the review of the XBT BUFR template with Bob Keeley and members of the JCOMM task team on Table Driven Codes.
- Sent requests to WMO (Atsushi Shimazaki) for new entries in the Common Code tables (C-3&C-4) for Marine mammals and for Arctic Instruments i.e Polar Ocean Profiling System (POPS) and Ice-tethered Profiler (ITP))
- Informed CLS of drifting buoys reporting locations of (0,0) several times a day. Problem now fixed. Also contacted them about one buoy broadcasting from land (at a manufacturer) which was subsequently taken off the GTS.

Pilot Projects

- Iridium PP
- Argos 3

Documentation & Information Exchange

- DBCP Brochure - updated the text based on input from the Chair.
- Provided information (from the SVPB Manual) to AOML (Rick Lumpkin) and PMEL (Mike McPhaden) about the make of Barometers used on drifters, to answer a query during the PIRATA meeting.
- DBCP Technical Document 4 – SVPB manual requested input from Meteo France (Pierre Blouch) and began incorporating additional information about Iridium telecommunications.
- Gathered and Shared deployment opportunities in monthly email.
- Contacted IPAB Chair (C Haas) about participation by South Africa. (no response yet, will follow up again)
- Sent a copy of th DBCP Tech Doc 8 to IODE (B Gelfeld)
- Due to excessive Spam via the Icelandic Met Office and changes in personnel, the email list has been moved to the JCOMMOPS email list server
 - Created a new email distribution list (dbcp-qc@jcommops.org) to take over buoy-qir@vedur.is. Added all existing members of Icelandic list and some extras from the PMOC list in the JCOMMOPS database.
 - Contacted QC centres producing Buoy Monitoring Stats and asked them to change the email they send the monthly file to dbcp-qc@jcommops.org

Task Team & Action Group support

- OceanSITES

- Began planning for a meeting of the Data management and Steering Teams before OceanObs '09.
- Familiarisation with the SensorML documents developed by NDBC (from Bill Burnett & Christopher Taylor) and IFREMER (from T Carval) to describe OceanSITES platform metadata.
- Reminded PIs to send through the updated Whitepaper documentation. Continued reviewing the documents sent
- Began to design Database model to hold the information for each site within the JCOMMOPS database.

5.27.6 March 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Attended the JCOMM Observations Coordination group meeting ([mission report](#))
- Prepared documents for SOT IV meeting, worked assessment of SOOP line sampling success over the last 6 years.
- Continued to work with M Belbeoch on work for SOT and knowledge transfer. Updated callsign masking files and explained the process to M Belbeoch for input to the report for the SOT TT on CallSign Masking.
- Sent requests to SOOPI operators to provide metadata for the 2008 Annual SOOP Line Sampling Report.

Database & Metadata

- Worked on content for the OceanObs Metadata Whitepaper
- Entered information from PMEL/NDBC about TAO mooring deployments (servicing) as received in the past from PMEL (P Freitag, B Burnett).
- Prepared a new Database view for daily buoy metadata to be exported to Google Earth in kml format ([see the link here](#) which will open directly in Google Earth as long as it is installed)
- Sent out final reminder about the SOOP metadata to be reported by SOOP Operators for 2008 and completed initial counts based on the submissions

Data Sharing (Quality control and data timeliness) & GTS

- Continued to work on the review of the XBT BUFR template with Bob Keeley and members of the JCOMM task team on Table Driven Codes.
- Sent requests to WMO (Atsushi Shimazaki) for new entries in the Common Code tables (C-3&C-4) for Marine mammals and for Arctic Instruments i.e Polar Ocean Profiling System (POPS) and Ice-tethered Profiler (ITP))
- Informed CLS of drifting buoys reporting locations of (0,0) several times a day. Problem now fixed. Also contacted them about a buoy broadcasting from land.

Documentation & Information Exchange

- DBCP Technical Document 4 – SVPB manual requested input from Meteo France (Pierre Blouch) and began incorporating additional information about Iridium telecommunications.
- Began to plan JCOMMOPS Community White Paper for OceanObs

Task Team & Action Group support

- OceanSITES
 - Assisted EuroSITES representative with WMO number allocations for 8 buoys
 - Reminded PIs to send through the updated Whitepaper documentation. Continued reviewing the documents sent and performed preliminary inventory to assess how many buoys were considered Air-Sea Flux reference sites
 - Reminded PIs and data managers to send through the updated metadata documents for the GDACs
 - Discussed the site catalog with various members of the Data management group
 - Updates to the website
 - Provided input for OOPC about Air-Sea Flux reference sites including a map
 - Designed Database Model to hold the information for each site within the JCOMMOPS database.

5.27.7 April 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Included Wave observations on the Monthly Map of Sensors (Types of data on the GTS)
- Finalised new Google Earth File for Daily Updated GTS data ([see the link here](#))
- Prepared presentations for SOT IV meeting
- Worked on SOOP Line Sampling report for 2008, sent out preliminary results to SOOP Operators.
- Requests to WMO for travel throughout 2009, organized quotations for May travel.

Database & Metadata

- Drafted OceanObs JCOMMOPS CWP and worked on inputs to Metadata CWP
- Updated scripts for XML outputs both daily and monthly, containing Buoy metadata from the JCOMMOPS database, the resulting files will be updated automatically , each day, with platforms which were in some way modified the day before - [daily](#) and [monthly](#). There are CSV files also [<http://www.jcommops.org/FTPRoot/CSV/>](http://www.jcommops.org/FTPRoot/CSV/) (semi-colon delimited text) in the same place.
- Contacted BSH Germany about incorrect Batch Dates provided in the 2008 SOOP Metadata,

Data Sharing (Quality control and data timeliness) & GTS

- Followed up with QC Centres (US, France and Australia) about a few missing Buoy Monitoring Statistics files for recent months.
- Contacted Meteo France (C Bataille) about missing Daily GTS statistics files.
- Contacted Australian BOM Data Manager (K Wong) about Tide Gauge data reporting on the GTS with ambiguous WMO Ids.
- Provided information to CLS (Y Bernard) about extents of Ocean Basins for the development of a Delays analysis tool per Basin.

