

**OPERATING PRINCIPLES OF THE
DATA BUOY CO-OPERATION PANEL (DBCP)**
(as adopted at DBCP-XXV)

1. INTRODUCTION

1.1 The Data Buoy Co-operation Panel (DBCP) is a subsidiary body of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM). The World Meteorological Organization (WMO) and Intergovernmental Oceanographic Commission of UNESCO (IOC) jointly sponsor the JCOMM, in order to undertake international / intergovernmental coordination of marine observational networks for which both organizations are mandated.

1.2 The DBCP was established in 1985 by WMO Resolution 10 (EC-XXXVII) and IOC Resolution EC-XIX.7. In 1993, the governing bodies of IOC and WMO agreed to change the name of the Panel to the Data Buoy Co-operation Panel (DBCP) with extended terms of reference, so that the Panel may provide international coordination required for both drifters and moored buoy programmes, which support major WMO and IOC programmes (IOC Resolution XVII-6 and WMO Resolution 9 (EC-XLV)). As the JCOMM was established in 1999, the Panel became a part of the JCOMM Observations Programme Area (Resolution 4 (EC-LII)). The Terms of Reference of the DBCP are reproduced in *Appendix I*.

1.3 The DBCP addresses the requirements and needs for real-time or archival data from buoys, both drifting and moored, coordinates buoy deployments worldwide, maintenance and collection of data from instrumented oceanographic and meteorological drifting buoys and moored buoys on the high seas. The Panel provides a forum for the exchange of technical and related information on buoy technology, communications systems and the applications of buoy data, to both operations and research.

1.4 The Panel coordinates its activities with related regional and global programmes of WMO and IOC, such as the World Weather Watch (WWW), the Global Ocean Observing Systems (GOOS) and the ICSU / WMO / IOC / UNEP Global Climate Observing System (GCOS) and the ICSU / WMO / IOC World Climate Research Programme (WCRP), and serve their needs for the data buoy technology and the implementation of data buoy networks.

1.5 The Panel adheres to a data policy approved by itself at DBCP Sessions. The DBCP Data Policy is reproduced in Appendix IX.

2. PANEL MEMBERS AND PARTICIPANTS

2.1 The Terms of Reference for the DBCP are decided by the WMO and IOC Executive Bodies through proposition by JCOMM; the Panel is reporting to JCOMM and serves the needs of WMO and IOC Programmes. In this context, WMO and IOC Members / Member States designate National Focal Points for buoy programmes who become full Panel members. This is done by means of a letter from the Permanent Representative of a country with WMO to the WMO Secretary-General or by the IOC Action Addressee to the Executive Secretary of IOC. The lists of National Focal Points for buoy programmes are maintained by the WMO and IOC Secretariats, and published on the JCOMM website.

2.2 Participants in the DBCP activities can be operational agencies, meteorological and oceanographic institutes, research agencies, data centres, governmental and non-governmental organizations, and commercial services interested in the global oceans who actively contribute to the aims of the Panel. Individuals with an interest in data buoy activities are also welcome to attend as observers.

3. KEY DBCP PERSONNEL, THE EXECUTIVE BOARD AND TECHNICAL CO-ORDINATOR

3.1 The Panel elects a Chairperson and Vice-chairpersons at the end of its regular sessions with geographical representation from: (i) Asia; (ii) Europe; (iii) North America; and (iv) the Southern Hemisphere. Elections will be decided by a simple majority if a quorum of Panel members is present. A quorum will consist of six Panel members. If a quorum is not present at the regular meeting, elections will be by unanimous vote.

3.2 The elected Chairperson leads the DBCP during the next intersessional period within principles and financial limits defined by the Panel, and Chairpersons the next Panel Session. The Chairperson is supported by the WMO-IOC Joint Secretariat and the DBCP Executive Board, which is responsible for the day-to-day management of the Programme within the guidelines set at the regular meeting of Panel members. The Terms of Reference of the Executive Board are provided in *Appendix IV* to this document.

