INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (OF UNESCO)

WORLD METEOROLOGICAL ORGANIZATION

DATA BUOY COOPERATION PANEL

DBCP-29/ Doc 5
(12-Sep-13)

TWENTY-NINTH SESSION

ITEM: 5

PARIS, FRANCE
23-27 SEPTEMBER 2013

ENGLISH ONLY

REPORT BY THE TECHNICAL CO-ORDINATOR

(Submitted by the Technical Coordinator, Kelly Stroker, JCOMMOPS)

Summary and purpose of the document

This document provides information on the work undertaken by the Technical Coordinator of the DBCP during the last intersessional period.

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. Monthly Maps for July 2013
- B. Graph of Parameters Reporting on the GTS
- C. Quality of Buoy Data
- D. Technical Coordinator non-routine Tasks

-A- DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT

5.1 During the period 1 September 2012 to 31 August 2013, Ms. Kelly Stroker worked as Technical Coordinator (TC) of the Data Buoy Cooperation Panel (DBCP). For part of the year (Sept 1- Dec 31, 2012) Ms. Stroker worked in Toulouse, France, at CLS, and was employed by the World Meteorological Organization (WMO). The remainder of the year Ms. Stroker worked from the United States on contract to WMO. On average, the TC spends 70% of her time on DBCP-related matters and 30% of her time as OceanSITES Project Office.

5.2 The TC reminded the panel that in Jan, 2013 she returned to the US and has been working remotely for most of the intersessional period. The panel should begin the process for hiring a replacement to be stationed in Brest where JCOMMOPS will relocate in 2014. More details on the relocation are in the JCOMMOPS report.

5.3 During the previous year, Ms. Stroker's time was spent on the following:

- Travelling to meet with various DBCP Members, Action Groups, and Teams
- Producing monthly maps and GTS timeliness reports
- User assistance as needed
- Assisting Panel members with technical and programmatic issues
- Maintaining metadata in the JCOMMOPS database
- Updating and maintaining DBCP and OceanSITES websites
- Maintaining mailing lists, contact details and user groups on DBCP, JCOMMOPS, and OceanSITES website (including coordination with JCOMM site)
- Monitoring the Quality-Control Relay traffic
- Investigating deployment opportunities
- Tracking all buoy deployments, and mooring maintenance/installations
- JCOMMOPS – reviewing database design, metadata loading and reporting
- Preparing for and attending meetings
- Preparing meeting reports and documents

5.4 The TC outlined the current status of the data buoy network. During the past 12 months, the average number of drifting buoys reporting onto the GTS was 1168 per month and 453 moored buoys. During the months of Aug-Nov, 2012, we saw an increase in the drifting buoy array (from 1221 to 1292) and then in November we saw a sharp decline going down to 1030 in April. While we have seen the number of operational drifters go up in the past couple of months, this statistic is of great concern to the community. The current number of operational drifters on the GTS for July, 2013 was 1155, with about 40% of those reporting atmospheric pressure. For the moored buoys, we have seen this number drop as well. The TAO array, in particular, has experienced a drop in numbers over the past year and in July, 2013 is currently operating at 36%

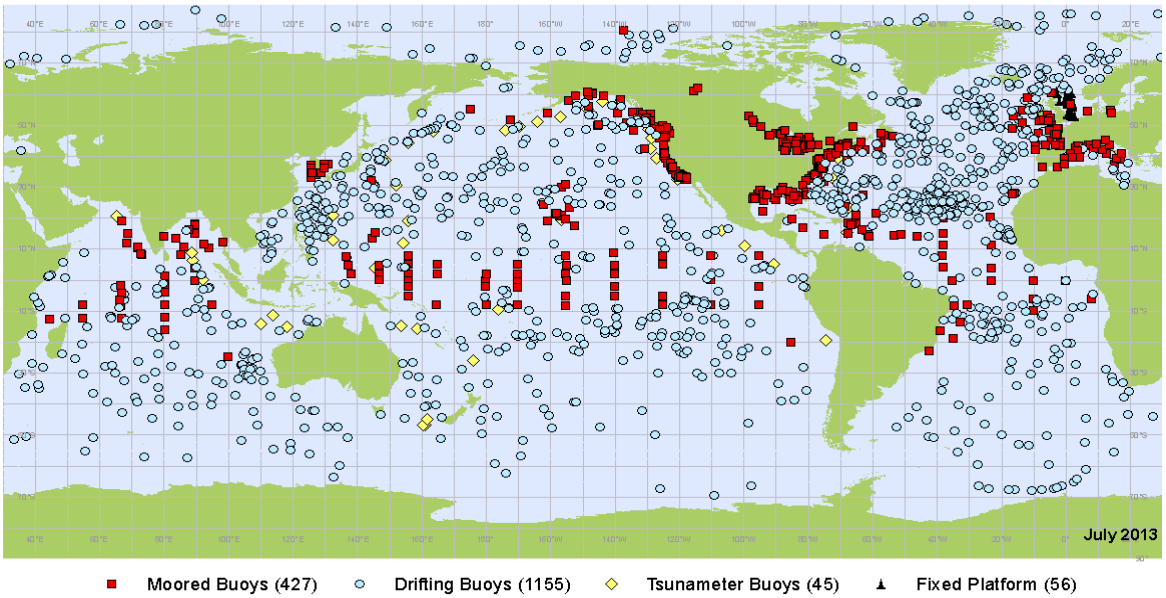

Figure 1 - Status of the Operational Buoy Array, July 2013

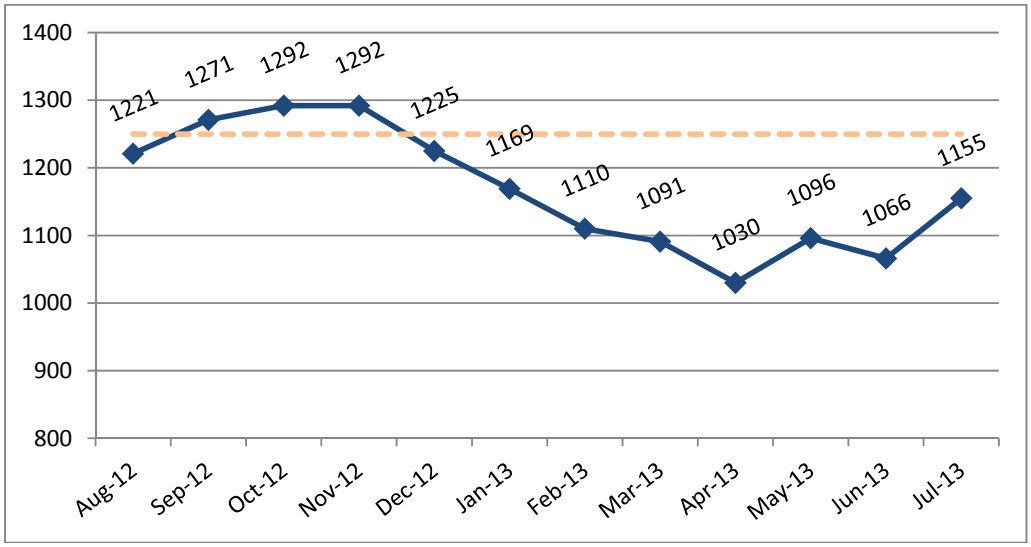

Figure 2 - Number of operational drifting buoys during the last intersessional period showing the steep decline from Nov-Apr.

5.5 The Technical Coordinator reported that among the drifting and moored buoys reporting on the GTS in BUOY (or BUFR) format, the following variables were measured in July 2013.

Variable	Any	Air P	P Tend	SST	Air T	Hum	Wind	Waves	Sub/T
Drifting Buoys	1118	420	394	945	16	3	0	6	62
Moorings	412	227	168	309	270	137	263	259	58

5.6 During the last intersessional period, the TC looked more closely at deployments by country as the Global Drifter Program relies very heavily on its global partnerships to maintain the array. It was found that while the US ships are responsible for deploying around 50% of the array, the remainder of the drifting buoys were deployed by 21 different countries. At the time of writing this

document, the deployments during the last year are still being investigated. The TC is working with the GDP and all Action Groups to try to better compile this metric (***action; TC, Panel Members; July 2014***)

5.7 The TC reminded the panel that during previous intersessional period the Deep-Ocean Assessment and Reporting of Tsunami (DART) Buoys had been added to the JCOMMOPS database. The locations of these buoys are included on the monthly maps and in the reporting. The data for these buoys does not come through the normal GTS chains and is not collected by Météo-France or the Integrated Science Data Management (ISDM, Canada). Information on the status of the tsunami buoys is received monthly from NDBC. An automated process for receiving this information is recommended and the TC will explore this option with NDBC (***action; TC, NDBC; July 2014***)

5.8 The TC reported on the status of the TAO refresh buoy array and the GTS header issue that was raised during DBCP-28. At present 29 TAO Buoys in the Pacific have been refreshed to use Iridium communication and these buoys are reporting under the GTS Header of "SXPA01 KWNB". This format does not follow the WMO specifications for bulletin headers and thus the data are not processed at Météo-France. The GTS header should be modified to follow WMO specifications as the entire TAO array has plans to be refreshed by 2014. (***action; NDBC; asap***).

5.9 The Southern Ocean Buoy Programme (SOBP), as part of the DBCP Implementation Strategy, aims to have 300 operational drifting buoys with barometers distributed across the Seas south of 40^{o}S. The situation in the Southern Ocean is rather dire. During July 2013, there were only 89 drifters in the Southern Ocean and only 67 of these were barometer drifters. DBCP members should look for deployment opportunities in the Southern Ocean (***action; DBCP Members; asap***).

5.10 The Technical Coordinator showed a map of drifting buoy density for July, 2013. This map simply shows the number of drifters operating in a 5x5 degree grid and does take yet take into account important factors such as age of drifter, drogue, barometer, etc. The TC recommended the panel to review the map and make suggestions on what would be useful to report on. She will then work with the GDP on these products.

5.11 The TC reported on the different numbers from the GDP and the JCOMMOPS database. At least once per year the operational drifting buoy information collected at the GDP is compared with that at JCOMMOPS. In June, there were 168 drifters in the JCOMMOPS database that were not included in the GDP deployment log. The differences were found to be the following:

- Buoys as part of the IABP program (these should be categorized differently in the JCOMMOPS database)
- Some test iridium buoys (e.g. Norway IMR)
- Time frame of reporting. JCOMMOPS looks at drifting buoys active during the entire month whereas the GDP produces a snap shot of buoys for that each week.
- Other iridium drifters that whose deployment details are not getting in the GDP database

5.11 The panel recommended that due to the rather limited duration of the current Technical Coordinator's contract, that she prepare a detailed document of tasks and products that she is responsible for. The TC will spend some time putting this together so that the new TC has a clearer picture of what is expected.

5.11 **The meeting made the following recommendations**:

(i.) The panel recommended for the manufacturers to provide information to JCOMMOPS on models, formats, and shipments;

(ii.) The panel recommended it's members to continue providing Iridium deployments to the Technical Coordinator in the agreed upon format;

(iii.) The panel recommended that the current TC put together a detail of her tasks and responsibilities for her incumbent;

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

(i.) The TC to work with the Global Drifter Program and other Action Groups on creating a map of deployments by country/program (**action; TC, members; July 2014**);

(ii.) The TC to work with NDBC on an automated process for receiving tsunameter information. (**action; TC, NDBC; July 2014**);

(iii.) The Panel requested the Technical Coordinator to work with Iridium VARs to obtain drifting and moored buoy data (***action; TC; DBCP-30***);

(iv.) The GTS header should be modified to follow WMO specifications as the entire TAO array has plans to be refreshed by 2014. (***action, NDBC, asap***);

(v.) DBCP members should look for deployment opportunities in the Southern Ocean (***action; DBCP Members; asap***).