- Organised a meeting and agenda about VOS BUFR templates just before SOTV in Geneva.

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database
 - Reviewed inactive buoys and updated documentation. (updated GMAIL account filters and folders)
 - Requested information about unknown buoys reporting to the GMAIL address.
- Argos 3

Documentation & Information Exchange

- Completed a final draft of the DBCP Brochure
- Developing new layout and content for the DBCP Website
- Provided inputs to WMO for the DBCP Annual Report
- Assisted the Argo TC with Map Data for The Newspaper Süddeutsche Zeitung about floats which had covered the greatest distance in the ocean.
- Updated national focal point contact information for South Korea
- Began creating DBCP web pages on www.jcomm.info (draft only)
- Provided some draft text to IOC about changes in TC roles in JCOMMOPS, for the JCOMM Newsletter
- Discussed deployments in the Eastern Atlantic with a representative from Total and GDP.
- Assisted Ed Harrison with some JCOMM/DBCP status maps for a meeting of the Atmospheric Observing Panel for Climate
- Added a Satellite Buyers guide (from D Meldrum) to draft DBCP Best practices web page <http://www.jcommops.org/dbcp/bestpractice.html>

Task Team & Action Group support

- OceanSITES
 - Continued reviewing the documents sent
 - Reminded PIs about the potential meeting in Venice.
 - Reminded PIs and data managers to send through the updated metadata documents for the GDACs
 - Discussed the site catalog with various members of the Data management group
 - Checked GDAC data holdings
 - Continued on design of Database Model to hold the information for each site within the JCOMMOPS database.
 - Contacted several PIs about additional funding for OceanSITES
 - Contacted the OceanObs conference Hotel Bookin service to see if they could offer assistance with booking for the OceanSITES meeting.
 - Provided information to Woods Hole on sharing Mooring data on the GTS (Iridium services at CLS America)

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Prepared all JCOMMOPS presentations for SOT meeting.
- Attended and presented at the SOT meeting. Mission Report: http://www.jcommops.org/FTPRoot/DBCP/status/Missions/2009/hviola_geneva_report_200905.doc
- Sent out preliminary results for the SOOP Annual Line Sampling Report (2008) to SOOP participants for review.
- Attended the DBCP Pilot Projects for waves –WET,WMD Workshops. Mission report: http://www.jcommops.org/FTPRoot/DBCP/status/Missions/2009/hviola_sandiego_report_200905.doc
- Visited Pacific Gyre to see new production, implementation of Iridium buoys, and discuss the new drifters being produced.
- Attended and presented at the E-SURFMAR data buoy technical advisory group
- Met with EuroSITES staff at NOCS about OceanSITES data management, new sites and the project goals. Mission Report: http://www.jcommops.org/FTPRoot/DBCP/status/Missions/2009/hviola_southampton_report_200905.doc

Database & Metadata

- Updated the monthly GTS statistics April as there were errors in the loading.
 - Updated the script to calculate country statistics for February and April as the statistics were being calculated incorrectly for a majority of buoys when the CLS GTS processing chain was switched to backup (so one buoy transmitted from both centres in the month, but only one set of statistics were being tallied) – problem resolved.
 - Recalculated all statistics for Feb-April.
- Provided some details to the OSMC developers about how WMO number allocations are handled in the JCOMMOPS database.
- Provided information to Mike Johnson (NOAA), based on a query about the contributions by Japan to the Observing system components.
- Sent information to Andy Sybrandy, Pacific Gyre about metadata which he could send as a text file for all buoy manufactured to create buoy metadata before deployments.

Data Sharing (Quality control and data timeliness) & GTS

- Contacted Meteo France (C Bataille) about including Wave Buoys (Spain BUFR and other WAVEOB messages) in monthly statistics. i.e. additional information in the daily and monthly Statistics (<ftp://ftp.meteo.fr/pub/ludjet/charpentier/>) that Meteo France provides.
 - To include the WAVEOB data type = MMXX FM 65-XI (for buoys i.e. numerical WMO codes of 5 digits)
 - and messages going out in FM96 BUFR from Spanish Wave buoys, which includes Directional wave information
- Provided information to IFREMER about obtaining WMO identifiers.
- Assisted Brazil with some information about data on the GTS via CLS. Asked them to correct the data flow of a mooring (31478) sending data with a Drifting Buoy

WMO ID (31978)

- Worked with M Belbeoch on Monthly Maps for SOT and looking at Statistics for data on the GTS in April – identified a problem in the JCOMMOPS database.
- Assisted ISDM Canada with a query about discrepancies between BUOY messages and BUFR messages – requested CLS to provide a list a of all BUFR Bulletin Headers.

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database
- Argos 3
- Waves
 - Sent request to Japan (Jaxa and JMA) about wave drifter technologies in use and to ask if there was anyone at the organizations who would be interested in participating in the Pilot Project for Drifters.

Documentation & Information Exchange

- Continued developing new layout and content for the DBCP Website
- Finalised OceanObs JCOMMOPS CWP and worked on inputs to Metadata CWP
- Completed a final draft of the DBCP Brochure
- Sent deployment opportunity information , i.e. details of ships in use in the Gulf of Guinea (by Total Energy) to GDP.
- Continued creating DBCP web pages on www.jcomm.info (draft only) and discussed the contents for the OPA section with Candyce Clark
- Provided a background document for the DBCP Wave Pilot Project workshops containing network status information relating to Wave data on the GTS (http://www.jcommops.org/FTPRoot/DBCP/meetings/2009/WAVE_WORKSHOP/DBCP_GTS_WAVES_WIND.pdf)
- Sent out a query (forwarded by BOM, G. Ball) about a buoy which was recovered on the Australian coast.
- Participated in several meetings about VOS BUFR templates during SOTV in Geneva.
- Finalised a response to the JCOMM TT-TDC (B Keeley) about updating the XBT BUFR template based on information from SOT members. Reviewed the updated template and updated the site.
http://www.jcomm.info/index.php?option=com_oe&task=viewDoclistRecord&doclistID=76
- Request from Diane Stanitski for information about the Drifter 1250 - Provided some photos and a map of the track and a google earth file for visualizing the track.