3.3 The Panel recruits a full-time Technical Co-ordinator whose position is fully financed by voluntary contributions from Panel members or other contributors. The Technical Co-ordinator acts as the focal point for the Programme and carries out the directives of the Panel, as appropriate, during the intersessional period. Upon the Panel's decision, the Technical Co-ordinator works for other related programmes to assist their implementation. Tasks and duties of the Technical Co-ordinator are detailed under section 11 of this document, and the Terms of Reference of the Technical Co-ordinator are given in *Appendix II*.

3.4 By the decision at the 24th session, the Technical Co-ordinator works a third of his/her time on the OceanSITES Project Office support.

3.5 The Technical Co-ordinator would be requested to inform the Chairperson and the Secretariat of his / her wish, or otherwise, to continue to work as Technical Co-ordinator of the Panel for the period 1 June "Y+1" to 31 May "Y+2". Should that information be a wish to continue, the Panel in turn would agree to retain him/her as Technical Co-ordinator, subject to the availability of funds, and subject to his / her specific contract limitations with his / her relay employer.

3.6 In case the Technical Co-ordinator wished to quit the position, he/she would be required to inform the Panel as soon as possible, and in any case preferably six months in advance, to assist in the recruitment and training of his / her successor, in order to ensure as full continuity as possible in the work of the Panel's Technical Co-ordinator.

3.7 The current contact details for key DBCP personnel are listed in *Appendix X*.

4. TASK TEAMS

4.1 Task Teams can be established to work proactively on key issues identified by the Panel, in order to ensure that the Workplan is duly implemented during the intersessional period. The Chairperson(s) of (a) Task Team(s) is / are appointed by the Panel. The Team(s) will report to the Panel on their activities at its regular sessions. The Terms of Reference and Membership of the current Task Teams are provided in *Appendix V*.

4.2 From time to time, the Panel may decide to establish and fund Pilot Projects of limited duration to evaluate new technologies or procedures that might enhance its capabilities.

5. ACTION GROUPS

5.1 The implementation of buoy deployments is coordinated at the regional level through global, regional, or specialized Action Groups. The definition of an Action Group is given in *Appendix III*.

6. IMPLEMENTATION STRATEGY

6.1 The Panel defines its Implementation Strategy and review it at its regular meetings. The Implementation Strategy is defined in such a way that it is consistent with the WMO and IOC Strategic plans.

7. WORKPLAN

7.1 The Panel established and reviews the overall Workplan for itself and the Technical Co-ordinator at its regular sessions, for the coming intersessional period.

7.2 The DBCP Chairperson and the Executive Board may update the Technical Co-ordinator's Workplan during the intersessional period, as appropriate, and report on such changes at the next Panel Session.

8. FUNDING

8.1 The DBCP is self-sustaining, by contributions of equipment, services (such as communications, deployment, archiving, and scientific or technical advice), and coordination. The contributions include monetary contribution to secure employment and activities of the Technical Co-ordinator, through IOC and WMO.

8.2 Monetary contributions - on a voluntary basis - are made by Panel members to the DBCP Trust Fund at WMO and/or IOC, as appropriate. The Terms of Reference of the DBCP Trust Fund at WMO are given in *Appendix VII*. The Trust Fund at IOC follows the Financial Regulations of the IOC Special Account that are reproduced in *Appendix VIII* (Decisions in 157th Executive Board of UNESCO). The IOC Regulations follow the General rules and regulations of UNESCO on Trust Funds, which correspond to those of WMO, in principle.

8.3 The Panel can establish budget lines to implement the DBCP activities, based on its agreed Workplan. The current DBCP budget line items are provided in *Appendix VI*.

8.4 Through the present arrangement, the Technical Co-ordinator is recruited by IOC, and the employment and activities of the Technical Co-ordinator depend on the DBCP Trust Fund in IOC and in WMO - the salary and logistical support are paid within the DBCP Trust Fund in IOC, whereas the expenses incurred for the TC's activities are executed within the DBCP Trust Fund in WMO.

8.5 Timely contribution from Panel members is critical to secure the TC employment contract, considering the yearly cycle of the administration within WMO and IOC. Panel members are encouraged to ensure that their contributions are made in good time.