-B- BACKGROUND INFORMATION

This report covers the activities of the Technical Coordinator of the DBPC for the period of 1 September 2012 to 31 August 2013.

1 During the period 1 September 2012 to 31 August 2013, Ms. Kelly Stroker worked as Technical Coordinator (TC) of the Data Buoy Cooperation Panel (DBCP). For part of the year (Sept 1- Dec 31, 2012) Ms. Stroker worked in Toulouse, France, at CLS, and was employed by the World Meteorological Organization (WMO). The remainder of the year Ms. Stroker worked from the United States on contract to WMO. On average, the TC spends 70% of her time on DBCP-related matters and 30% of her time as OceanSITES Project Office.

2 The TC reminded the panel that in Jan, 2013 she returned to the US and has been working remotely for most of the intersessional period. The panel should begin the process for hiring a replacement to be stationed in Brest where JCOMMOPS will relocate in 2014. More details on the relocation are in the JCOMMOPS report.

3 During the previous year, Ms. Stroker's time was spent on the following:

- Travelling to meet with various DBCP Members, Action Groups, and Teams
- Producing monthly maps and GTS timeliness reports
- User assistance as needed
- Assisting Panel members with technical and programmatic issues
- Maintaining metadata in the JCOMMOPS database
- Updating and maintaining DBCP and OceanSITES websites

- Maintaining mailing lists, contact details and user groups on DBCP, JCOMMOPS, and OceanSITES website (including coordination with JCOMM site)
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- Investigating deployment opportunities
- Tracking all buoy deployments, and mooring maintenance/installations
- JCOMMOPS – reviewing database design, metadata loading and reporting
- Preparing for and attending meetings
- Preparing meeting reports and documents

Other details on the work the TC performs can be found in the Terms of Reference for the Technical Coordinator of the DBCP, ANNEX IV, APPENDIX II of the full meeting report.

Current status of the data buoy network

4 The TC outlined the current status of the data buoy network. During the past 12 months, the average number of drifting buoys reporting onto the GTS was 1168 per month and 453 moored buoys. During the months of Aug-Nov, 2012, we saw an increase in the drifting buoy array (from 1221 to 1292) and then in November we saw a sharp decline going down to 1030 in April. While we have seen the number of operational drifters go up in the past couple of months, this statistic is of great concern to the community. The current number of operational drifters on the GTS for July, 2013 was 1155, with about 40% of those reporting atmospheric pressure.

A detailed analysis of this issue was presented at the Science and Technology Session by the Global Drifter Program.

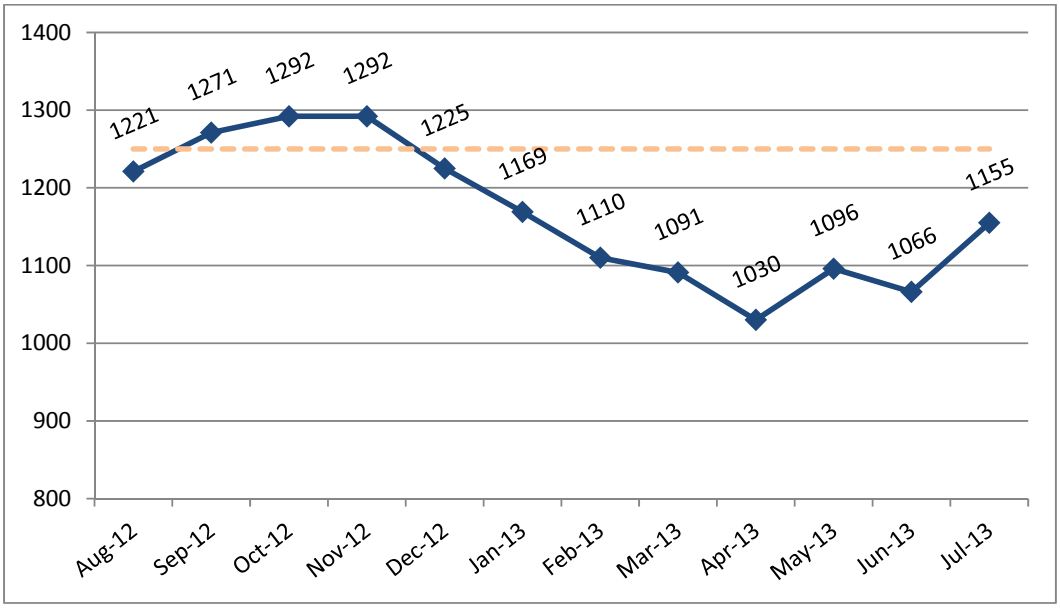

Figure 3 - Operational drifters on the GTS during the period August 2012-July 2013. Number of drifters verified and confirmed through Météo-France GTS. Target line of 1250 shown for reference.

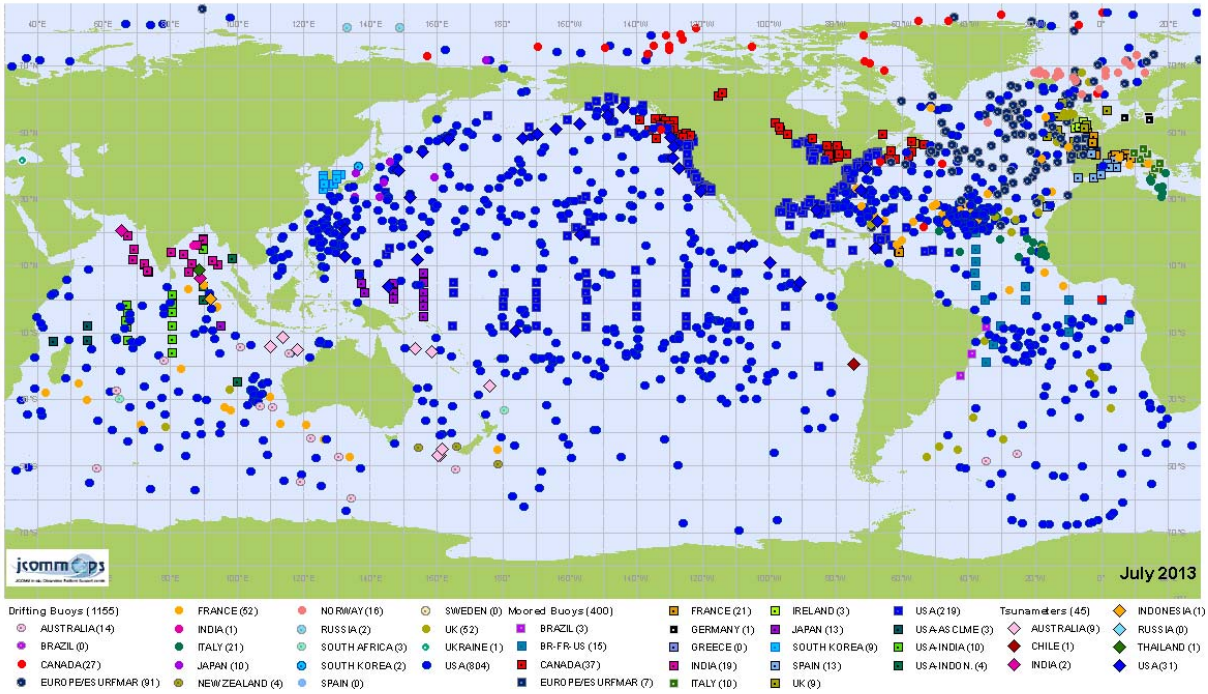

Figure 4- Drifting and Moored buoy monthly status map for July 2013. (GTS information received from Météo-France)

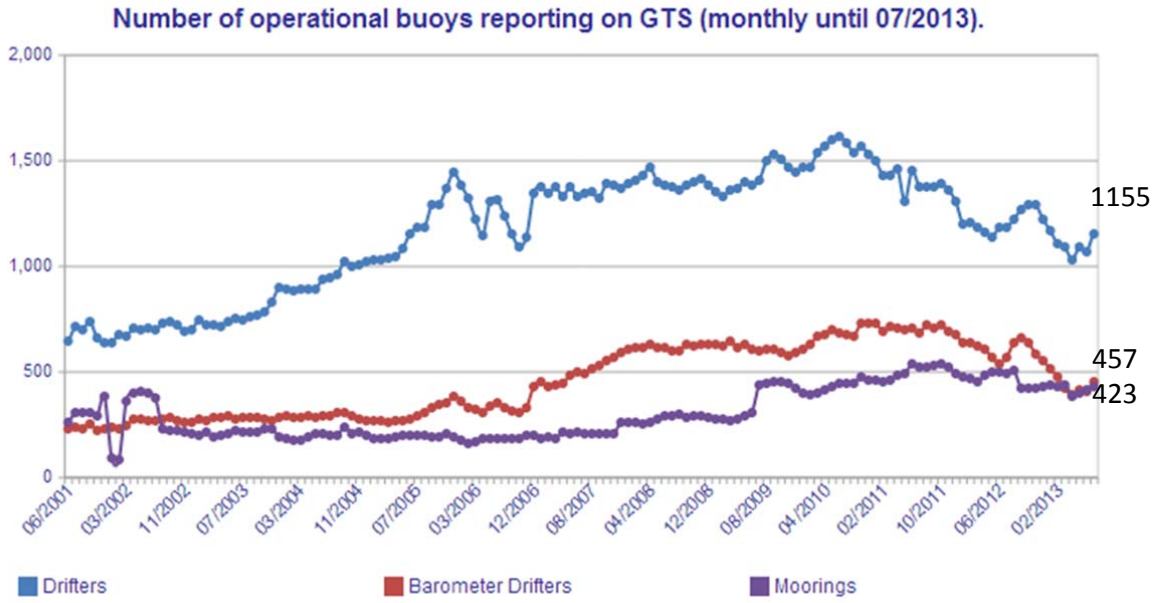

Figure 5 - Number of operational buoys reporting on the GTS since 2001.

The present status of the buoy platforms per country is:

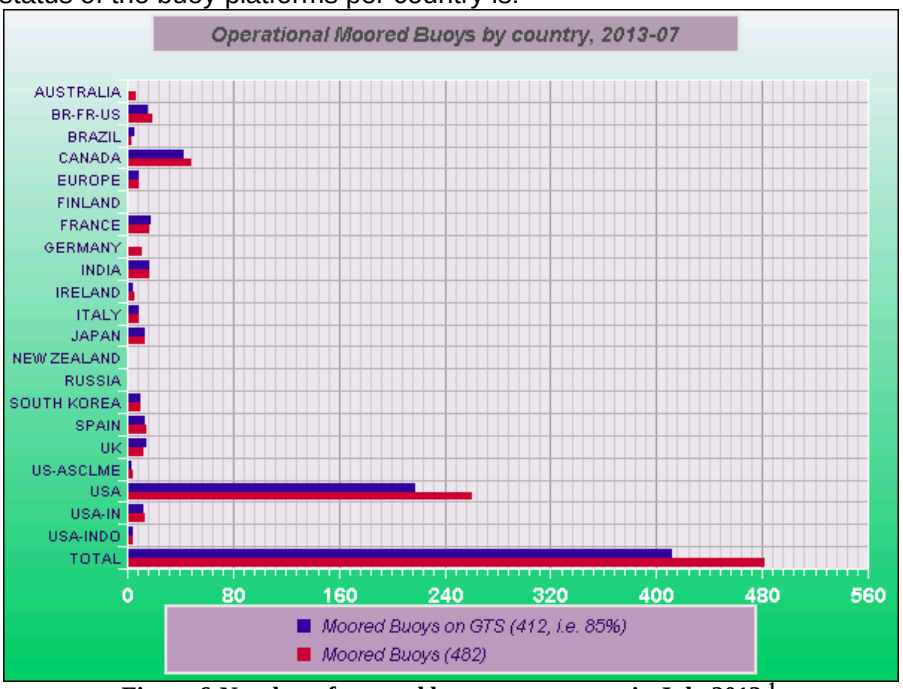

Figure 6-Number of moored buoys per country in July 2013.[1]

Country	Moored Buoys	Moored Buoys on GTS
AUSTRALIA	7	0
BR-FR-US	19	16
BRAZIL	3	6
CANADA	49	43
EUROPE	9	9
FINLAND	1	0
FRANCE	17	18
GERMANY	11	1
INDIA	17	17
IRELAND	6	4
ITALY	9	9
JAPAN	13	13
NEW ZEALAND	0	1
RUSSIA	1	0
SOUTH KOREA	10	10
SPAIN	15	13
UK	12	15
US-ASCLME	4	3
USA	261	218
USA-IN	13	12
USA-INDO	5	4
Total	482	412

Table 1- Moored Buoys reporting through Argos and other telecom types on the GTS during July 2013. New Zealand 'Mooring' = stationary drifting buoy.