Task Team & Action Group support

- OceanSITES
 - Provided information to WHOI about GTS data dissemination and Iridium Data Processing at CLS America
 - Provided a summary of progress in receiving updated documentation and continued reviewing the updated documents sent.
 - Sent final reminder to PIs about the potential meeting in Venice and confirmed with all OceanSITES member that the meeting would go ahead.

- Set up JCOMM meeting website www.jcomm.info/oceansites2009. Entered details of additional PIs into the JCOMM.info website database.
- Prepared a logistical information document for the OceanSITES 2009 meeting
- Contacted Roberta Boscolo about OceanSITES sites, she gave the contact details of other PIs who had taken over.
- Reminded PIs and data managers to send through the updated metadata documents for the GDACs
- Made several requests to GDACs to change directory names and to synchronise data between the two GDACs each day.
- Met with Uwe Send and Matthias Lankhorst about the OceanSITES documentation and site catalog as well as data processing at Scripps.
- Consulted with several PIs about additional funding for OceanSITES and worked with DBCP Chair and secretariat on how to approach India about additional funding.

5.27.9 June 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html>
- Attended and presented at the GODAE Observing System Evaluation workshop and parts of the GODAE Ocean View meeting (Toulouse)
- Began planning for DBCP 25 documents. Contacted Meteo France about the Iridium PP and the participants in the Southern Ocean Buoy Program to ask about plans for Buoys to be deployed south of latitude 40S in 2009-10.

Database & Metadata

- Worked on the draft Metadata Community Whitepaper for OceanObs 09. Discussed the content and structure with D Snowden.
- Followed up on request from IODE (P Pissierssens) about database volumes for all DBCP data at ISDM.

Data Sharing (Quality control and data timeliness) & GTS

- Corresponded with GHRSSST (C Donlon) about requirements for interactions with DBCP. Requested details from UK Met Office on how much the High Resolution SST Satellite (GHRSSST) are used in reviewing Data Buoy Quality.
- Provided a description to Australia BOM (R Proctor and E Schultz) about putting Southern Ocean Timeseries/OceanSITES data onto the GTS in a SHIP message, BUFR format and described the requirements for WMO numbers to the National Focal Point (G Ball).
- Table Driven Codes
 - Updated the BUFR template document for XBT at http://www.jcomm.info/index.php?option=com_oe&task=viewDoclistRecord&doclistID=76 based on feedback from the JCOMM Table Driven codes team.
 - Compiled the outcomes of the May meetings about the VOS BUFR templates into a document for the meeting participants to review
 - Sent a request to the WMO Secretariat (A Shimazaki) to check on the

progress of additions to code tables C-4 and C-3 made in February.

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database
 - Placed all new message format descriptions from Meteo France onto <http://www.jcommops.org/dbcp/iridium-pp/findings.html>
 -
- Argos 3 – Followed up about deployment plans with AOML and Scripps
- Waves
 - Sent a reminder to Japan (Jaxa and JMA) about wave drifter technologies in use and the Pilot Project for Drifters.
 - Created a map of all known Wave buoys (including Spanish and Australian buoys) for the OceanObs 09 Community White Paper lead by V Swail.

Documentation & Information Exchange

- Continued revising DBCP Website content
- Entered new pages into www.jcomm.info for [OPA](#), [DBCP](#) and [OceanSITES](#) and sought feedback from stakeholders
- Provided some photos of the deployment and a Google Earth file of the track of Global Drifter 1250 to NOAA (D Stanitski) for World Ocean Day
- Provided some details on contact points to IOC for invitation to the DBCP-25 meeting.
- Based on an action item from the SOT meeting in may, produced a SOOP text file summarizing all of the lines that each ship has sampled in recent years for ISDM Canada
http://www.jcommops.org/FTPRoot/SOT/SOOP/Survey/CALLSIGN_LINE_SUMMARY_2004-09.txt
- Provided a summary of the DBCP presentation to E-SURFMAR and documented a request for a text file of deployments each month plus a 2nd text file with buoys that stopped operating (information contained only in PDF format at the moment).
- Reminded KNMI about possibilities for deployments from VOS vessels.
- Contact BOM (K Jarrott) about printing the DBCP brochure.
- Provided Technical Documents to D Guerrini at the Italian Navy.
- Provided some information to JouBeh about GTS distribution and the automatic QC needed, based on DBCP Technical Document 2.
- Sent information to Turkmenistan about buoy manufacturers.

Task Team & Action Group support

- TT Instrument Best Practice - Provided a document to the Instrument Best Practice task team about Battelle Memorial Institute creating a new CO2 buoy.
- IABP
 - Provided a presentation on DBCP & JCOMMOPS Status for the IABP-19 meeting
- ISABP
 - Updated the ISABP website to include the revised Operating Principles document and the meeting report from 2008.