8.6 The logistics for the DBCP Technical Co-ordinator are currently provided by the CLS (France), of which the terms and cost are defined by a MOU between the IOC and CLS on the logistic support for JCOMMOPS – where the Technical Co-ordinator belongs to. The annual cost is paid to the CLS from the DBCP Trust Fund in IOC. All actual expenses incurred by the host for the logistic support of JCOMMOPS, in excess of the amount of the contract signed with IOC to that effect, is considered as a contribution by the host to the work of the Panel.

8.7 The WMO and IOC Secretariats provide finalized financial statements of account on an annual basis to the Panel in early Year+1 as soon as the organizations' fiscal year accounting is finalized. The Panel also reviews its financial situation at regular Panel sessions, with interim statements of the budget provided by the WMO and IOC Secretariats.

8.8 The Panel may appoint a Panel Member as finance advisor to act on its behalf of and to work with the WMO-IOC Joint Secretariat to produce a consistent, comprehensive and comprehensible set of annualized accounting reports to be presented to the Panel and its

Executive Board at their regular meetings (see *Appendix X* for currently appointed person).

9. ORGANIZATION AND CONDUCT OF THE DBCP SESSIONS

9.1 In odd years, the regular session of the DBCP will be held at either the WMO or IOC Headquarters, based on the agreement and decision by the Panel and the WMO-IOC Joint Secretariat, in order to lessen travel duties of the Secretariats and to provide opportunities for extended participation of other WMO or IOC officers in the session for wide range of information exchange and cooperation.

9.2 In even years, the regular session of the DBCP will be held at an external location, upon a suitable offer for hosting sessions. This is to advocate and support the Panel's activities in regional and national levels, and to encourage regional / national staff at all levels to actively participate in the work of the Panel, in particular through presentations to the Scientific and Technical Workshop and other networking opportunities.

9.3 The agenda and timetable of the regular session will be drawn up by the Panel Chairperson, in consultation with the Executive Board, other Panel members and the Joint WMO-IOC Secretariat. In principle, the Panel discussion at the regular session is to be completed within 2.5 days. In order to ensure efficiency of the session as well as the comprehensive review and exchange of information, some parallel sessions and focused discussion may be introduced, as required. The Panel will strive to reach decisions by consensus only; no voting should in principle take place. All decisions and relevant discussion will be recorded in the session report, which will be approved by the Panel before it disperses.

10. INFORMATION EXCHANGE AND REPORTING

10.1 The Technical Co-ordinator maintains a website on behalf of the Panel. The URL for the website is: <http://www.jcommops.org/dbcp/>.

10.2 The Technical Co-ordinator also maintains mailing lists for the Panel. The names of the mailing lists, their objectives, and membership are detailed on the DBCP website.

10.3 The Panel may produce and update the DBCP brochure. The contents, means of publication and distribution, and funding mechanisms for related activities are to be agreed by the Panel at its regular sessions.

10.4 The Panel members who represent DBCP at various events are to use a standard Powerpoint presentation template. The template is developed and maintained by the Technical Co-ordinator, and available from the DBCP website.

10.5 The Technical Co-ordinator also maintains a document describing the Panel's achievements since its establishment.

10.6 The Panel maintains series of DBCP Technical Publications that are issued by the WMO Secretariat. These publications can be with the form of paper copy, CD-ROM, DVD-ROM, or be web-based only. The list of current DBCP Publications is available at the DBCP website. The actual costs of editing, publishing, and distributing the DBCP Publications are being recuperated from the DBCP Trust Fund.

10.7 At its regular sessions, the Panel receives reports on activities during the intersessional period, from:

- the Executive Board;
- the Technical Co-ordinator;
- the Action Groups (annual basis), and
- the Member Countries (annual).

The annual reports by Action Groups and the Member Countries are also to be included in the DBCP Annual Report.