[1] http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/ptfCountry

One of the main challenges now with the moored buoy array is finding resources to maintain the systems. At present, the TAO array is currently delivering data at just under 37%. Retirement of the Ka'mimoane in 2012 contributes to the issues with maintenance.

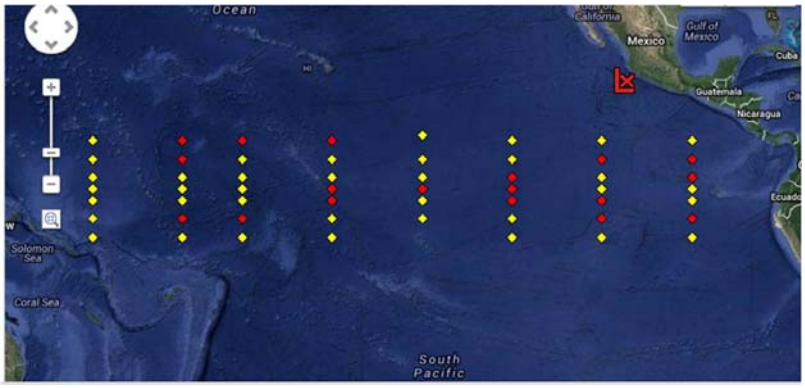

Figure 7 - TAO array status in August 2013.

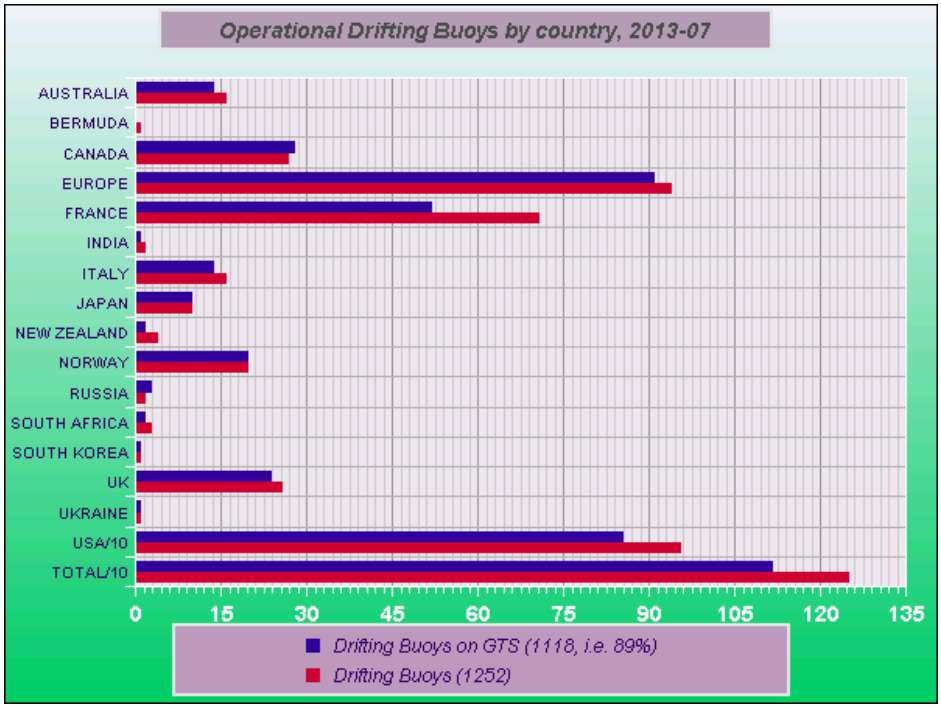

Figure 8 -Number of drifting buoys per country in July 2013

Country	Drifting Buoys	Drifting Buoys on GTS	Iridium
AUSTRALIA	16	14	9
BERMUDA	1	0	
CANADA	27	28	15
EUROPE	94	91	91
FRANCE	71	52	32
INDIA	2	1	
ITALY	16	14	7
JAPAN	10	10	
NEW ZEALAND	4	2	1
NORWAY	20	20	20
RUSSIA	2	3	
SOUTH AFRICA	3	2	2
SOUTH KOREA	1	1	
UK	26	24	23
UKRAINE	1	1	1
USA	958	855	51
Total	1252	1118	252

Table 2 - Drifting Buoys reporting through Argos and others on the GTS during July 2013. The number of Iridium drifters is included in the total drifting buoys, but separated out for reference.

Variable measured from boys and reporting on GTS

5 Amongst the drifting and moored buoys reporting on the GTS in BUOY (or BUFR) format, the following variables were measured in July 2013. The number of drifters reporting Air Pressure has dropped to around 40% from an expected 50%.

Variable	Any	Air P	P Tend	SST	Air T	Hum	Wind	Waves	Sub/T
Drifting Buoys	1118	420	394	945	16	3	0	6	62
Moorings	412	227	168	309	270	137	263	259	58

Table 3 - Drifting and Moored buoy variables being reported on the GTS during July 2013.

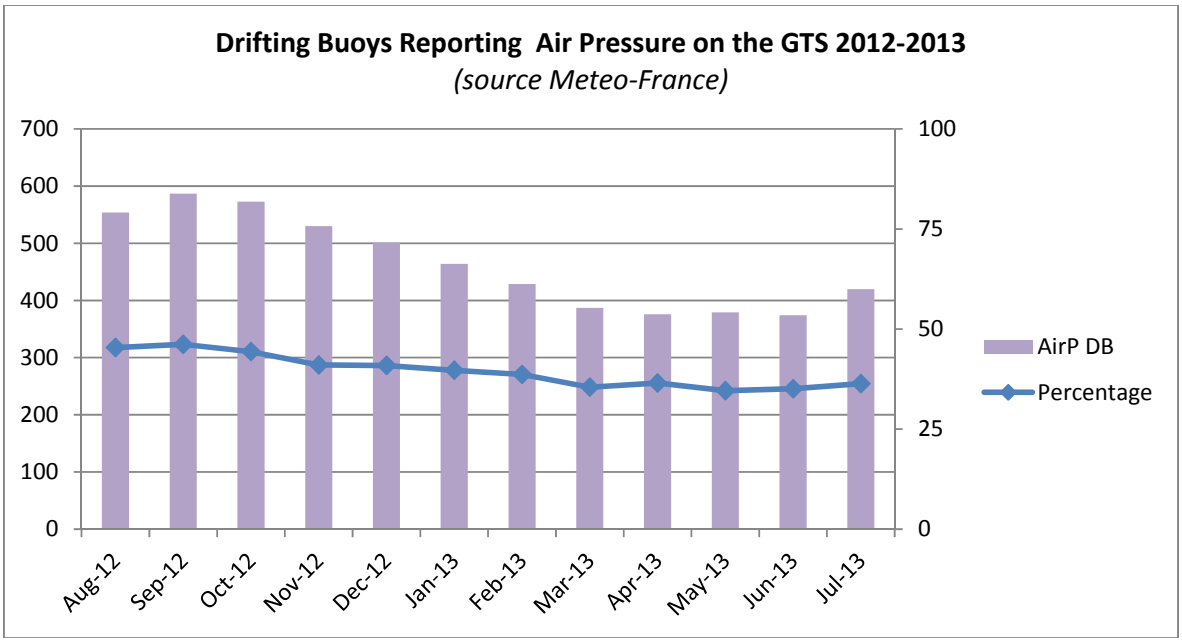

Figure 9 - Number of drifting buoys reporting Air Pressure on the GTS during August 2012-July 2013. The number of barometer buoys has dropped significantly during the past year. While the desired percentage is 50% of the array reporting Air Pressure, the previous year has shown between 35%-46%.

Tsunameters

6 During the last intersessional period the Technical Coordinator had added Tsunami Buoys to the JCOMMOPS database. The locations of these buoys will be included in monthly maps and reporting. They will be held separately as they are not at this time reporting any meteorological parameters onto the GTS. The Tsunami Buoys report water level data only and these data are not received through Météo-France as the rest of the array.

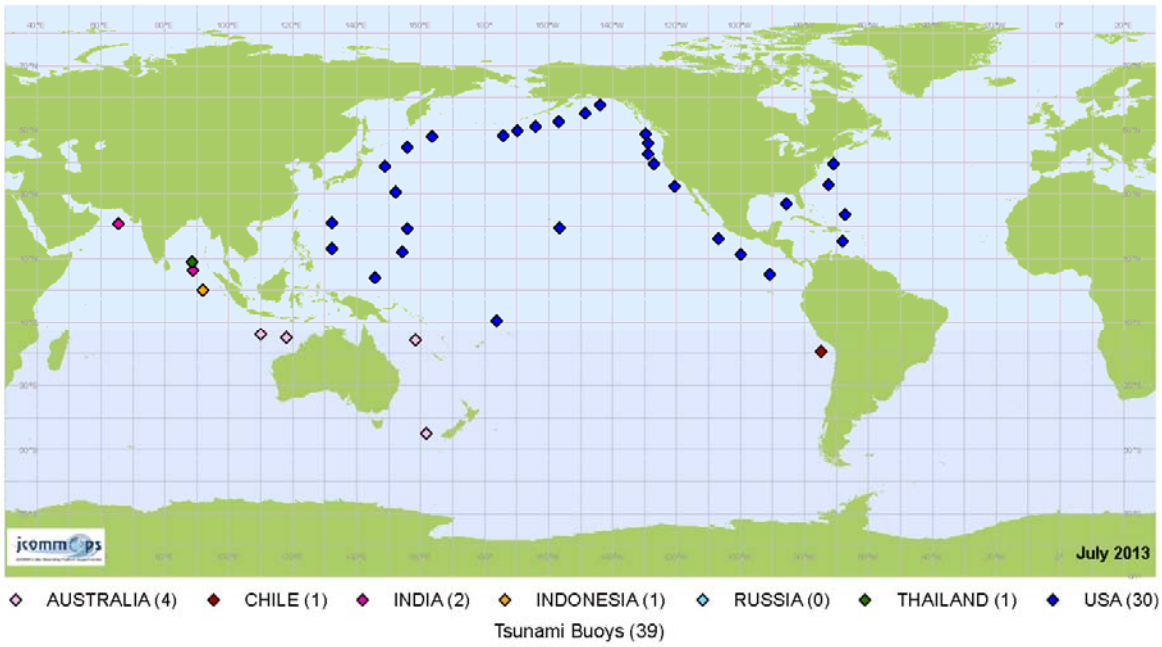

Figure 10- Operational Tsunami Buoys in July 2013. Location information received from NOAA/NDBC or international partners.