- Added entry on the website for the 2010 ISABP XIII meeting in Buenos Aires.
- OceanSITES
 - Managed attendance lists for the OceanSITES 2009 meeting (<http://www.jcomm.info/oceansites2009>)
 - Reminded PIs and data managers to send through the updated metadata documents for the GDACs. Followed up with Data Assembly Centers about providing OceanSITES data and metadata. Worked with WHOI, INCOIS and MBARI on data flows.
 - Updates to the website for new data servers, 2009 meeting and removed duplication in references to documents.
 - Compiled an update to the Site Catalog (<http://www.jcommops.org/FTPRoot/OceanSITES/documents/>) and requested that the GDACs update directory names to match it and manage old data files (NetCDF version 1.0), so that they do not appear in the Index files. Sent out an email to the Data Management Team to request they review the contents.
 - Provided a description to Australia BOM/CSIRO about putting Southern Ocean Timeseries/OceanSITES data onto the GTS in SHIP format, BUFR format and how to put the data into OceanSITES NetCDF format
 - Described the requirements for WMO numbers to comply with the OceanSITES numbering system to several operators.
 - Made several requests to GDACs to change directory names and to synchronise data between the two GDACs each day. (<ftp://data.ndbc.noaa.gov/data/oceansites/> & <ftp://ftp.ifremer.fr/ifremer/oceansites/>).
 - Spoke with Bill Burnett about how to manage the updates to directory structures and which sites should be considered part of the OceanSITES network. Provided some information about metadata requirements to IFREMER (C Robin)
 - Sent requests to several PIs of potential new OceanSITES sites to request that they provide documentation about the sites.
 - Draft Status of the OceanSITES network updated:
Sent multiple reminders to PIs about document updates, required by end of June.
Compiled the documents received into Ocean Basin documents and 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_2009.xls
The list is based on feedback from most OceanSITES participants
A few of the sites that show up on the map as discontinued may still in fact be active(no information received).
PDF:
http://www.jcommops.org/FTPRoot/OceanSITES/maps/200906_STATUS.pdf
PNG:
http://www.jcommops.org/FTPRoot/OceanSITES/maps/200906_STATUS.png

Google Earth (.kmz):

http://www.jcommops.org/FTPRoot/OceanSITES/status/200906_oceansites_locations.kmz

5.27.10 July 2009

Reporting, Meetings, Presentations & Administration

- Produced monthly maps : <http://www.jcommops.org/DBCP/dbcpmaps.html> and JCOMM-wide maps
- Prepared a document for the NOAA Observing System Monitoring Center on JCOMMOPS coordination and covering action items from the previous meeting.
- Attended the meeting of the NOAA Observing System Monitoring Center, [Seattle, USA 20-24 July 2009](#). Met with Derrick Snowden and Steven Hankin about the user interface and mission of the OSMC. Met with Meghan Cronin about OceanSITES and Paul Freitag and Mike McPhaden about OceanSITES and DBCP.
- Prepared documents for DBCP-25.
- Prepared a draft agenda for the OceanSITES Data Management Team meeting (with B Burnett) and compiled the draft Steering Team meeting minutes into a single draft agenda.
- Compiled draft letters to POGO, JCOMM and OOPC concerning the new OceanSITES Executive Committee.
- Reviewed JCOMM III draft document about OPSC

Database & Metadata

- Discussions with Derrick Snowden about the OceanObs 09 Community White Paper on Metadata.
- Sent a request to Meteo France (C Bataille) to include all Wave Buoys (especially the Spanish ones transmitting in BUFR) in the monthly GTS statistics provided to JCOMMOPS, with details about formats and requirements.
- Produced the [Annual SOOP Metadata text file](#) based on the 2008 Line Sampling report for NODC and explained to the Argo TC about how to produce it.
- Reviewed the OSMC read-ahead documents and commented on plans for defining unique URNs for the database based on a combination of WMO ID and Date for DBCP and the platform code (as documented in the Site Catalog) for OceanSITES.

Data Sharing (Quality control and data timeliness) & GTS

- Responded to a query from BOM (C Sirakoff) about the continuity of their Buoy Monitoring Statistics as they are updating their models and will need to redevelop the routines.
- Spoke with Mr. S PASQUINI at the Italian met Office about GTS data formats, GTS distribution and ODAS metadata requirements for planned moorings and sent DBCP Technical documents 2 and 8.
- Reminded members of the JCOMM Task Team on Table Driven Codes about the updated XBT BUFR template. Sent the final version to the Expert Team on Data Representation and Codes for review.
- Provided a list of GTS bulletin headers for Spain's PDE buoys (BUFR) to NDBC for

the OSMC.

Pilot Projects

- Iridium PP
 - New deployment metadata entered into database
- Argos 3
 - Assisted CLS and project participants with sourcing WMO ids.
- Waves

Documentation & Information Exchange

- Continued revising DBCP Website content and layout
- Updated new pages into www.icomm.info for [OPA](#), [DBCP](#) and [OceanSITES](#). in consultation with C Clark (and advice from T Gross)
- Completed updates to DBCP Technical Document 3 for review by CLS.
- Updated http://www.icommops.org/network_status/ with an improved map from the OSMC (no Javascript required).

Task Team & Action Group support

- Provided input to the Task Team on Data Management Report for DBCP-25
- Compiled inputs on the Southern Ocean Buoy Program for the DBCP-25 report
- OceanSITES
 - Draft Status of the OceanSITES network:
 - Synthesized newly provided documents into the existing metadata and updated the status documents. On the [FTP server](#)
 - Sent reminders to participants to review the documents.
 - Reminded all DACs about the commitments made to providing data and metadata to the GDACs
 - Created an OceanSITES letterhead template for use in official communications.
 - Sent out invitation letters to those meeting participants who requested them.
 - Completed updates to the OceanSITES website for Contact information and Data links.

APPENDIX A

DBCP BROCHURE



The brochure features a background image of a turbulent sea with a person in a small boat. The DBCP logo is in the top left, and the title 'DATA BUOY COOPERATION PANEL' is in large white letters on the right. A blue banner below the title contains the mission statement. The main body is divided into three sections, each with a blue text box on the left and a corresponding image on the right. The first section is about improving forecasts, the second is about ships' role, and the third is about how mariners can help. Contact information is at the bottom right.

