

WORLD METEOROLOGICAL ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)

DATA BUOY COOPERATION PANEL

DBCP-XXVII/Doc. 5 REV. 2
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TWENTY-SEVENTH SESSION

ITEM: 5

GENEVA, SWITZERLAND
26-30 SEPTEMBER 2011

ENGLISH ONLY

REPORT BY THE TECHNICAL CO-ORDINATOR

(Submitted by the Secretariat)

Summary and purpose of the document

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

ACTION PROPOSED

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

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

-A- DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT

5.1 The Panel recalled that the Technical Coordinator's position has been vacant for eleven months during the last intersessional period, i.e. between 1 October 2010 and 28 August 2011. Ms Hester Viola's contract with the United Nations Educational, Scientific, and Cultural Organization (UNESCO) had not been renewed following her decision not to be pursuing continuing employment for personal reasons. Ms Hester Viola's contract with UNESCO was running up until July 2010, after which point she was employed via a short-term contract with the World Meteorological Organization (WMO) until the end of September 2010.

5.2 The recruitment process as presented at DBCP-26, and discussed under agenda item 11.1 continued during the last intersessional period until the recruitment of the new Technical Coordinator, Ms Kelly Stroker as of 29 August 2011 – i.e. only four weeks before this DBCP Session. Ms Stroker is now based in Toulouse, France, at CLS, and employed by the UNESCO through a renewable fixed-term post.

5.3 As of 29 August 2011, Ms Stroker received some training and guidance from the WMO and IOC Secretariats, including from the former Technical Coordinators Mr David Meldrum (IOC), and Etienne Charpentier (WMO), and well as from the DBCP Chair, Al Wallace (Canada), and the JCOMMOPS Manager and Argo Technical Coordinator, Mr Mathieu Belbéoch. The rest of Ms Stroker's time was spent essentially in getting familiar with routine TC tasks, and reading preparatory documentation for this DBCP Session, which was also regarded as an opportunity to learn on DBCP activities and issues.

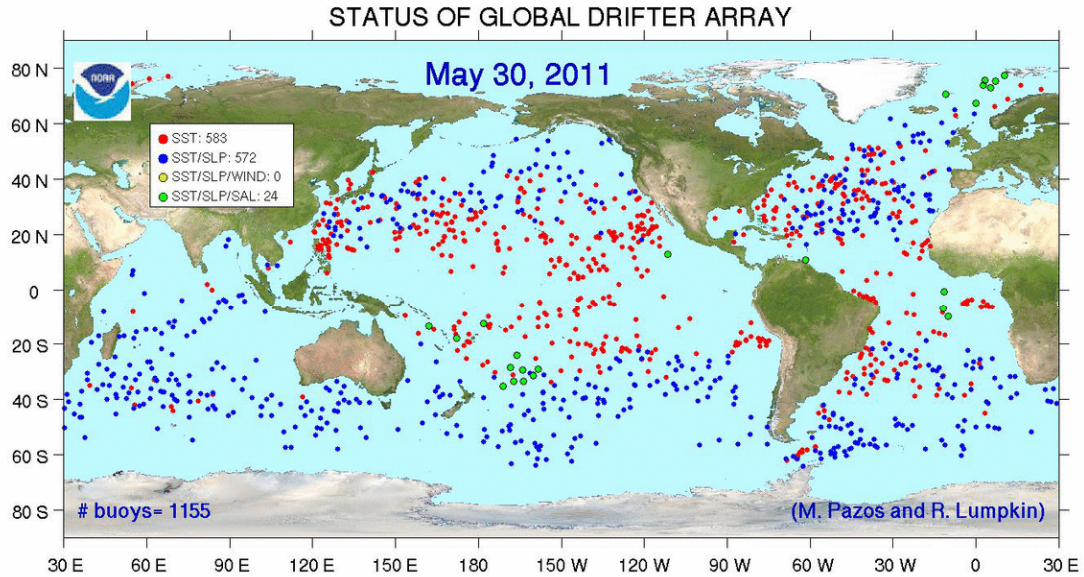
5.4 During her short period of employment, Ms Stroker also traveled in mission to the following places:

- IOC Headquarters, Paris, France
- WMO Secretariat Headquarters, Geneva, Switzerland (to participate at the Ninth JCOMM Management Committee meeting, 13-16 September 2011, as well as this DBCP-27 Session).