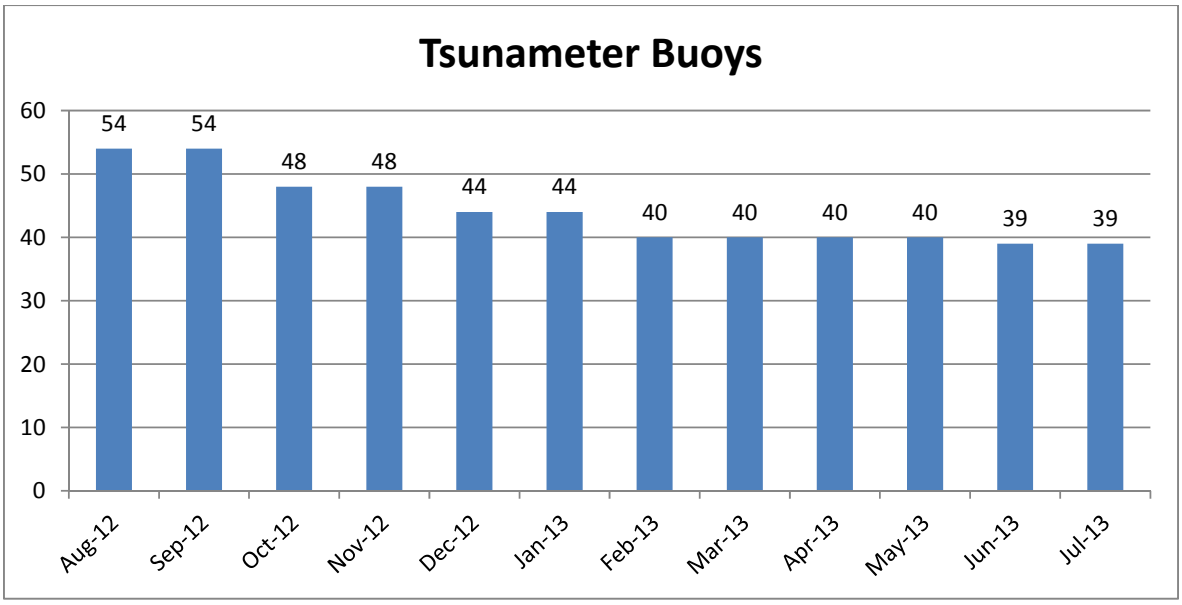

Figure 11 - Number of active tsunami buoys each month over the last intersessional period.

Comparison of GTS data

7 There is a goal for ISDM and Météo-France to fully compare data going onto the GTS a least twice per intersessional period. During the last intersessional period a full comparison was not performed, however brief comparisons were done. One of the findings was that there are several drifting and moored buoys that have started reporting in BUFR only format (25 moored buoys and 35 drifting buoys). Météo-France was the only centre receiving this information. A second issue still concerns the TAO Refresh buoys. At present 29 TAO Buoys in the Pacific have been refreshed to use Iridium communication and these buoys are reporting under the GTS Header of SXPA01 KWNB (Fig. 11). This format does not follow the WMO specifications for bulletin headers and thus the data are not processed at Météo-France, however they are received and processed at ISDM. The GTS header should be modified to follow WMO specifications as the entire TAO array has plans to be refreshed by 2014.

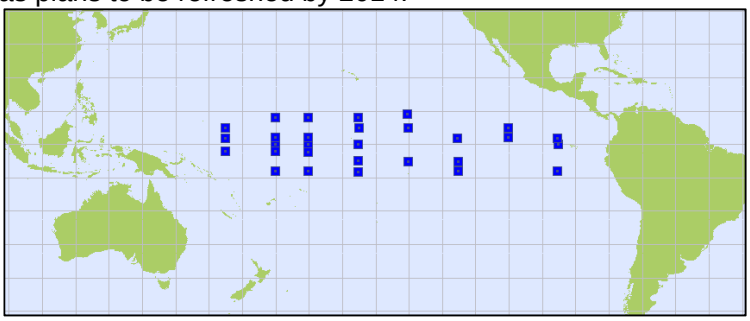

Figure 12 – Locations of TAO Refresh Buoys currently not transmitting data onto the GTS with WMO specified headers.

Southern Ocean Buoy Programme (SOBP)

8 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. During July 2013, the number was 67, which means we are quite far from achieving this goal.

During the Intersessional period the number went up to a peak of 120 in October 2013.

Month	Number of Barometer Drifting Buoys (SVPB)	Number of Drifting Buoys (SVP)
Jul-13	67	89
Jun-13	76	100
May-13	80	109
Apr-13	88	118
Mar-13	97	126
Feb-13	93	122
Jan-13	100	129
Dec-12	104	136
Nov-12	104	139
Oct-12	**120**	**158**
Sep-12	118	165
Aug-12	108	157

Table 4 - Number of Operational barometer drifting buoys in the Southern Ocean per month during the last year.

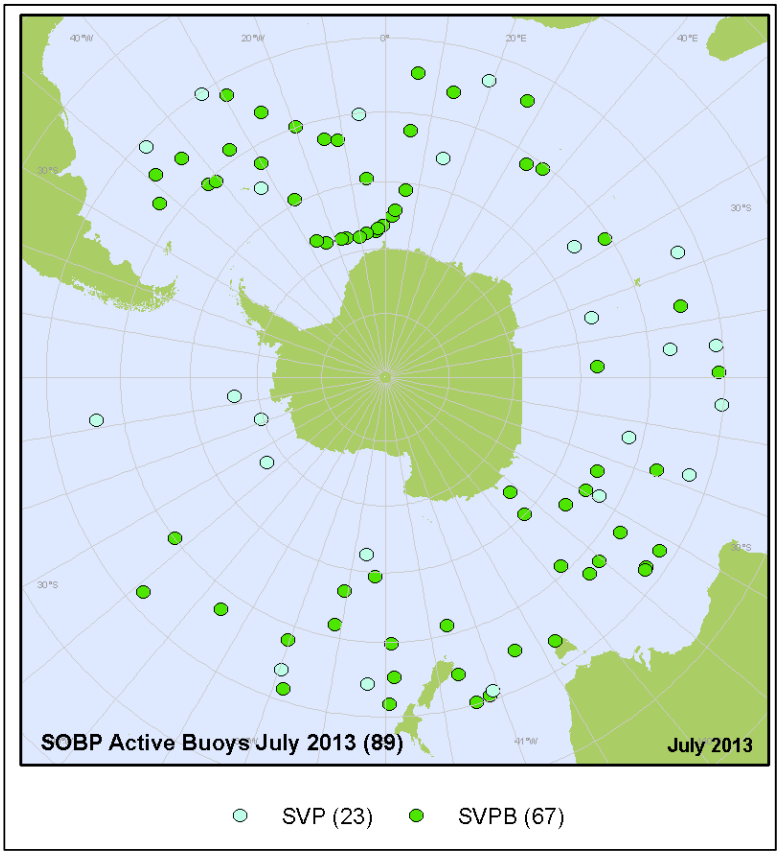

Figure 13 – Active drifting buoys during July 2013 in the Southern Ocean below 40°S.

The deployment plans last year were for 319 buoys with Barometers (including 44 upgrades) to be deployed south of 40°S. As it is very difficult to predict deployment opportunities, firm commitments are difficult and this exact numbers of SVPB buoys versus SVPs are also difficult to predict.

Country	Buoys purchased or planned	Additional Upgrades	Total	Comment
Australia	3	4	7	
France	0	30	30	
Germany	0	0	0	
New Zealand	6	10	16	
South Africa	70	0	70	*Many of these deployments are included in the GDP plans.
UK	6	0	6	

USA	190		190	US/IPAB (10) GDP: • South Indian (60) • South Pacific (40) • South Atlantic (80) • All deployments will be conducted in cooperation with global partnerships
Total	**275**	**44**	**319**	

Table 5- Barometer Drifter deployment plans for August 2012 to July 2013 as agreed at DBCP-28.

The actual deployments totalled 73. The reasons for the difference between planned and actual are shown in the table below (Table 6).

Country	Buoys purchased & deployed	Additional Upgrades	Total	Comment
Australia	4		4	
France	0	10	10	RV Marion Dufresne not available for a certain period
Germany	0	0	0	
New Zealand	0	1	1	
South Africa	36	0	36	Drifters deployed for GDP, University of Cape Town, DEA and Bayworld Centre for Research and Education (BCRE)
UK	5	0	5	
USA	17		17	Because of the recent recalls and ship availability, many of the annual deployment ops did not occur.
Total	**62**	**11**	**73**	

Table 6 - Actual barometer drifter deployments during the period August 2012 to July 2013.

The plans for August 2012 – July 2013 are shown in Table 8 below. As mentioned above, the southern ocean is the trickiest basin to predict deployment numbers. According to the GDP, there are normally few opportunities, limited lead times, and shipping difficulties, which makes it difficult to seed these areas. There are several new opportunities for deployments in the Southern Ocean that are being arranged within JCOMMOPS with the Ship Coordinator, Martin Kramp. The details on these deployments will be available in Doc 9.2 – Deployment Opportunities.

Country	Planned	Additional Upgrades	Total	Comment
Australia	5		5	
France		30	30	
Germany	0		0	
New Zealand	10		10	- 4 MetOcean Iridium SVP-B - 1 Marlin-Yug Argos SVP-B - 5 Marlin-Yug Iridium SVP-B

South Africa	20		20	- 8 Gough Sept 2013 - 10 Sanae Dec-Feb 2013/14 - 2 Marion April 2014
UK	5		5	
USA	158		158	- 20 SVPB deployments south of NZ - 30 SVPB deployments near 55S,155W (in conjunction with KISOT) - 30 SVPB deployments throughout the Southern Ocean (aboard Barcelona World Race) - 28 SVPB deployments in the Drake Passage (PI Christian Reiss) - 20 SVPB deployments in the Drake Passage (2 per mo. in conduction with US Antarctic Program) - 10 SVPB deployments in South Atlantic (in conduction with SAWS) - 20 SVPB deployments in the South Atlantic (in conjunction with the Brazilian Navy)
Total	**198**	**30**	228	

Table 7 - Barometer Drifter deployment plans for the period August 2013 to July 2014 as proposed to be agreed at DBCP-29.

TC priorities

9 The priorities as outlined at the previous DBCP Session were addressed as following.

9.1 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 Quality Control (QC) feedback into one web page;
- Adapting the Google Earth products created for the Argo program to present Buoy metadata and trajectories.

9.2 To work with the DBCP Task Team on Instrument Best Practices and Drifter Technology Development (TT-IBP) on updating the SVPB Design Reference Manual

Work has begun on updating this document. The new chairs of the TT-IBP will form a small committee to review and update the document.

9.3 To work with Iridium VARs to obtain drifting and moored buoy data

The TC has begun to work with Joubeh on providing metadata and data for drifting buoy deployments. To date, most of this has been manual and adhoc, however, they are working towards a web service type of interface that would improve the flow of information to JCOMMOPS.

9.4 To make a distinction between Rigs & Platforms and Moored Buoys on JCOMMOPS status maps.

The DBCP Technical Coordinator will work with Météo-France on the GTS feed of the separation of rigs and platforms in the database.

9.5 To identify experts for each unfinished section of the "Oceanographer's and Marine Meteorologists Cookbook for submitting data in real time and in delayed mode" so the existing draft can be completed, and submitted for publication

The "Cookbook" has been a priority item but the TC has been unable to find the allocated time to work on this document. She understands the importance and places a high priority on updating it for the coming year.