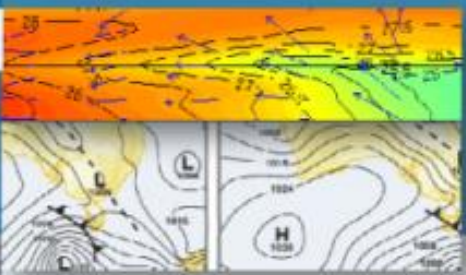
DBCP
WMO - IOC
DATA BUOY COOPERATION PANEL

DATA BUOY COOPERATION PANEL

» Increasing the quantity, quality and timeliness of atmospheric and oceanographic data in ocean areas, where few other measurements are taken.

IMPROVING GLOBAL FORECASTS OF WEATHER & OCEAN CONDITIONS

» Data buoys measure air pressure, temperature (sea-surface & air), ocean current velocity and wind velocity across all oceans. These observations are relayed by satellite and used immediately to improve forecasts and increase marine safety.




SHIPS AHOY!

» Most drifting buoys are deployed by commercial ships and research vessels. Without such cooperation, the global buoy network of over 1250 drifting buoys and 400 moored buoys could not exist today and would be hard to sustain in future.



HOW CAN MARINERS HELP?

» The DBCP is looking for ships to be part of this global effort, because it continually needs more buoys deployed to maintain the network. Buoys are pre-packaged for easy deployment, from the lowest deck or ramp, whilst underway.




Contact: support@jcommops.org
<http://www.jcommops.org/dbcp>

The DBCP is an international program coordinating the use of autonomous data buoys to observe atmosphere and ocean conditions, for forecasting and research.

The DBCP was formed in 1985, as a joint body of the World Meteorological Organization (WMO) and Intergovernmental Oceanographic Commission (IOC) of UNESCO. It makes up the data buoy component of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM).

The DBCP was the first component of the Global Ocean Observing System (GOOS) to achieve its initial goal, when in 2005, it deployed its 1250th drifter, meaning at least one buoy in every 500 x 500 km square.



Global Drifter (GDP)


WHERE THE ACTION IS

Much of the work achieved by the DBCP is through Action Groups. Each group maintains an observational buoy program that supplies data for operational and research purposes.

The DBCP has the following action groups:

- Global**
 - The Global Drifter Program (GDP)
 - OceanSITES (long-term, deepwater reference stations)
- Regional**
 - Tropical Moored Buoy Implementation Panel (TAO, TRITON, PIRATA, RAMA)
 - European EUCOS Surface Marine Programme (E-SURFMAR)
 - International Arctic Buoy Programme (IABP)
 - International South Atlantic Buoy Programme (ISABP)
 - North Pacific Data Buoy Advisory Panel (NPDBAP)
 - International Buoy Program for the Indian Ocean (IBPIO)
 - International Programme for Antarctic Buoys (IPAB)


http://www.jcommops.org/dbcp/dbcp_ag.html




DBCP Action Group Map

DATA BUOYS


- Data Buoys, whether drifting or moored, measure and transmit automatically, in a predictable and controlled way, communicating in real time via satellite systems such as Argos and Inmarsat. Data buoy observations make significant contributions to our ability to model, understand and describe global weather and climate on all time and space scales. The data collected complements or validates data from other platforms (such as from Voluntary Observing Ships) and remotely-sensed data.
- Drifting Buoys, generally attached to some form of drogue or sea-anchor, are easy to deploy and reliably measure the atmosphere and ocean surface conditions for an average of 18 months. They track ocean currents at the depth corresponding to the length of their drogue and are relatively inexpensive to operate. The DBCP has been working for decades to design standardised drifting buoys to suit observational requirements for meteorological and oceanographic applications.
- Moored Buoys are anchored at fixed locations and regularly collect observations from many different atmospheric and oceanographic sensors. Moored buoys are usually deployed to serve national forecasting needs, maritime safety needs or to observe regional climate patterns. They are generally upgraded or serviced yearly.



A Drifting Buoy at sea




Drifting buoys during manufacture





A Moored Buoy being serviced

GET INVOLVED

- **Membership**
All IOC and WMO member states are invited to participate in the DBCP. Panel membership is also open to any other interested parties, such as buoy manufacturers, data users, researchers and ship operators.
- **Contact**
Ms Hester Viola
DBCP Technical Coordinator
JCOMMOPS
8-10 Rue Hermes
Parc Technologique du Canal
Ramonville Saint Agne 31520
FRANCE
Tel: +33 5 61 30 47 82
Email: support@jcommops.org