10.8 The Panel's regular session report and Annual Report will be consolidated into a single mailing, structured as follows:

a. A 2-page covering letter containing important information for decision makers, including:

- Executive summary of the Panel's achievements, activities and aspirations for the current year; and
- Table of national contributions.

b. A slimmed-down paper hard copy report containing information that needs to be referenced (and possibly annotated) rather frequently and quickly. This would essentially replace the existing session final report. The material in this report would include the following:

- Executive summary of the Panel's achievements, activities and aspirations for the current year;
- The final report of the regular session (i.e., the usual final report without the annexes);
- Agenda;
- List of participants;
- Operating Principles of the Panel (this document, as updated and agreed at the annual session);
- Summaries of the Action Group reports;
- Executive Board report;
- Finalised annual financial accounts, including the table of national contributions and budget for the following year;
- If necessary, selected buoy and GTS statistics (showing trends in numbers, quality, delays, plus a few maps);
- List of Actions and Workplan, and;
- List of Acronyms.

c. A CD-ROM containing the entire above, plus a complete set of meetings, and all other annexes generally attached to the two reports includes:

- A full report by the Technical Co-ordinator;
- National reports;
- Full reports by the Action Groups;
- Data Management Centre reports;
- The current status and development of satellite communications (CLS/Argos, Iridium, etc);
- GTS report;
- National Focal Point list;
- Contracts;
- Other financial and administrative papers; and
- Technical Document list, including available electronic versions.

d. All of the above information will be available on-line via the JCOMMOPS website.

10.9 During the intersessional period, the Technical Co-ordinator provides for synthetic quarterly reports on his/her activities and the status of his/her Workplan's implementation to the DBCP Executive Board.

10.10 The Technical Co-ordinator produces monthly maps and statistical graphics on a monthly basis regarding the status of buoy programmes. This information is posted on the DBCP website and issued through the appropriate mailing lists.

10.11 Written reports to the Panel session will adhere to a format that will make clear to the Panel, by means of an Executive Summary, those issues that require discussion and decision. Similarly, presentations to the session will presume that written reports have been read by the Panel, and will concentrate solely on those issues, which require an action or decision by the Panel. Report presenters will submit a summary of their report and the ensuing discussion and actions to the secretariat for inclusion in the draft final report of the session.

11. ROUTINE TASKS OF THE TECHNICAL CO-ORDINATOR

The following routine tasks of the Technical Co-ordinator (TC) comply with his/her Terms of Reference (*Appendix II*).

11.1 The Technical Co-ordinator acts as a clearing house for information on all aspects of buoy data use; he/she maintains DBCP and JCOMMOPS websites as appropriate.

11.2 The Technical Co-ordinator monitors the status of the global drifting and moored buoy networks in terms of: (i) spatial density; (ii) accuracy of the measurements; (iii) real-time data distribution and data timeliness; and (iv) buoy lifetime. The TC identifies gaps in the system, and makes recommendations to the Panel as appropriate. He/she also regularly provides information on instrument performances to the WMO Database as part of the CBS Rolling Review of Requirements (RRR).

11.3 Through direct contacts with programme managers, Principal Investigators, and buoy operators, the Technical Co-ordinator advertises the DBCP Programme, encourage use of buoy data, and active participation of new participants. The TC regularly contacts buoy programme managers of existing and new programmes in order to: (i) invite them, and possibly convince them, if useful, to authorise GTS distribution of their buoy data; (ii) offer technical assistance for that purpose if needed; (iii) collect information on buoy programmes, and the deployed buoys, including metadata; and (iv) collect information in buoy deployment opportunities for use by other buoy operators. Programme Managers may also directly contact the Technical Co-ordinator for receiving assistance with regard to the GTS distribution of their buoy data.

11.4 The Technical Co-ordinator provides information and assists as appropriate buoy data users for accessing data and platform/instrument metadata.

11.5 The Technical Co-ordinator also participates actively in buoy quality monitoring as defined in the DBCP Quality Control Guidelines ([details on the DBCP website](#)). In particular, The TC monitors the dedicated mailing list, and information posted on the dedicated web page, reviews the buoy monitoring statistics, and provides feedback to buoy operators regarding the quality of their buoy data as appropriate and recommends action for those buoys reporting erroneous data. He/she assists in the resolution of specific technical problems regarding the GTS distribution of the data as appropriate (obtaining WMO numbers, looking at technical files, calibration curves, looking at data losses, etc.).

11.6 The Technical Co-ordinator works closely with centres responsible for the collection, location, data processing, and real-time GTS distribution of the buoy data for: (i) monitoring the system and identifying possible problems; (ii) making sure these problems are corrected; and (iii) providing technical assistance as appropriate.