9.6 Ensuring 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).

Dynamic maps:

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

Static maps:

- The DBCP maps produced by the Technical Coordinator can be found on the DBCP website: http://www.jcommops.org/dbcp/dbcpmaps.html
- PDF and PNG Files are also accessible directly from http://www.jcommops.org/FTPRoot/DBCP/Maps/2012/, which includes:
    - Buoys by Country
    - Barometer Drifting Buoys by Country
    - SST, Barometer, Wind and Wave Buoys (All Sensors)
    - GTS Delays
    - Iridium and Argos-3 Buoys by Country

9.7 Assisting in the standardization and documentation of instrument practices.

The TC works with the community to provide updates and information in this area. On the DBCP Website, resources are available: http://www.jcommops.org/dbcp/community/standards.html

9.8 WMO / Argos number cross-reference list

A reminder to the community of the list of active buoy WMO numbers is available

1) Through a dynamic web page which permits querying the JCOMMOPS database (http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/wa/wmo); and
2) A file updated daily which can be downloaded from the JCOMMOPS ftp site. http://www.jcommops.org/FTPRoot/JCOMMOPS/GTS/wmo/wmo_list.txt.

10 The Technical Coordinator showed a map of drifting buoy density for July, 2013. This map simply shows the number of drifters operating in a 5x5 degree grid and does take yet take into account important factors such as age of drifter, drogue, barometer, etc. The goal of the drifter program is to have 1250 operational drifters distributed as evenly as possible throughout the world's ocean. This number was determined as there are 1250 ice-free 5x5 degree grid cells on the globe. One should keep in mind that because drifters drift, they move away from divergent areas and into convergent ones and it is impossible to have a global array that meets all three constraints (from the GDP):

(1)1250 drifters,
(2) 5x5 array, and
(3) long-lived

The TC recommended the panel to review the map and make suggestions on what would be useful to report on. She will then work with the GDP on these products.

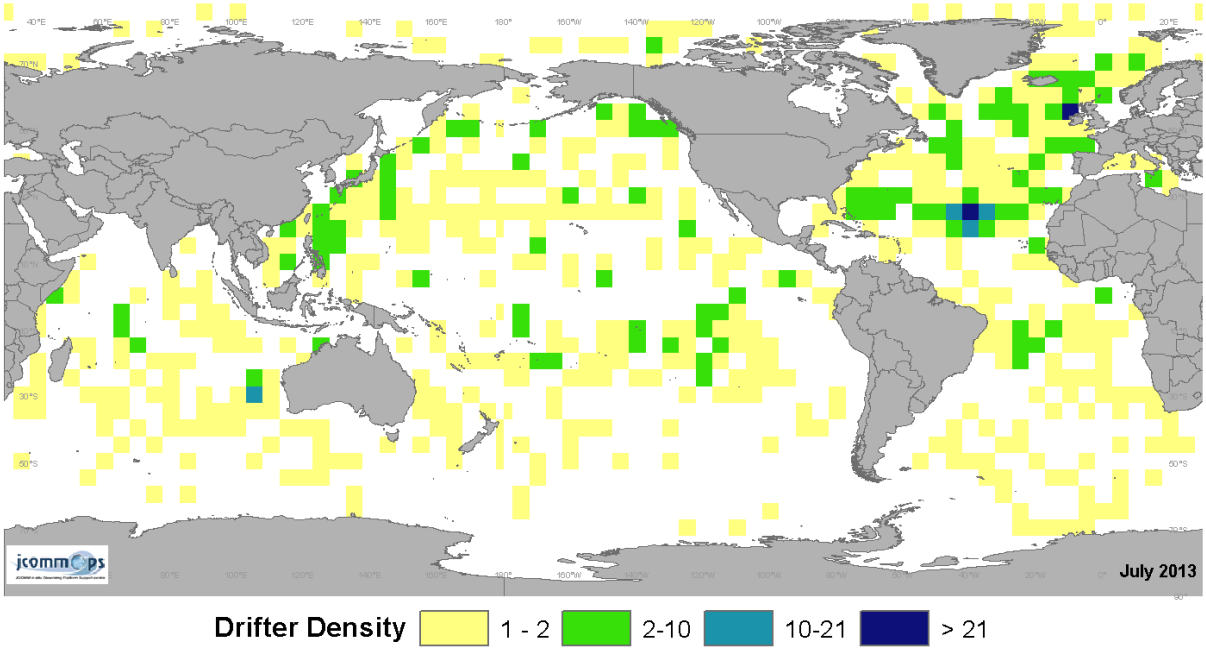

Figure 14 - Density of drifting buoys per 5x5 degree grid for July, 2013. Grid cells where density is <1 are indicated in white.

Appendices: 4

APPENDIX A

DBCP MONTHLY MAPS – JULY 2013

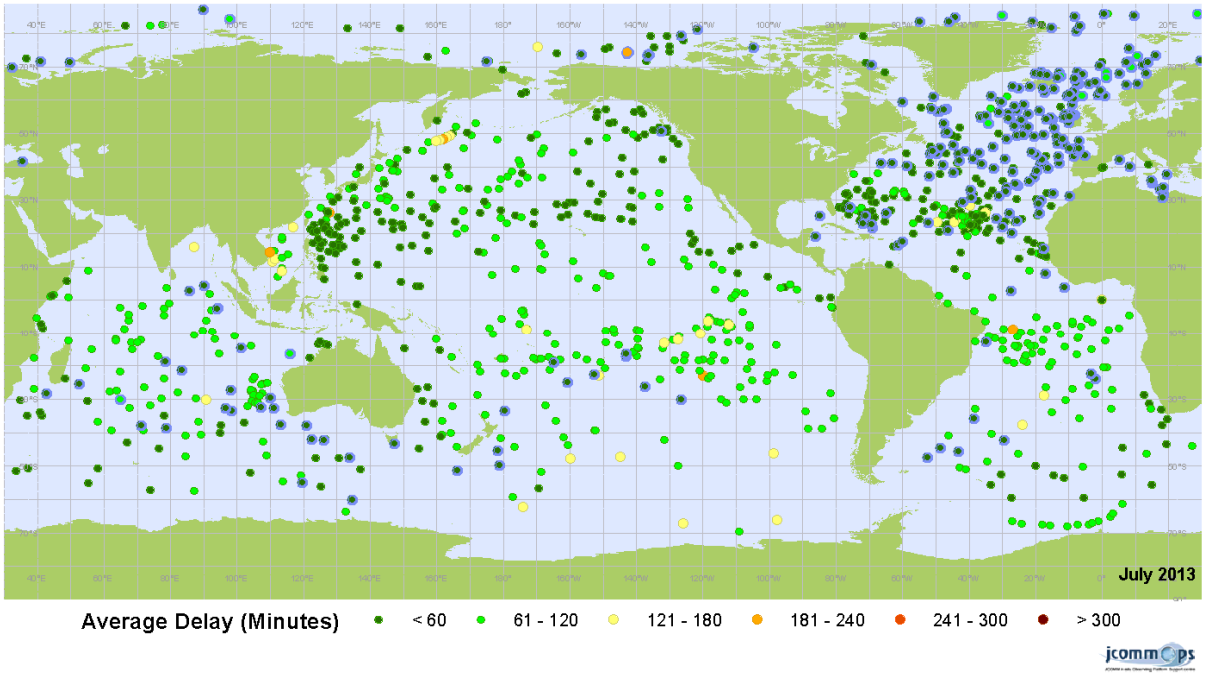

Figure 15 - GTS delays for drifting buoys reporting during July 2013. Iridium drifters outlined in blue.

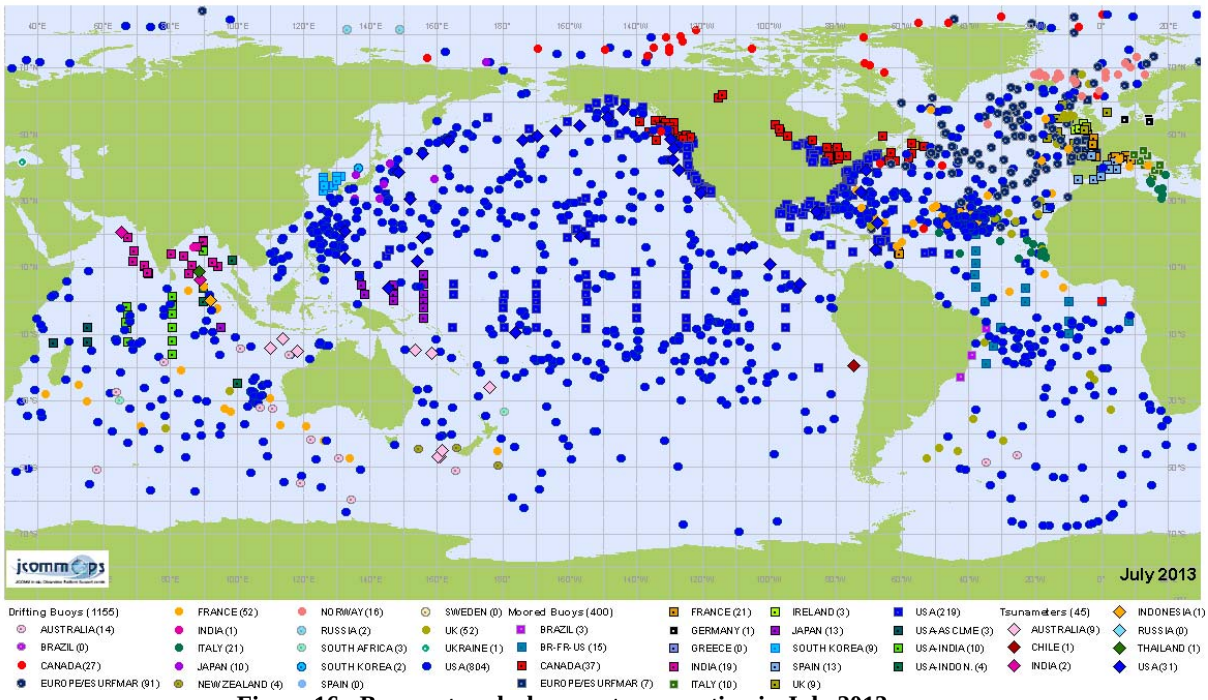

Figure 16 - Buoy networks by country reporting in July 2013.

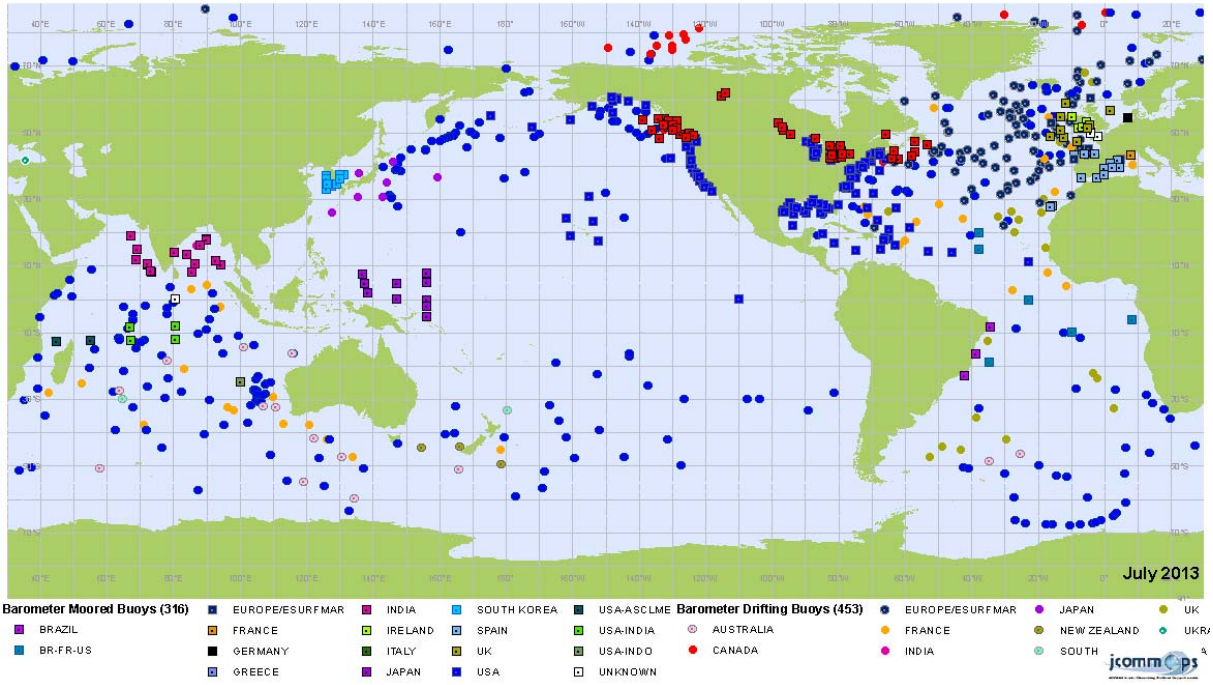

Figure 17 - Drifting and Moored buoys reporting Atmospheric Pressure during July 2013.