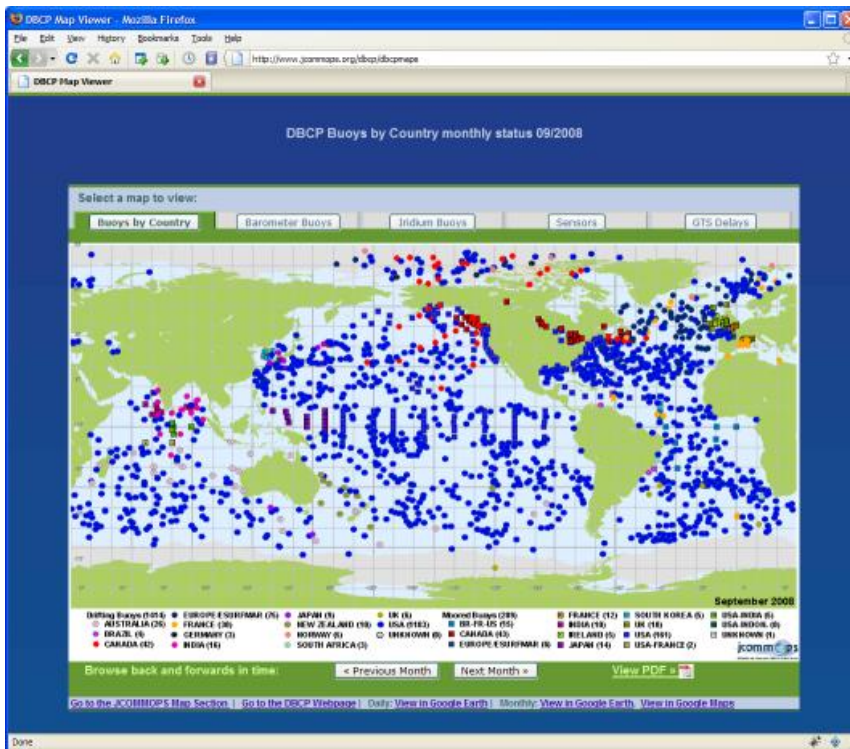



www.jcommops.org/dbcp www.ioc-unesco.org www.jcommops.org

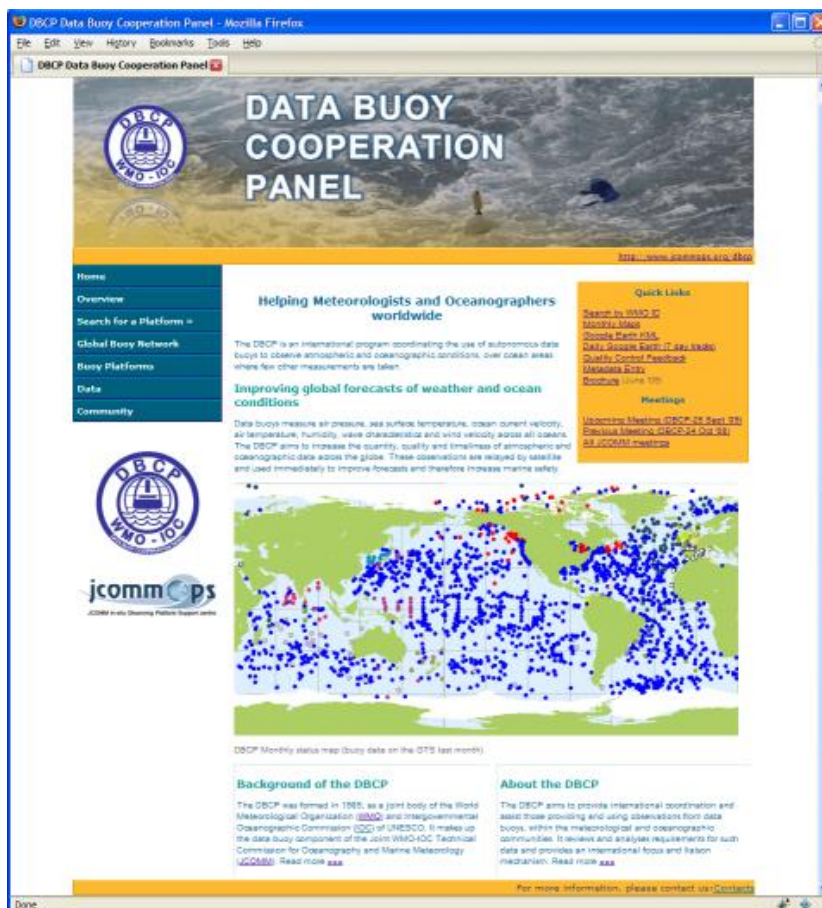
JCOMMOPS Buoy Observing Platform support centre