5.5 The Panel realized that because of the long period during which there was no Technical Coordinator to serve the Panel, the DBCP monitoring record, including status maps and products, and buoy metadata could not be maintained since September 2010 at JCOMMOPS as required. The Panel agreed that the Technical Coordinator should consider resuming these related activities, and reconstruct the missing records and monitoring products as a matter of priority (**action; TC/DBCP; ASAP**). This will also permit the Technical Coordinator to conduct her work properly using accurate and up to date information.

5.6 The Panel recalled the high priority activities it had agreed for the new Technical Coordinator – once recruited – at the previous Session (see section 5.11 of DBCP-26 Final Report; the list is also reproduced below in Section B) and agreed that these remained valid. It therefore requested the Technical Coordinator to address these tasks during the next intersessional period as a matter of priority (**action; TC/DBCP; Sep. 2012**).

5.7 The TC outlined the current status of the data buoy network, noting that the total number of buoys globally was stable in the last year. The spread across the globe has been relatively consistent and even, although some gaps can be seen in the Gulf of Guinea, the East and West Equatorial Pacific Ocean, the North Pacific, and the East Indian Ocean, the Arabian Gulf, the Bay of Bengal, and parts of the Southern Ocean.



Map 1: Status of the Global Drifter Array for May 2011 (source, GDP).

5.8 She reported that amongst the drifting and moored buoys reporting on the GTS in BUOY (or BUFR) message format and archived as the RNODC/DB (ISDM, Canada), the following variables were measured in June 2011. The total number of operational drifting buoys has been maintained around the 1250 level and about half of those measuring and reporting Sea Level Pressure. There was a small decrease of the number of drifters reporting Sea Level Pressure compared to last year (572 in May 2011, 659 in May 2010 according to JCOMMOPS). Similarly the total number of buoys (drifters and moorings) reporting air pressure decreased slightly in the last two years (figure 1).

Variable	Any	Air P	P Tend.	SST	Air T	Hum.	Wind	Waves	Sub/T
Drifting Buoys	1451	691	633	1327	25	1	1	0	1
Moorings	133	50	2	122	124	101	112	7	113

Table 1. Drifting and Moored buoys – variables being reported on the GTS (source ISDM)