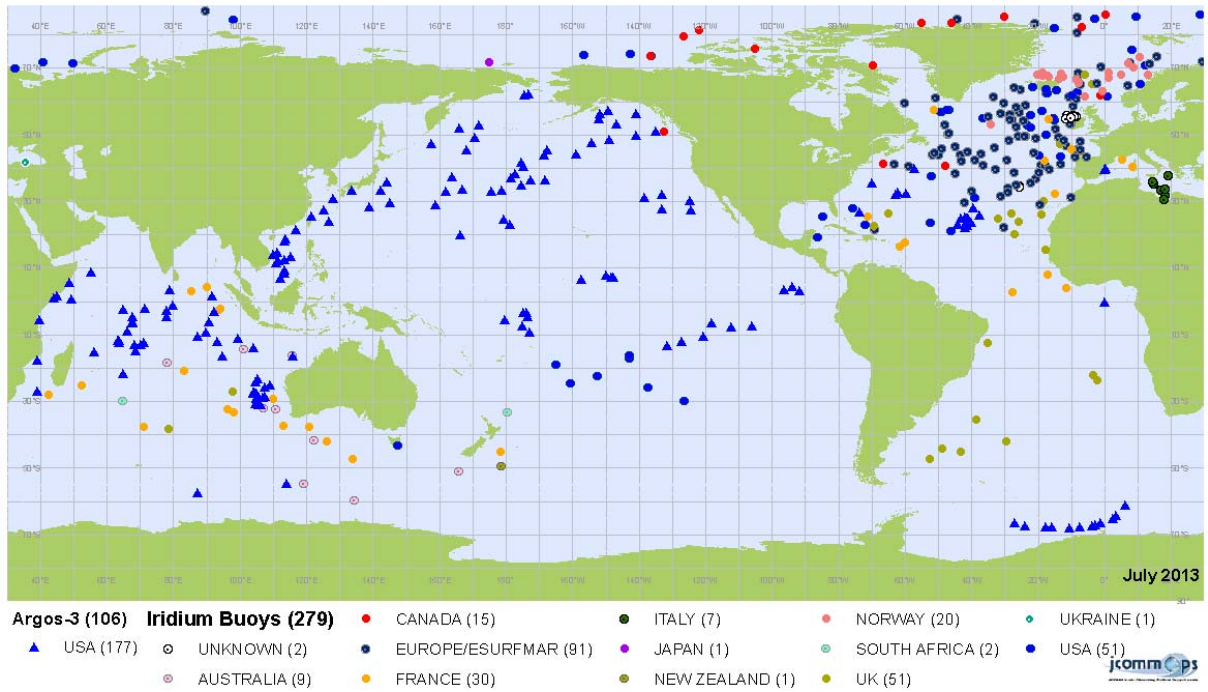

Figure 18 - Iridium and Argos3 Drifting Buoy by Country reporting during July 2013.

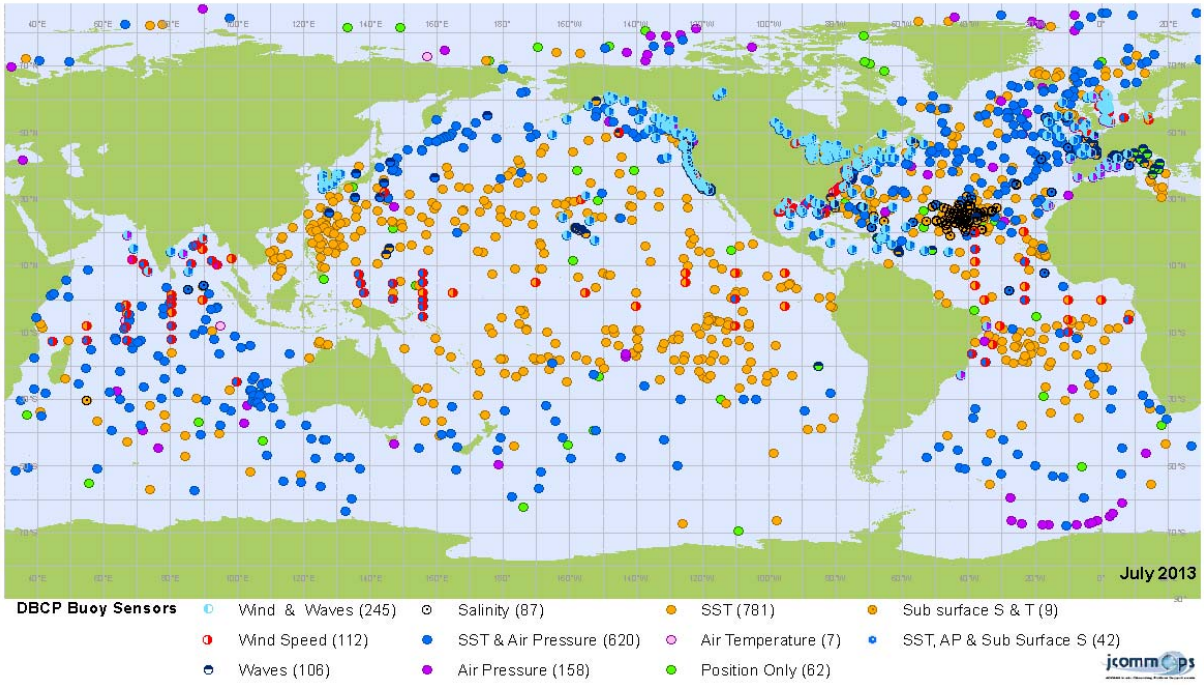

Figure 19 - Parameters reporting to the GTS for drifting and moored buoys during July 2013.

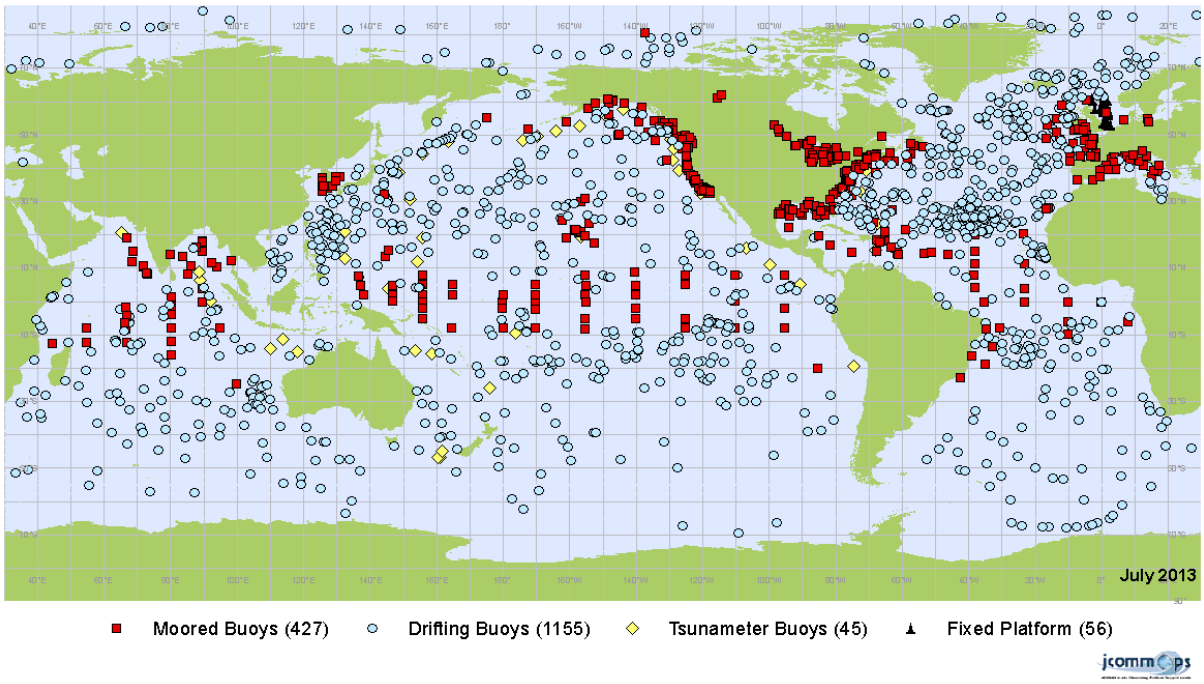

Figure 20 - Simple map by platform type - July 2013.

APPENDIX C

PARAMETERS REPORTING ONTO THE GTS

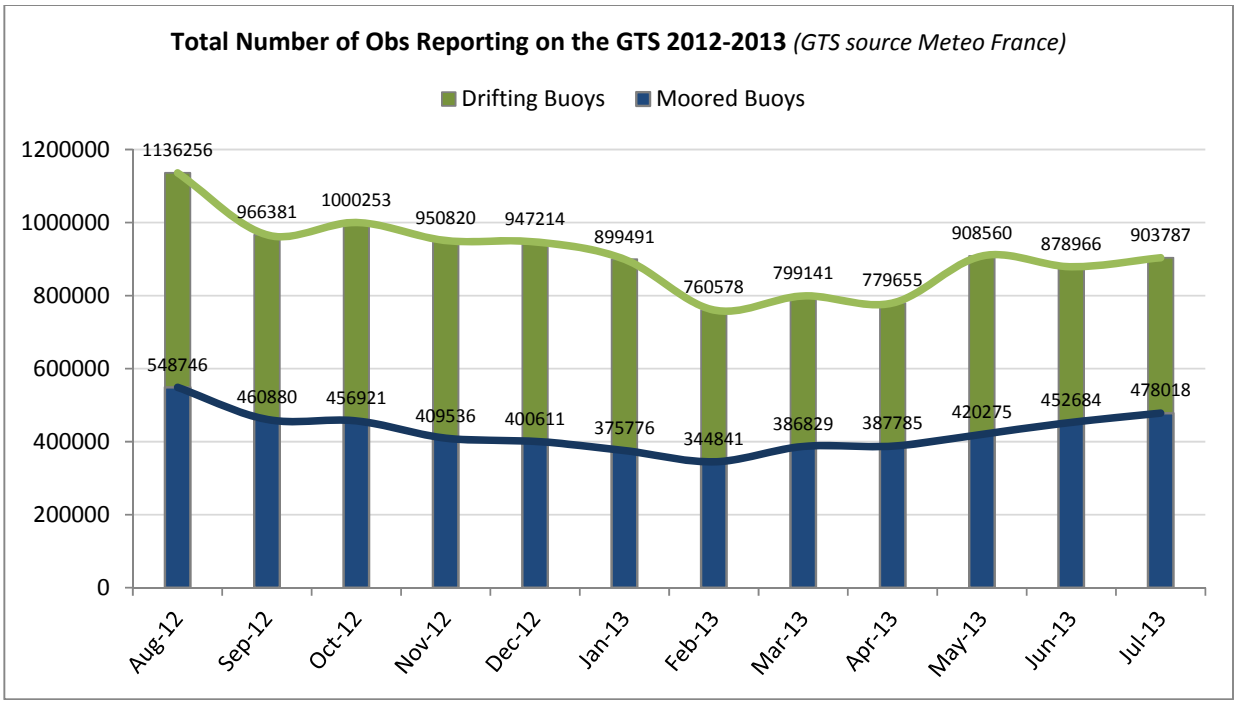

Figure 21 - Total Number of Buoy Observations reporting onto the GTS per month during Aug 2012-July 2013.

