

**INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)**

DATA BUOY COOPERATION PANEL

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WORLD METEOROLOGICAL ORGANIZATION

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ITEM: 8.2

ENGLISH ONLY

**PROGRESS REPORT ON PILOT PROJECT ON WAVE MEASUREMENT EVALUATION AND
TEST FROM MOORED AND DRIFTING BUOYS**

(Submitted by Val Swail, Co-chair PP-WET)

Summary and purpose of the document

This document provides information on the development and current status of the joint DBCP-ETWCH Pilot Project on wave measurement evaluation and test from moored and drifting buoys, and the Pilot Project workplan.

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. PP-WET WORKPLAN

-A- DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT

8.2.1 Mr Val Swail (Canada) reported on the development and current status of the joint DBCP¹-ETWCH² Pilot Project on wave measurement evaluation and test from moored and drifting buoys (PP-WET). The full report is included as a presentation accompanying the DBCP-29 meeting report.

8.2.2 Mr Swail noted that Dr Robert Jensen, PP-WET Co-Chair, had made a presentation on the Pilot Project to the WISE2013 meeting, April 21-25, 2013, College Park, Maryland, USA. Dr Jensen emphasized the importance of understanding the wave measurements which formed the basis for calibration and validation of modelling systems in wave forecasting agencies. He encouraged the modelling community to promote the wave measurement evaluation activities within their respective countries.

8.2.3 Mr. Swail also noted that a special session on wave measurement (Session A) was to be held as part of the 13th International Workshop on Wave Hindcasting and Forecasting (October 27-November 1, 2013, Banff, Canada) to present evaluation results to the scientific community and further develop guidelines and participation in the Pilot Project (<http://www.waveworkshop.org>). A Pilot Project meeting has been scheduled for the day prior to the Workshop for Pilot Project members attending the workshop as well as any other interested people, to review progress and future plans.

8.2.4 Mr Swail reported that the past year had been a difficult one for many national agencies, due to issues of funding, personnel, logistics and ship time, which had significantly hampered progress in the Pilot Project, particularly for the deployment of new wave buoys. In spite of this, the Panel reported some progress, and expressed its appreciation to several national agencies (Canada, US, Korea, India, Norway, United Kingdom) and international programmes for their participation in the intercomparison projects. In particular, the Panel welcomed the continued contribution from Canada in providing financial support for the Coastal Data Information Program (CDIP) at the Scripps Institution of Oceanography, in setting up the intercomparison methodology, web site and metadata criteria, and in carrying out individual intercomparisons. The Panel encouraged its member countries to participate in the intercomparison activities led by this pilot project, and encouraged WMO-IOC Regional Marine Instrument Centres (RMIC) who have wave measurement responsibilities to take a more active role in the project. The 3rd JCOMM Marine Instrument Workshop for the Asia-Pacific Region, 22 - 25 July 2013, Tianjin, China was noted as an excellent example. (**recommendation**).

8.2.5 Mr Swail noted a meeting of the DBCP-ETWCH Pilot Project on Wave measurement Evaluation and Test (PP-WET) will be held Saturday, October 26, 2013 in Banff, Alberta, Canada, in conjunction with the 13th International Workshop on Wave Hindcasting and Forecasting (www.waveworkshop.org). The objectives of the meeting will be to review the international activities to date, including preliminary analysis of the results of co-deployments, and to discuss the next steps for the activity. There will be a session at the Wave Workshop devoted to presentation of the results of the intercomparisons to date.

8.2.6 The Panel noted that evaluation results continue to be routinely added to the intercomparison web site <http://www.jcomm.info/wet> in near real time, if **spectral** data are routinely transmitted via satellite; if data must be retrieved from logging systems on the platforms, the analysis may be delayed by a year or more. Additional intercomparisons will be added to the web site once the information has been retrieved from the data storage systems on the buoys.

8.2.7 The Panel recognized that the pilot project would contribute to JCOMM in developing standards and best practice, as well as to the relevant WIGOS exercise, and encouraged the co-

1 DBCP: Data Buoy Cooperation Panel

2 ETWCH:JCOMM Expert Team on Waves and Coastal Hazard Forecasting Systems

chairs and Pilot Project members to actively outreach these relevant activities with the progress in the inter-comparison exercise (**recommendation**).

8.2.8 The Panel agreed that this pilot project was still progressing well, and decided to retain the project in its current form for another year, with no additional financial support. The revised work plan for the project, given in Appendix A, is also available at the pilot project website. The Panel thanked the PP-WET co-chairs, Mr Val Swail and Dr. Robert Jensen, and Pilot Project members for their work to make progress.

8.2.9 The meeting made the following recommendations:

- (i.) Continue the Pilot Project for the next year, with no funding support;
- (ii.) Encourage the co-chairs and Pilot Project members to contribute the results of the intercomparison exercise to JCOMM and WIGOS in developing standards and best practice;
- (iii.) Encourage its member countries, and RMICs with marine responsibilities, to participate in the Pilot Project intercomparison activities;

8.2.10 The meeting decided on the following action items:

- (i.) The future plans and membership of the Pilot Project will be reviewed in October 2013, at the special meeting preceding the Wave Workshop, including a possible follow up technical workshop on results to date (**action; PP-WET co-chairs, Secretariat; October, 2013**)
- (ii.) Guidelines on the best practices for measurement of reliable, high-quality spectral wave measurements, including directional spectra, will be developed, possibly as an outcome of the technical workshop (**action; PP-WET co-chairs; DBCP-30**).

Appendix: 1

APPENDIX A

WORKPLAN (OCTOBER 2013 TO SEPTEMBER 2014) OF THE PILOT PROJECT ON WAVE MEASUREMENT EVALUATION AND TEST FROM MOORED BUOYS (PP-WET)

1. Coordinate intercomparisons of wave measurements from different platforms, on an opportunistic basis;
 2. Publish intercomparison results and updated status reports on Pilot Project web site;
 3. Develop a plan for a continuous testing and evaluation program;
 4. Promote widely the pilot project goals and objectives, and results, to encourage enhanced participation and additional partners, including investigation of an alternative testing site on an ocean platform, and greater involvement of Regional Marine Instrumentation Centres (RMIC);
 5. Contribute to training material to educate users about how to deploy and operate wave sensors appropriately;
 6. Contribute, as appropriate, to the JCOMM Standards and Best Practice Guides, including a recommended approach to making reliable, high-quality spectral wave measurements, including directional spectra;
 7. Decide whether to continue the pilot project for a further year and investigate follow-on mechanisms;
 8. Present results to DBCP-30 and other scientific fora.
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