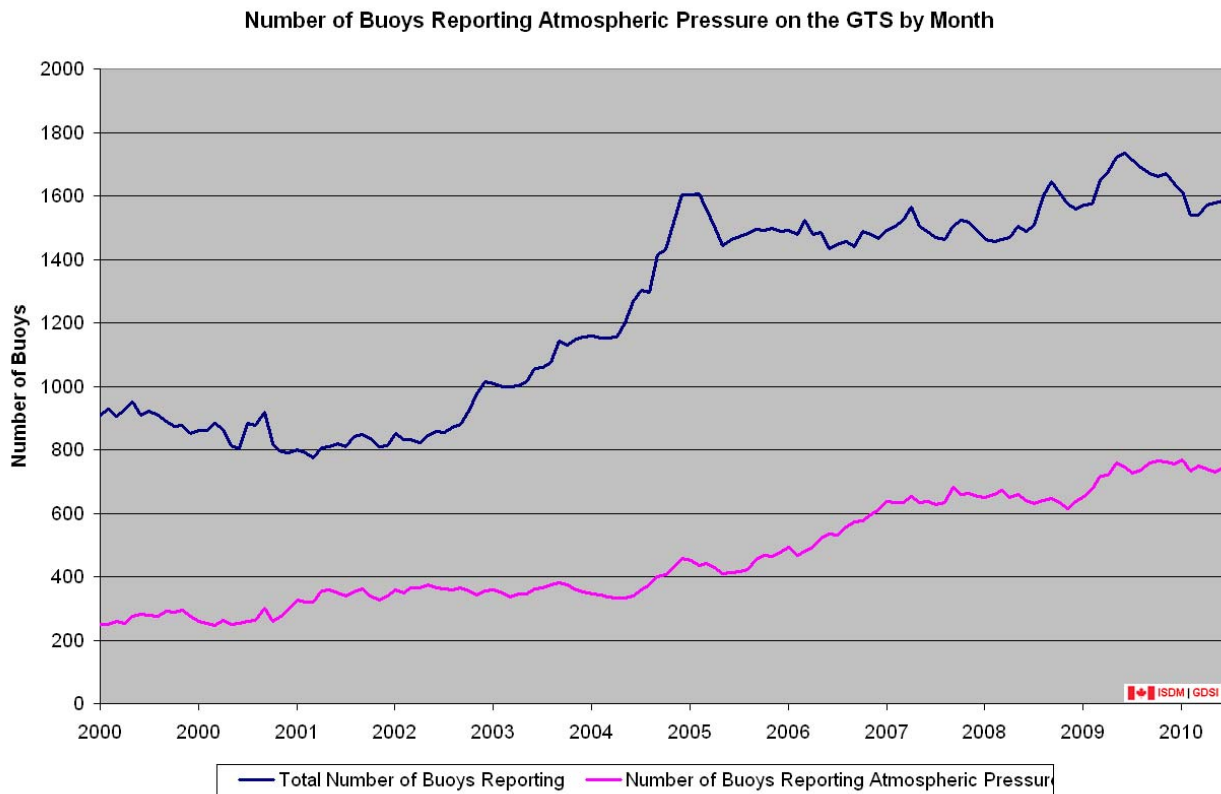


Figure 1: Number of buoys (moored and drifting) reporting air pressure on the GTS between 2000 and June 2011 (source ISDM)

5.9 The Panel noted with appreciation that 334 SVPBs have been deployed in the area South of 40S as part of the Southern Ocean Buoy Programme (SOBP) during the period August 2010 to July 2011 while the plans agreed upon at the previous session was for 241 units. However, the number of operational units reporting from the area in July 2011 was only 152; a substantial decrease from previous years. This may be due to a shorter lifetime of the buoys deployed in this area. The Panel requested the Technical Coordinator to investigate the causes of this problem, to work with Panel members on possible solutions, and to report findings at the next Panel Session (**action; TC DBCP; DBCP-28**). The Panel agreed to commit 273 units for the period August 2011 to July 2012.

5.10 The Panel welcomed Ms Stroker and wished her successful and fruitful time in her future work for the Panel. The Panel also thanked Mr Etienne Charpentier (WMO Secretariat), Mathieu Belbéoch (JCOMMOPS), and Mr David Meldrum (IOC) for providing training to Ms Stroker.

-B- BACKGROUND INFORMATION

1. Priority activities for the Technical Coordinator

1.1 At the previous DBCP Session, in addition to the workplan that already exists, routine tasks, and support for Action Groups and Task Teams, plus working on OceanSITES, the Panel concurred with the following high priority tasks proposed by Ms Viola for the new Technical Coordinator that will be recruited in her replacement:

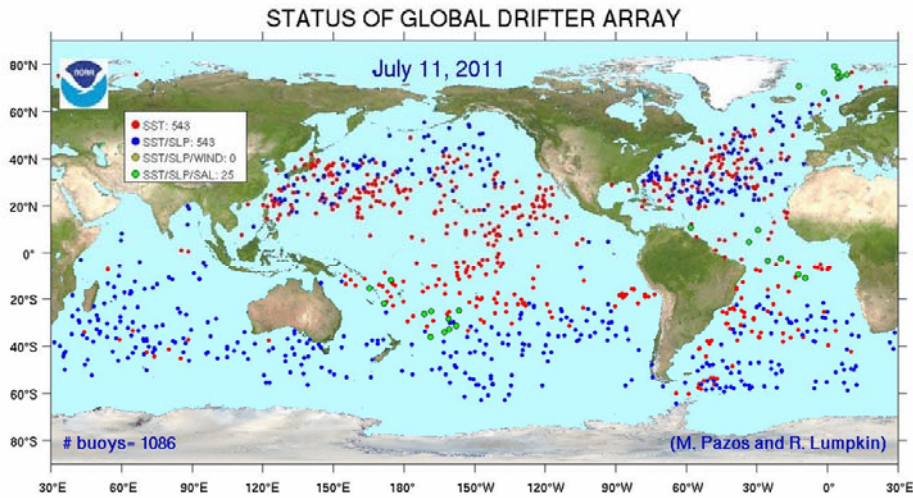
- *Working with JCOMMOPS colleagues to improve the design and functionality of the JCOMMOPS website and other web products such as:*
 - *the QIR tool, to integrate all of JCOMMOPS Quality Control (QC) feedback into one web page;*
 - *Adapting the Google Earth products created for the Argo program to present Buoy metadata and trajectories.*
- *Adding extra metadata fields to GTS Data Flows, continue to assist with JCOMM-wide reviews of BUFR templates along with the JCOMM Task Team on Table Driven Codes.*
 - *Working with the JCOMM Task Team on Table-Driven Codes and Panel members to incorporate appropriate Buoy Metadata into the BUFR Templates for Drifting and Moored buoys.*
- *Designing new products to track deployment plans and assist with creating new deployment opportunities within JCOMM*
- *Finalizing integration of OceanSITES data/metadata into JCOMMOPS database*
 - *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)*
- *Assisting in the standardization and documentation of instrument practices.*