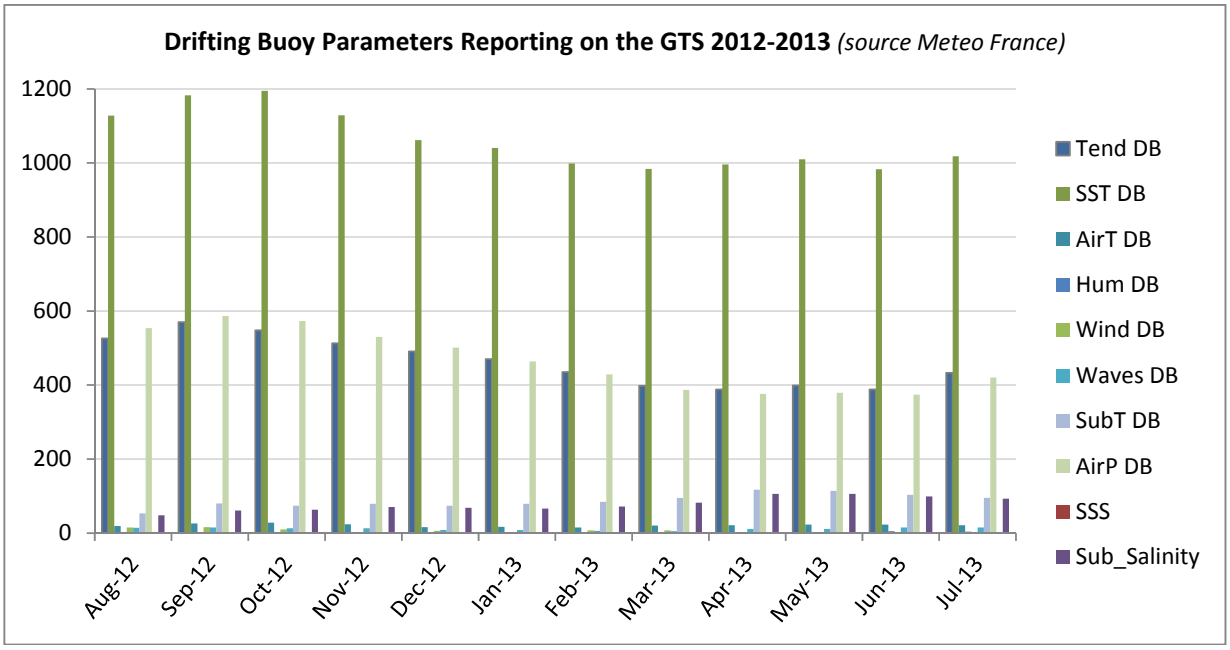

Figure 22 - Drifting buoy parameters reporting onto the GTS during August 2012-July 2013.

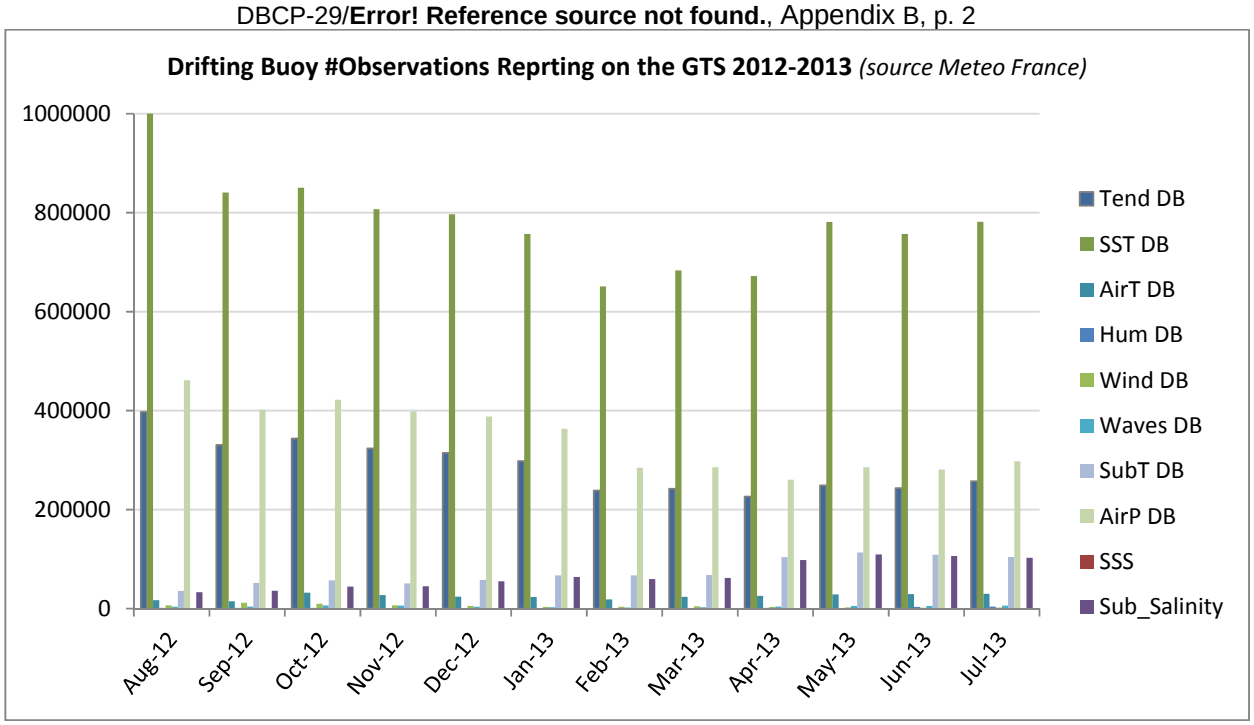

Figure 23 - Number of Observations reported by drifting buoys per parameters onto the GTS during August 2012-July 2013.

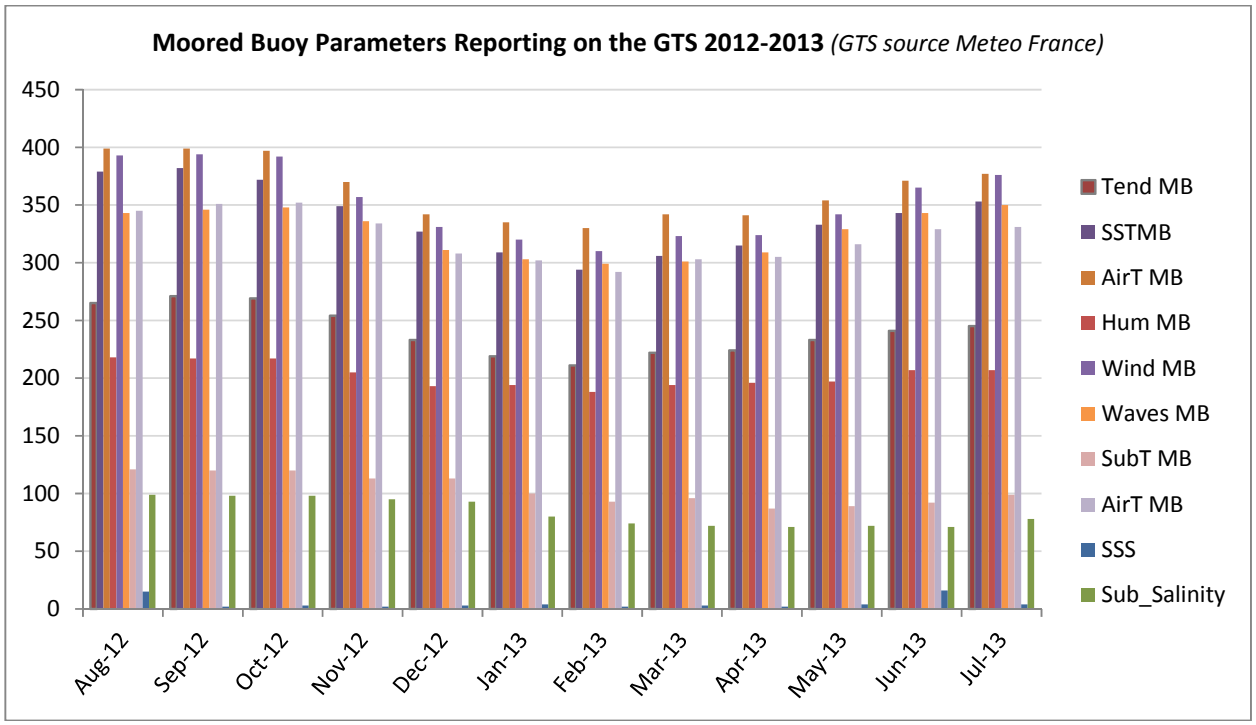

Figure 24 - Moored buoy parameters reporting onto the GTS during August 2012-July 2013.

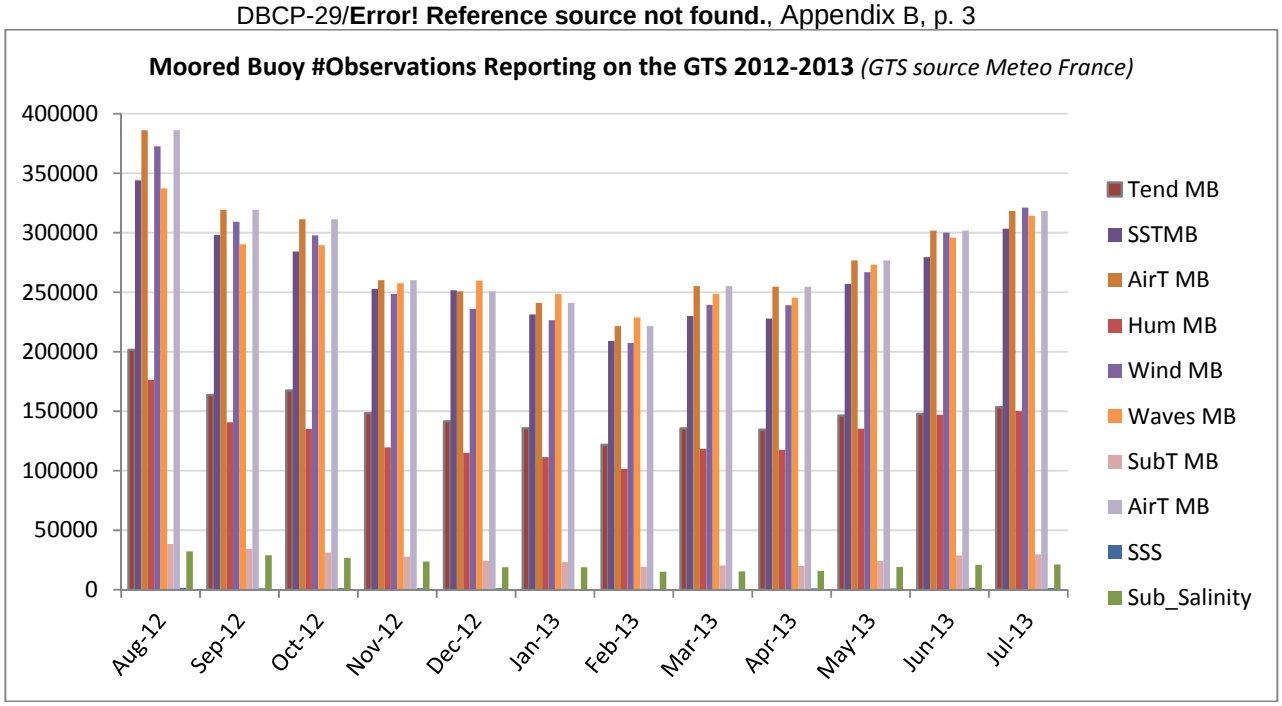

Figure 25 - Number of Observations reported by moored buoys per parameters onto the GTS during August 2012-July 2013.