11.7 Upon request, the Technical Co-ordinators also provides the WMO and IOC Secretariats with status maps, statistical information and graphs, and documentation.

11.8 The Technical Co-ordinator maintains the DBCP list of buoy manufacturers and provides it on the DBCP website.

11.9 The Technical Co-ordinator liaises with the DBCP Action Group coordinators and prepares reports on DBCP activities for the regular meetings of the Action Groups. The TC represents the Panel or the Action Groups at relevant technical meetings, both inside and outside WMO and IOC, as required.

11.10 The Technical Co-ordinator assists the Chairperson and the Secretariats in the preparation of the DBCP Session, including the preparation of specific technical preparatory documents and presentations.

12. REVIEW OF THE MANAGEMENT STRUCTURE AND OPERATING PRINCIPLES

12.1 The Panel reviews and updates its management structure, and operating principles at its regular sessions. This includes, in particular, the appropriate appendices of the DBCP operating principles, i.e., definition of an Action Group, Terms of Reference of the Executive Board, budget lines, and Terms of Reference of the DBCP Trust Fund at WMO and IOC.

APPENDIX I

Terms of Reference of the Data Buoy Co-operation Panel (Approved by WMO Resolution 4(EC-LII) and UNESCO/IOC Resolution XVII-6)

The Data Buoy Co-operation Panel shall:

Consider the expressed needs of the international meteorological and oceanographic communities for real-time or archival data from ocean-data buoys on the high seas and request action from its members, the Technical Co-ordinator or Action Groups to meet these needs;

1. Co-ordinate activity on existing programmes so as to optimize the provision and timely receipt of good quality data from them;
 2. Propose, organize and implement, through the co-ordination of national contributions, the expansion of existing programmes or the creation of new ones to supply such data;
 3. Support and organize as appropriate such Action Groups as may be necessary to implement the deployment of data gathering buoys to meet the expressed needs of oceanographic and meteorological programmes such as WWW, WCRP, GOOS and GCOS;
 4. Encourage the initiation of national contributions to data buoy programmes from countries which do not make them;
 5. Promote the insertion of all available and appropriate buoy data into the Global Telecommunication System;
 6. Promote the exchange of information on data buoy activities and encourage the development and transfer of appropriate technology;
 7. Ensure that other bodies actively involved in buoy use are informed of the workings of the Panel and encourage, as appropriate, their participation in the Panel deliberations;
 8. Make and regularly review arrangements to secure the services of a Technical Co-ordinator with the terms of reference given in Part B;
 9. Report formally to the Joint WMO / IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM), and participate in and contribute to an integrated global operational ocean observing system, implemented and co-ordinated through JCOMM; and
 10. Submit annually to the Executive Councils of the WMO and the IOC, to JCOMM and to other appropriate bodies of WMO and IOC, a report that shall include summaries of the existing and planned buoy deployments and data flow.
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APPENDIX II

Terms of Reference for the Technical Co-ordinator of the DBCP (Approved by WMO Resolution 4 (WMO EC-LII) and UNESCO/IOC Resolution XVII-6)

The Technical Co-ordinator of the Data Buoy Co-operation Panel shall:

1. Under the direction of the Data Buoy Co-operation Panel take all possible steps within the competence of the Panel to assist in the successful achievement of its aims;
 2. Assist in the development, implementation, and management of quality control procedures for data buoy systems;
 3. Assist in setting up suitable arrangements for notifying the appropriate user communities of changes in the functional status of operational buoys;
 4. Assist in the standardization of buoy data formats, sensor accuracy, etc.;
 5. Assist when requested with the development of cooperative arrangements for buoy deployment;
 6. Assist in the clarification and resolution of issues between Service Argos and buoy operators;
 7. Assist in promoting the insertion of all available and appropriate buoy data into the Global Telecommunications System;
 8. Supply information about buoy developments and applications to the WMO and IOC Secretariats and assist the Data Buoy Co-operation Panel to promote an international dialogue between oceanographers and meteorologists;
 9. Coordinate and monitor the flow of buoy data into appropriate permanent archives.
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APPENDIX III