APPENDIX B

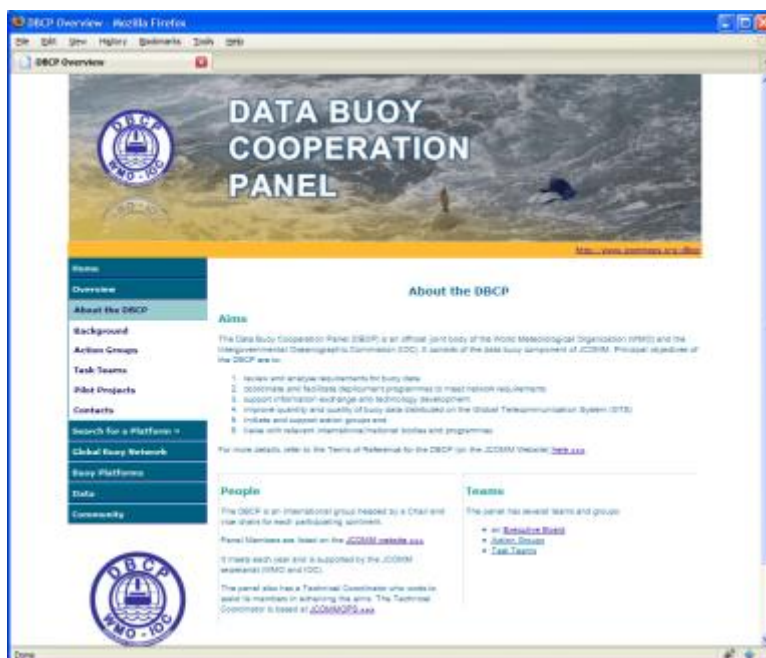
DBCP WEBSITE



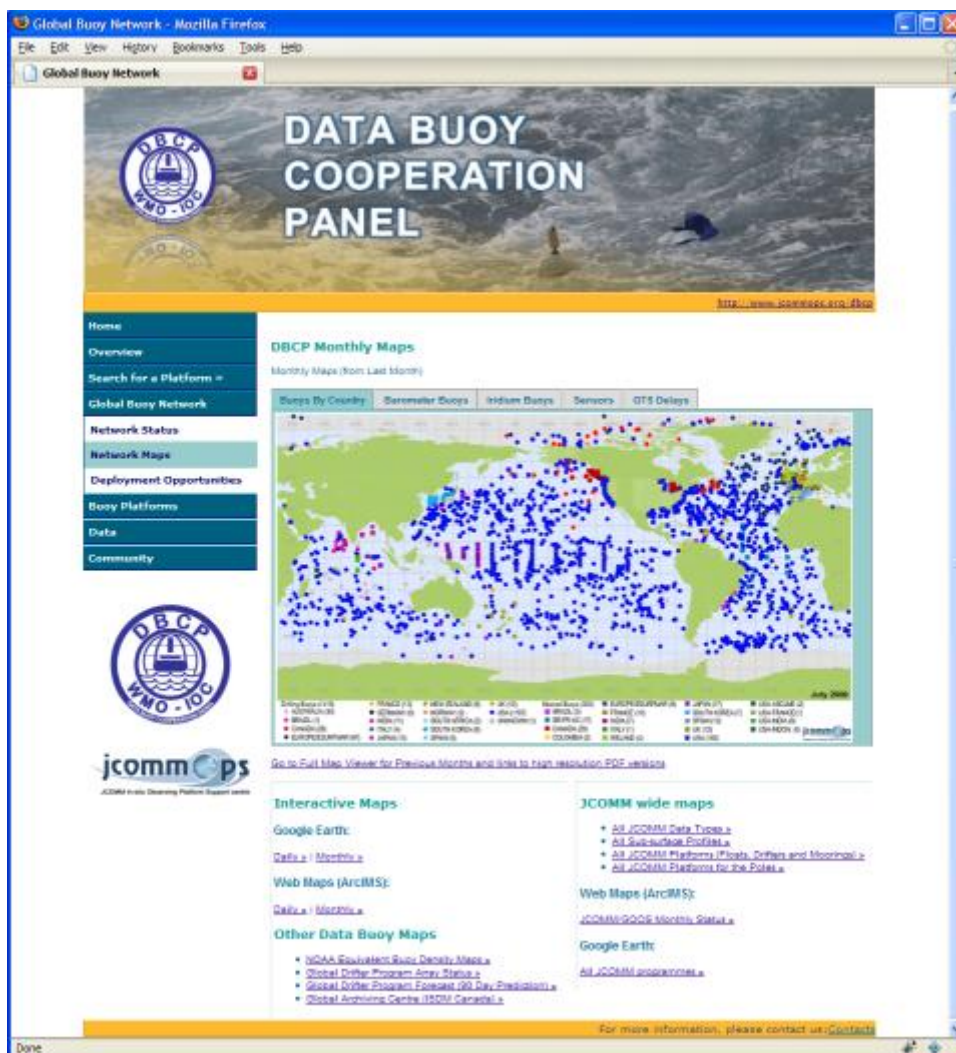
New Maps page: <http://www.jcommops.org/dbcp/dbcpmaps>



