

FOREWORD

It is my pleasure to present the thirtieth Annual Report of the Data Buoy Co-operation Panel. The Panel was established in 1984 to address the drifting buoy network in the global oceans. In 1993 its Terms of Reference were updated to also address the moored buoys in the high seas. It was re-constituted in 1999 under the auspices of JCOMM. In 2012, per decision from JCOMM, the terms of reference of the Panel were again updated to include coordination for rigs and platforms in the ocean. Membership in the DBCP is voluntary, and its activities are supported by contributions, both monetary and in-kind, from member countries. The drifting and moored buoy arrays support many international programs such as the GOOS¹, the GCOS², the WCRP³, the WIGOS⁴, and the GFCS⁵. At its twenty-ninth Session (Paris, France, 23-27 September 2013), the Panel recognized again the considerable importance of the implementation of the WMO Integrated Global Observing System (WIGOS) to WMO and UNESCO/IOC, and to their Members/Member State. It updated its implementation strategy to reflect the implication to the DBCP activities of the WIGOS framework Implementation Plan (WIP).

While the Panel is striving to maintain the drifting buoy array at the level of 1250 operational units in the world oceans, efforts remain to be made to address data gaps in certain oceans. DBCP seeks to improve quantity, quality, timeliness and coverage of data, in particular, barometric pressure, for use in prediction and research programs. Other activities include the analysis of requirements and the provision of international liaison and a forum for discussion. The DBCP supports an excellent working relationship with manufacturers, who are attendees at annual meetings, and who work with network operators throughout the year to address issues.

Some of the successes of the DBCP include: (i) the development of data quality control guidelines; (ii) the establishment of actions groups for the world's oceans, e.g. International Buoy Programme for the Indian Ocean (IBPIO); (iii) the creation of task teams to address technical issues, e.g. Capacity Building; (iv) the setting up pilot projects e.g. Argos/Iridium telecommunications; wave measurements; sea level pressure; (v) the coordination of reporting on common issues such as the DBCP Report on Vandalism, technical manuals and guides, standards, and best practices; and (vi) the sponsoring of capacity building workshops.

The Panel has been fostering collaborative activities and deployment opportunities in critical and data-sparse areas. The Panel has organized a series of Capacity Building workshops, the first of these, directed at key personnel from the African region, was held at Ostend in June 2007; and successive ones in Cape Town, South Africa (2010), Mauritius (2011), Mombasa, Kenya (2012), Zanzibar, Tanzania (2013) and Port Elizabeth, South Africa (2014) targeting implementation of buoy programmes in the Western Indian Ocean region. In addition, The Panel organized a first "North Pacific Ocean and Marginal Seas" (NPOMS-1) Workshop in the Republic of Korea in July 2012, a second NPOMS-2 Workshop in Hangzhou in China in October 2013, and a third will be held in Kyoto, Japan in October, 2014. A "Regional Workshop on Best Practices for Instruments and Methods of Ocean Observation" was held in Chennai, India in November 2012.

1 IOC-WMO-UNEP-ICSU Global Ocean Observing System
2 WMO-IOC-UNEP-ICSU Global Climate Observing System
3 WMO-IOC-ICSU World Climate Research Program
4 WMO Integrated Global Observing System
5 Global Framework for Climate Services

The Panel notes that a number of other capacity building efforts are underway for Africa, and will review the overall needs during the next inter-sessional period. Pending the results of that review, the need for future Western Indian Ocean capacity building workshops will be considered. There has been a need identified for a workshop for southern Asia.

The number of operational drifters on the GTS for August 2014 was 1532, with more than 50% of those reporting atmospheric pressure. This represents a significant improvement from a year ago, and members are congratulated on their success. Data timeliness continues to improve, in part because of the increased use of Argos-3 and Iridium satellite telecommunications systems.

Drifter lifetimes remain a concern as they continue to be below the goal of a half-life of 450 days. The DBCP Task Team on Instrument Best Practices and Drifter Technology Development (TT-IBP) continues to review the technology. Previous studies showed that the main factors known to affect the drifter lifetime are (i) faulty battery packs; (ii) increased power demand that resulted from the implementation of PMT and strain gauge. The GDP is working to address and remediate the identified problems and tests are being conducted to determine their success and re-establish confidence in the buoy supply chain and to avoid episodes of network degradation in the future. The TAO array, has also experienced a drop in numbers over the year and in July 2013 only 36% of the TAO data were delivered to end users. DBCP-29 expressed its concerns about the limited ship support for the equatorial mooring arrays, the state of the TAO array and data availability. The Panel noted the difficulty of maintaining these sustained observation programmes. One of the main challenges now with the moored buoy array is finding resources to maintain the systems.

As we look forward to the future the DBCP sees opportunities while it will also face some challenges. The Panel welcomes new participants and partners to support the observing arrays and maintain the drifting network at 1250, while addressing gaps and timeliness issues and increasing the number of buoys reporting barometric pressure. The DBCP must remain relevant by meeting client needs (such as high resolution sea surface temperature), integrating emerging technologies (such as gliders), and addressing regional and/or technological requirements through establishment of appropriate task teams or pilot projects. And, of course, we must accomplish this during a time of global fiscal constraint. I invite the readers of this annual report to consider joining the DBCP to advance programs of mutual interest.

Actions continue to be undertaken in 2014 to address the issue of vandalism on data buoys. In particular, the DBCP working group on Vandalism circulated works with member countries to ensure that incidents of vandalism on data buoys are reported and documented. Countries/programs reported a significant number of vandalism events during the last intersessional period. These ranged from cut mooring lines, to damaged sensors, and to the complete removal of instruments resulting in thousands of lost days of data. While recognizing that vandalism on data buoys continues to be a significant global menace to ocean observation systems, the Panel noted with appreciation some positive developments with regard to measures allowing to better preventing vandalism on data buoys. The Panel concurred with the recommendations of the working group on vandalism, and agreed that efforts remain to be made on anti-vandalism data buoy designs, mechanisms for the monitoring of incidents, including by using webcams, and on awareness programmes. The Panel agreed with an action plan to address the issue of vandalism.

The Panel was fortunate to have Ms Kelly Stroker continue as its technical coordinator after her return to the United States last year via a Special Service Agreement with WMO. The planning continues for the move of JCOMMOPS from Toulouse, France to Brest, France. The Panel, OceanSITES, and the Secretariats were successful in the recruitment of a

new Technical Coordinator will who relocate to Brest to begin her employment. The Panel welcomes Ms. Champika Gallage from Canada, congratulates her on the appointment, and looks forward to working with her in the coming years.

The annual meeting in 2014 will be my last as Chair of the DBCP. I have immensely enjoyed my five years leading the work of the Panel, and know that our new Chair will continue to support the work of the members. Overall, I am confident that the Panel is both well placed and enthusiastic to continue its pivotal role in ensuring the smooth flow of observations and other data from the oceans to a wide user community, and in addressing new observational and organizational challenges. We look forward to welcoming participants at DBCP-31 in Geneva, Switzerland, in October 2015.

Al Wallace
(DBCP Chair)