2 Platforms in the Southern Ocean –Air Pressure

2.1 The Southern Ocean Buoy Programme, as part of the DBCP Implementation Strategy, aims to have 300 operational drifting buoys with barometers distributed across the Seas south of 40°S, and excluding the Antarctic sea-ice zone.

2.2 In July 2011, the number of operational barometer buoys in the area is around 152 units.

2.3 It is clear from Map 2 below that almost all of buoys south of 40°S are recording air pressure. Some gaps appeared in the SouthEast Pacific ocean.



Map 2: Status of Global Drifter Array, July 2011 (source, Global Drifter Programme)

Month	Total number of Barometer buoys
AUG 2009	157
SEP 2009	150
OCT 2009	142
NOV 2009	145
DEC 2009	153
JAN 2010	166
FEB 2010	189
MAR 2010	217
APR 2010	210
MAY 2010	209
JUN 2010	202
JUL 2010	195
JUL 2011	152

Table 2. Number of Barometer buoys in the Southern Ocean each month for the year to June 2011.

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

Plans from last year

2.4 Table 3 below provides for the barometer drifter deployment plans as agreed at the 26th DBCP Session for the period August 2010 to July 2011.

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

Table 3. Barometer Drifter deployment plans for August 2010 to July 2011 as agreed at DBCP-26:

2.5 Table 4 below provides for the actual barometer drifter deployments during the period August 2010 to July 2011.

Country	Buoys purchased & deployed	Additional upgrades	Total	Comment
Australia	5	5	10	BOM has also deployed 7 GDP buoys
France	0	10	10	Iridium upgrades in South Indian Ocean
Germany	0	0	0	AWI has currently no buoys with barometers in the Southern Ocean.
New Zealand	4	10	14	Plus 6 Argos-3 Marlin-Yug drifters deployed in Tasman Sea, and 20 drifters deployed for GDP.
South Africa	78	0	78	31 units in ISABP, 35 in IBPIO, and 12 in IPAB. Operators: SAWS, Bayworld Centre for Research and Education, Dept of Environmental Affairs – Oceans & Coasts
UK	7	0	7	
USA	215	0	215	
Total	309	25	334	

Table 4. Actual barometer drifter deployments during the period August 2010 to July 2011:

2.6 Table 5 below provides for the tentative barometer drifter deployment plans for 2012 to be discussed at the 27th DBCP Session:

Country	Buoys purchased or planned	Additional upgrades	Total	Comment
Australia	5	6	11	Upgrades deployed by SAWS and Meteo France. 4 buoys deployed by BOM for the GDP.
France	0	25	25	South Indian Ocean (using RV Marion Dufresne from La Reunion to Amsterdam, Crozet, and Kerguelen Islands)
Germany	0	0	0	AWI has no plans to deploy barometer buoys until July 2012.
New Zealand	0	15	15	South Pacific depl.
South Africa	55	0	55	
UK	7	0	7	7 HRSST drifters with barometers, to be deployed in South Atlantic, including 2 upgrades supported by DBCP PP-HRSST
USA	150	10	160	GDP is planning to purchase 475 SVPBs globally. The following will be deployed S of 40S: South Pacific: 10 South Atlantic: 65 Weddell Sea/Drake Passage: 75
Total	217	56	273	

Table 5. Barometer Drifter deployment plans for the period August 2011 to July 2012 as proposed to be agreed at DBCP-27:

Appendix: None