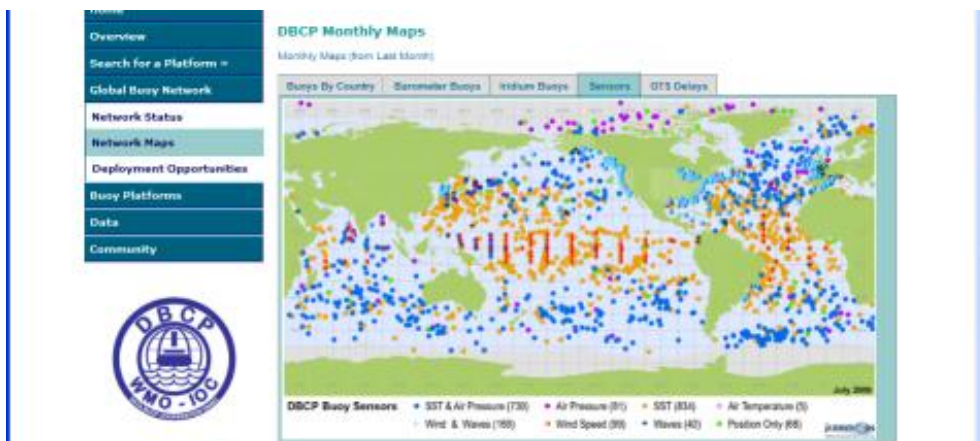
Example of Front page



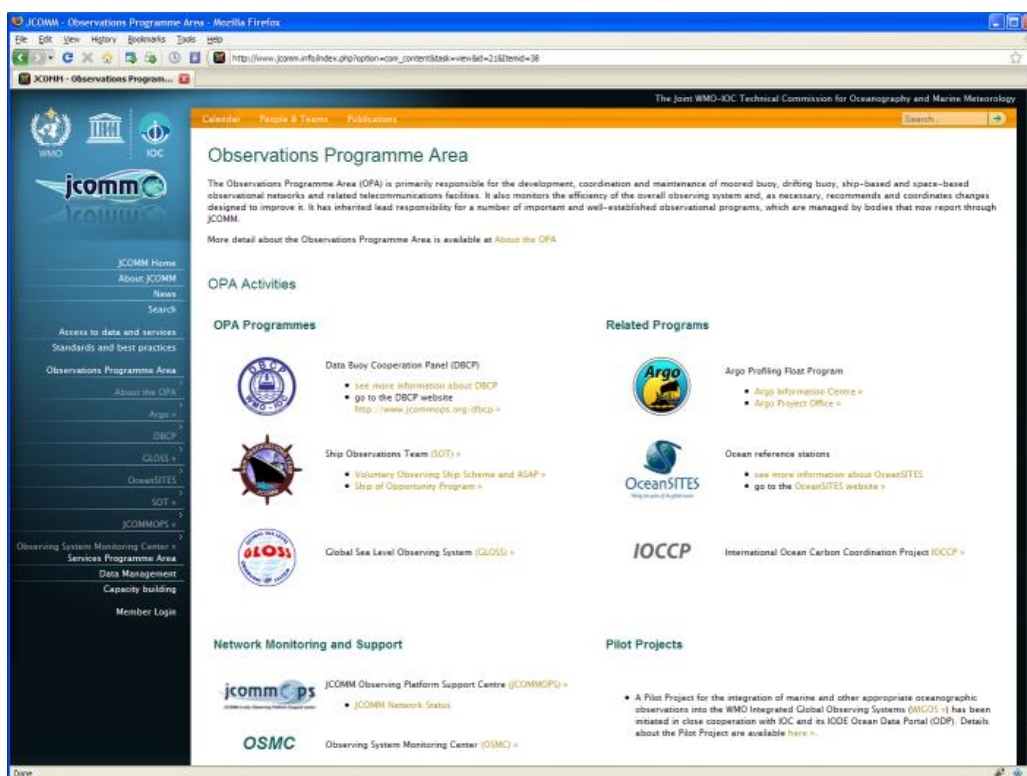
About the DBCP page



Sample of new DBCP maps front page



All current monthly maps visible on the Network Maps page



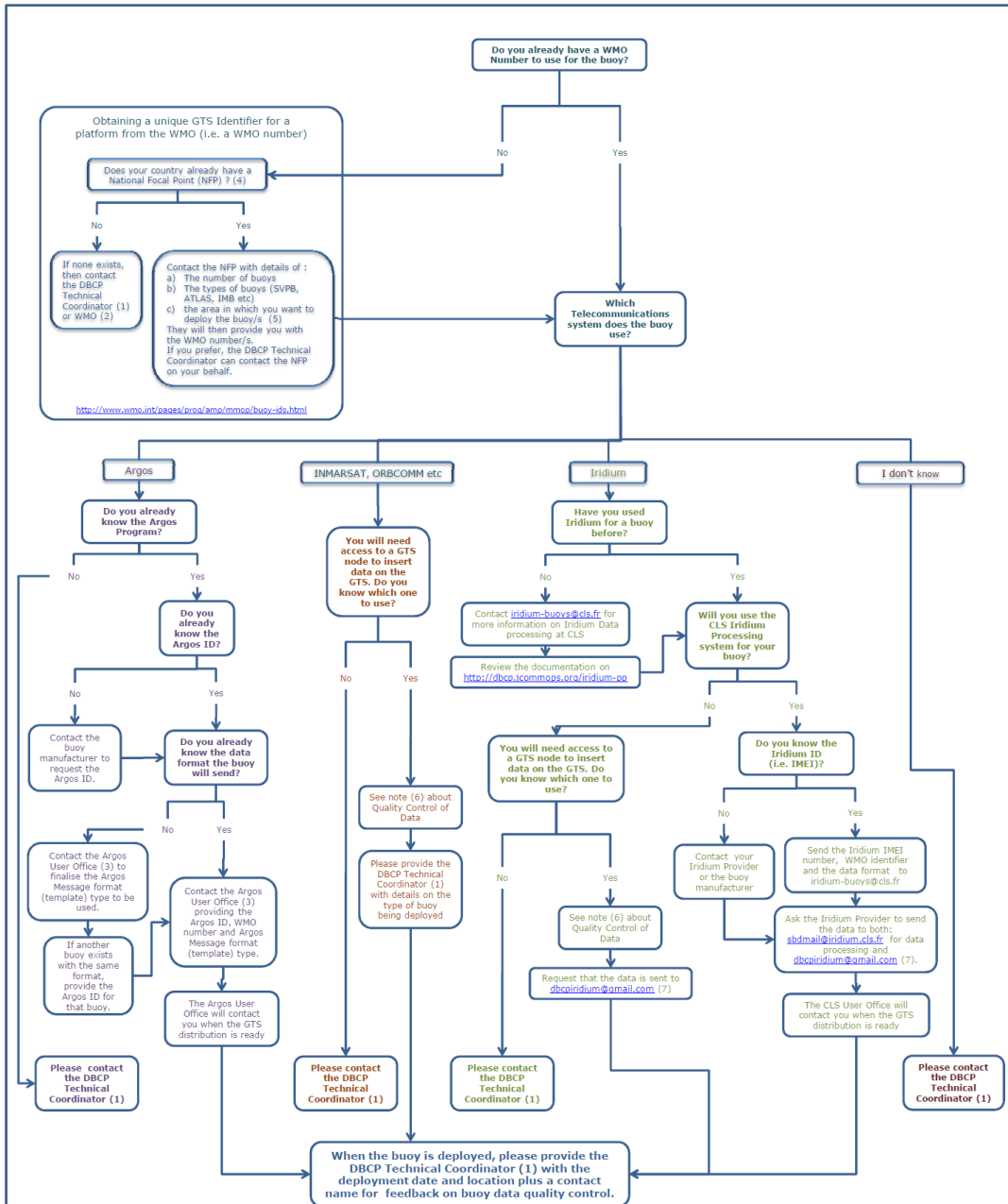
New content on www.jcomm.info for the Observations Programme Area

The screenshot shows the 'About the DBCP' page on the JCOMM website. The page is titled 'About the DBCP' and is part of the 'The Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology'. The main content area includes sections for Background, Mission, Goals, Structure, Action Groups, and Pilot Projects. A world map is displayed, showing various Action Group regions such as KPARA, TRITON, TAG, C-SURFMAP, IBPAC, BANGKOK, and IPAB. The page also includes a navigation menu on the left and a search bar at the top right.

New content on www.jcomm.info for the DBCP under the Observations Programme Area

APPENDIX C

GTS DATA FLOW CHART



DBCPC Diagram Sharing Data on the Global Telecommunications System of WMO – step by step process

Contacts and further information

- (1) DBCP Technical Coordinator : Hester Viola. viola@icommops.org
- (2) World Meteorological Organisation; Etienne Charpentier charpentier@wmo.int
- (3) Argos User Office: useroffice@cls.fr
- (4) National Focal Points for Buoy Programmes: http://www.icommops.org/index.php?option=com_oe&task=viewGroupRecord&groupID=147
- (5) WMO Area map see http://dbcpc.icommops.org/graph_ref/wmoarea.gif
- (6) Any organization planning to set up an Iridium processing and GTS dissemination system for buoys should refer to **DBCPC Technical Document 2** (in particular Section 7) to be sure of the real-time Quality Control that should be performed by the data processing centre.
- (7) The email address dbcpiridium@gmail.com is used by the Data Buoy Cooperation Panel as an archive of all messages for analysis of Iridium Buoy performance