APPENDIX C

QUALITY OF BUOY DATA

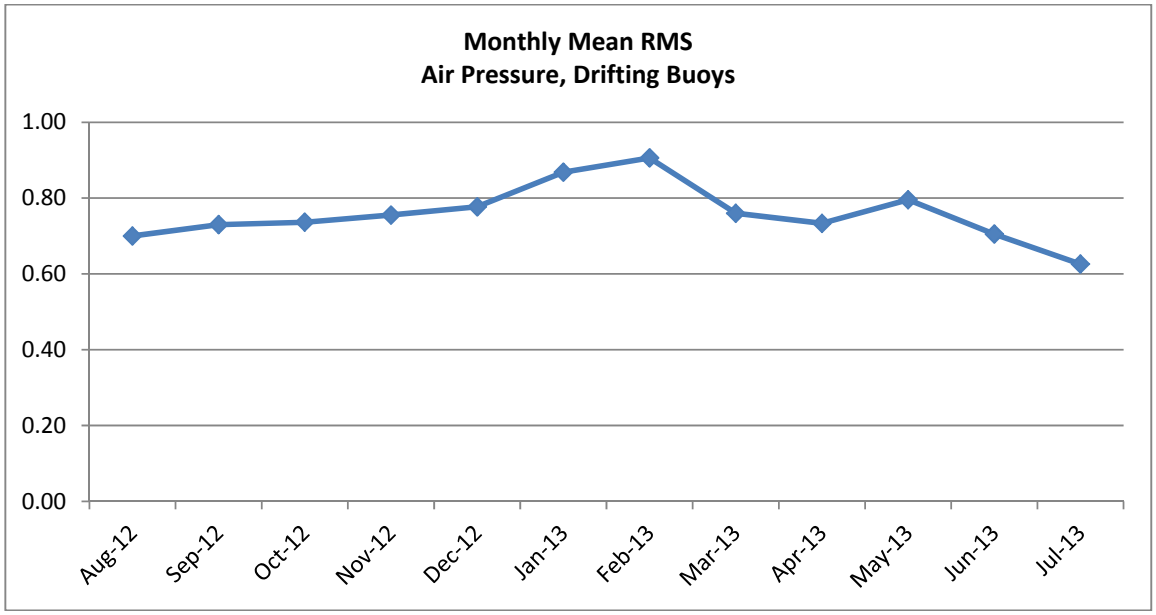

Figure 26 - Drifting buoy Air Pressure Quality Control for the period Aug, 2012-July 2013

The RMS (Obs.-FG) for drifting buoy air pressure data based on ECMWF buoy monitoring statistics for the period August 2012 to July 2013. Values were between 0.63 and 0.91 for the previous year.

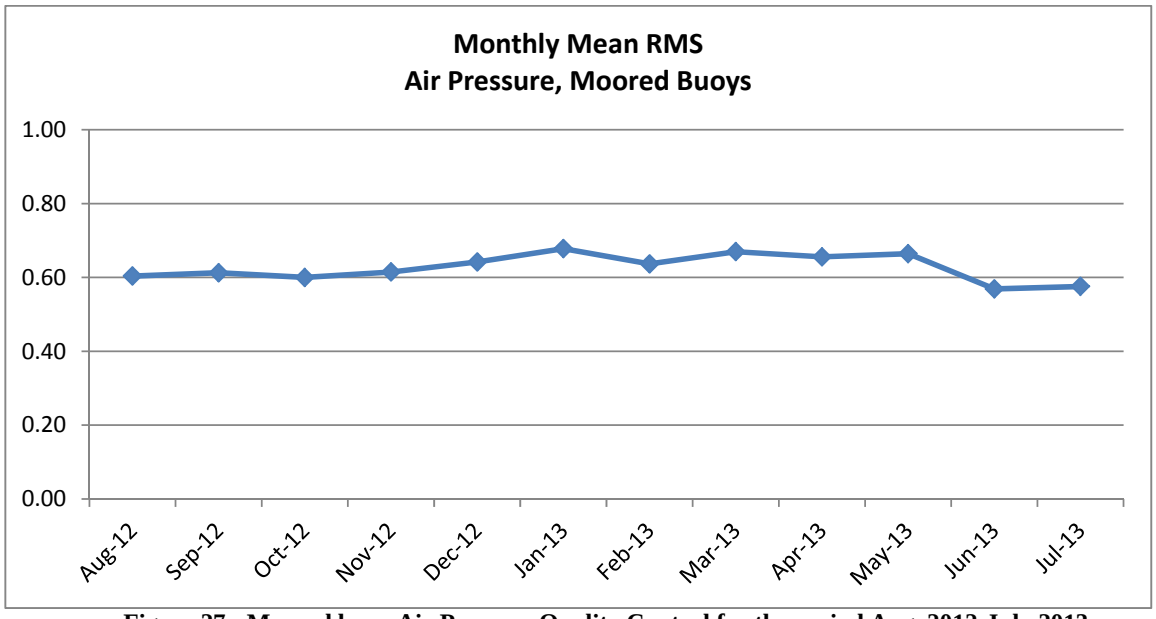

Figure 27 - Moored buoy Air Pressure Quality Control for the period Aug, 2012-July 2013

The RMS (Obs.-FG) for moored buoy air pressure data based on ECMWF buoy monitoring statistics for the period August 2011 to July 2012.Values were between 0.61 and 0.75 for the previous year.

APPENDIX D

TASKS OF THE TECHNICAL COORDINATOR DURING THE INTERSESSIONAL PERIOD (2012-2013)

The following is a short list of highlighted items specific TC DBCP non-regular tasks undertaken during the intersessional period.

These tasks are in addition to the normal monthly maps, metadata and database updates and tracking down drifter and mooring deployments and maintenance.

1. September 2012

1. Preparations for the 28th Session of the DBCP including reports and presentations
2. Interviews for the new JCOMMOPS Ship Coordinator Post

2. October 2012

1. Attendance at the 28th Session of the DBCP in Fremantle, Australia.
2. Updated and monitored JCOMMOPS mailing lists, making necessary modifications
3. Worked in details with several buoy operators on the metadata contents of the JCOMMOPS database
4. Worked on details on the transition back to the US to work remotely.
5. Worked on JCOMM Website and ToR for the ITP
6. OceanSITES Executive Meeting and DMT Teleconference
7. Separation from UNESCO and secondment to WMO paperwork

3. November 2012

1. Reviewed the changes to the DBCP Google Earth file including new links to data and
2. Reviewed and updated an English document for CLS France regarding fishery surveillance
3. Preparations for the next OceanSITES Face-to-Face meeting
4. Contact all OceanSITES members for contributions to the deep-ocean T/S program and follow up on deployments and plans
5. Updates on all OceanSITES Contacts for Steering Committee and Data management Team Meeting based on recent meetings and email exchanges
6. Worked with NOAA/NDBC on transferring the NPDBAP website to JCOMMOPS

4. December 2012

1. OceanSITES monthly Data Management Team meetings resumed.
2. Added all details on the OceanSITES deep-ocean T/S challenge to a News item on the OceanSITES website. Compiled all of this information in detailed Google Docs for showcasing on this site.
3. A lot of logistical preparations for the move back to the US including, moving companies, work with UNESCO HRM on the details, preparations of flights, set up of office in Colorado at NOAA campus
4. Work in Toulouse ended Dec 20 with move back to the US

5. January 2013

1. Work began back in the US on Jan 14
2. Time spent getting remote office set up and computer equipment properly installed and remote access arranged.
3. Compiled and prepared documents for OceanSITES for POGO Meeting

4. Prepared a news items on the O-Buoy with information from Paty Matrai and Carlton Rauschenberg
5. Updated the Buoy Safety Document on the JCOMMOPS>DBCP website: http://www.jcommops.org/dbcp/doc/buoyDeployments/BuoySafety.pdf

6. February 2013

1. Computer crashed, so had to deal with that remotely. This took quite a lot of time to sort out.
2. OceanSITES website and meeting finalizations for the location and invitation list of the upcoming Seoul Meeting.
3. Completed migration of the NPDBAP to JCOMMOPS: http://www.jcommops.org/dbcp/npdbap/
4. New Implementation Strategy and DBCP Operating Principles posted on website
5. Worked on compiling information for the "Data Cookbook"
6. Worked with NAVO on Bulletin Headers – there as an issue with how Volume C1 gets updated at WMO so we tried to sort this out with help from WMO.
7. JCOMMOPS Teleconference with key JCOMMOPS players (WMO, IOC,DBCP EB, JCOMM, Argo)
8. Preparations for upcoming travel to SOT and WIO-IV
9. Discussion and paper written with Mr. Charles Sun, NOAA/NODC on archive of OceanSITES data

7. March 2013

1. Revisited work on the DBCP Label (sticker) but was informed for now that this topic should be closed.
2. Worked with Pierre Blouch on an issue with recycled GTS numbers from Spain
3. Review of action items and preparation for SOT
4. Investigation of GTS delays in the North Pacific. These were found to be in the SPURS array of drifters and were designed to obtain regularly sampled observations, thus showing some longer delays (details are in GTS Timeliness report Doc 9.3)
5. OceanSITES Agenda preparations for Seoul meeting

8. April 2013

1. Preparations for and attendance at the SOT Meeting in Victoria (Apr 22-26)
2. Preparations for and attendance at the WIO IV Capacity Building Workshop in Zanzibar (April 29-May 3)
3. Meeting with Seadatanet and JCOMMOPS on platform coding and governance
4. OceanSITES Executive Committee Meeting
5.

9. May 2013

1. Prepared an OceanSITES Map for publication in a Ocean Circulation and Climate book Chapter written by John Gould, Martin Visbeck and Bernadette Sloyan
2. Preparations for and attendance at OceanSITES Meeting, Seoul, Korea May 27-31, 2013
3. Worked with Sergey, Marlin-Yug, on GTS data distribution issues with Iridium drifters
4. Worked with Brazil on their new Atlas-B to get data distributed to the GTS
5. Complete ingest of OceanSITES catalog into JCOMMOPS database

10. June 2013

1. Prepared slides for the E-Surfmar Meeting in Oslo. Presented by Jon Turton
2. Investigation with CLS on large delays in the southern hemisphere
3. OceanSITES DMT and Executive Committee Meetings
4. Major updates to the OceanSITES website (under review)
5. Compared JCOMMOPS and GDP Databases
6. Provided a detailed report to ICES/Seadatanet on JCOMMOPS platforms and coding.

11. July 2013

1. Attend IABP Meeting in Annapolis, MD USA
2. Visit to CLS America in Largo, MD USA
3. Prepare documents for DBCP meeting: GTS delays (Doc 9.3), TC Report (Doc 5), Information Exchange (Doc 9.1), Deployment Opportunities, with M. Kramp (Doc 9.2), JCOMMOPS Report, with JCOMMOPS team (Doc 11.2), and Action Item follow-up (Doc 12.3)

12. August 2013

1. Continued preparations for DBCP
2. Regular meetings with JCOMMOPS Staff
3. OceanSITES Steering Team Meeting Report
4. OceanSITES DMT Meeting Report
5. All OceanSITES Presentations on line
6. Prepared travel for DBCP (Paris, France) and OCG (Silver Spring, MD)

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