Definition of a DBCP Action Group *(as approved at DBCP-X)*

1. A DBCP Action Group is an independent self-funded body that maintains, as a significant element of its responsibilities, an observational buoy programme providing meteorological and oceanographic data for real-time and / or research purposes in support of the World Weather Watch (WWW), the World Climate Research Programme (WCRP), the Global Climate Observing System (GCOS), and the Global Ocean Observing System (GOOS), and other relevant WMO and IOC programmes.
 2. Action Groups of the DBCP shall support the aims and objectives of the DBCP - as set out in the Terms of Reference of the DBCP - particularly with respect to:
 - Provision of good quality and timely data to users;
 - Insertion of real-time (or near real-time) data into the GTS;
 - Exchange of information on data buoy activities and development and transfer of appropriate technology.
 3. An Action Group may be regional or national in nature provided that its programme benefits a regional or international community.
 4. To be adopted as an Action Group of the DBCP, the Terms of Reference or operating principles of the body or programme shall be submitted to a session of the DBCP for formal approval. Once approved these shall be lodged with the Secretariats of WMO and IOC.
 5. The DBCP shall support the activities of its adopted action groups especially through the assistance of its key personnel (technical co-ordinator and the Secretariats of WMO and IOC) as far as resources allow.
 6. Action Groups of the DBCP shall submit annual reports of their activities to the Chairperson of the DBCP.
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APPENDIX IV

Terms of Reference of the DBCP Executive Board (as approved at DBCP-XXIII)

The DBCP Executive Board shall:

1. Seek guidance from the Panel at its regular sessions regarding specific issues to be addressed by the Executive Board and the Tasks Teams during the intersessional period;
2. Act promptly to deal with any administrative, financial and planning issues and opportunities that might arise, within the guidelines established and reviewed regularly by the Panel;
3. Authorise the Chairperson to commit any expenditure necessary for the resolution of these issues and the promotion of the Panel's aims and objectives, up to the maximum amounts that might be agreed in advance by the Panel at its regular session;
4. Review the DBCP Implementation Strategy to ensure that it is kept up-to-date and complies with ongoing activities and users' requirements;
5. Set working priorities for the Technical Co-ordinator according to the DBCP recommendations at its regular sessions, and provide further guidance during the DBCP intersessional period;
6. Confer primarily regularly by e-mail, and exploit opportunities afforded by attendance at other meetings (e.g., the JCOMM OCG meeting) for face-to-face meetings;
7. Conduct meetings annually, following an agenda drawn up by the DBCP Chairperson;
8. Consult with Panel members and the Chairpersons of the DBCP Task Teams during the intersessional period if required;
9. Report its activities to the DBCP at its regular Session, and throughout the intersessional period as appropriate.

Membership:

The following individuals are members of the DBCP Executive Board:

- DBCP Chairperson, or his / her appointed deputy (Executive Board Chairperson)
- DBCP Vice-chairpersons
- DBCP member (appointed by the Chairperson)
- DBCP Technical Co-ordinator (*ex officio*)
- Representative of the IOC Secretariat (*ex officio*)
- Representative of the WMO Secretariat (*ex officio*)

Note 1: A quorum of the Board should consist of at least three members, and must include the Chairperson or his / her appointed deputy.

Note 2: Any Panel Member may attend DBCP annual Executive Board meetings as an observer, subject to the availability of adequate meeting room space. If required, the Chairperson of the DBCP Executive Board will make a final decision as to which observers may attend, and may also invite other persons to attend at his / her discretion.

APPENDIX V

TERMS OF REFERENCE OF THE DBCP TASK TEAMS

TERM OF REFERENCE OF THE TASK TEAM ON DATA MANAGEMENT

(as adopted at DBCP-XXIV)

The DBCP Task Team on Data Management shall:

1. Receive and review reports from the Data Management Centres specializing in buoy data, i.e., (i) the Météo-France SOC / DB, and (ii) the ISDM, Canada RNODC / DB; reconcile any overlaps with emphasis on differences;
2. Liaise with the DBCP Task Team on Quality Management for compiling table driven coding requirements for data buoy observations, for all relevant applications, and submit them in a consolidated way to the DMPA Task Team on Table Driven Codes;
3. Address issues to do with real-time distribution of data, including GTS issues, timeliness and methods to improve data / flows;
4. Address issues relating to delayed-mode distribution and archiving of the data;
5. Seek input from data users on which instrumental metadata is most important and how it is best managed and coordinate these activities with the JCOMM Meta-T Project;
6. Review all relevant JCOMM Publications, to make sure they are kept up-to-date and comply with Quality Management terminology;
7. Follow-up with regard to the development of the WIGOS Pilot Project for JCOMM and make sure that the developments proposed by the Task Team are consistent with the WIGOS and WIS requirements;
8. Make recommendations to the DBCP Executive Board or the DBCP for addressing the issues above; and
9. Report to the DBCP Executive Board and the DBCP at its biennial Sessions.

Membership:

The membership is open to all Panel members. The Chairperson, appointed by the Panel, has selected the following team members:

Ms Mayra Pazos (TT Chairperson and GDP representative);
Mr Bruce Bradshaw (RNODC representative);
Mr Jean Rolland (SOC representative);
Mr. Pierre Blouch (France);
Mr Johan Stander (SAWS);
Dr Bill Burnett (NDBC data manager);
Mr Christian Ortega (CLS data manager);
Ms Hester Viola (DBCP Technical Co-ordinator (*ex officio*));
Mr Jeff Wingenroth (Technocean Inc.), and;
Ms Emily MacPherson (MetOcean).

**TERMS OF REFERENCE OF THE TASK TEAM ON INSTRUMENT
BEST PRACTICES & DRIFTER TECHNOLOGY DEVELOPMENTS**
(as adopted at DBCP-XXIV)

Note: The DBCP Evaluation Group is being merged into this Task Team.

The DBCP Task Team on Instrument Best Practices & Drifter Technology Developments shall:

Instrument Best Practices and Quality Management

1. When required by the DBCP, evaluate quality of buoy data produced by specific types of buoys, as well as functioning, efficiency;
2. Review existing practices for automatic real-time buoy data quality control, and delayed-mode buoy data quality control, and possibly suggest design changes for improvement (sensors, hardware, software, data formats) in liaison with the Task Team on technological developments;
3. Address instrument evaluation issues; suggest specific tests and / or evaluation deployments in different sea conditions to DBCP members in order to evaluate buoy quality as described in (1) above;
4. Share experience and results of evaluation with the DBCP and other interested parties;
5. Review and recommend Best Practices; work on specific technical issues in order to facilitate standardization and liaise with the other DBCP Task Teams as appropriate (e.g., DBCP recommended Argos message formats); and
6. Define specific criteria for evaluation purposes (e.g. ocean areas, definition of acceptable quality data, e.g., early failures, lifetimes, delays, accuracies, resolutions, etc.);

Drifter technology developments

7. Investigate developments in the fields of sensor technology, on-board processing, buoy hardware, hull design, energy generation and storage in order to better meet user requirements in terms of the range, reliability and quality of observed parameters and their cost-effectiveness;
8. Regularly review and document operational and upcoming satellite telemetry systems in terms of their ability to address user requirements such as bandwidth, timeliness, availability, geographical coverage, reliability, service quality, technical support, energy consumption and cost; and make specific recommendations to the communications service providers on required / desired enhancements;
9. Review operational platform location systems, and whether they meet the user requirements;
10. Propose to the DBCP and its Executive Board any evaluation activities and pilot projects that it deems beneficial to data buoy operators;
11. Propose recommendations, both upon request and unsolicited, to the Argos Joint

Tariff Agreement. Such recommendations shall be passed via the DBCP Executive Board or the DBCP as appropriate; and

12. Evaluate, test, and promote buoy designs that are resistant to vandalism;

General

13. Review all relevant JCOMM Publications to make sure they are kept up to date, comply with Quality Management terminology, and adhere to the WMO Quality Management Framework (QMF);
14. Provide the DBCP Executive Board and the DBCP, both upon request and unsolicited, with technical advice needed for addressing the issues above; and
15. Submit reports to the DBCP Executive Board and to the DBCP at its annual session that describe intersessional activities and propose a Workplan for the next intersessional period.

Membership:

The membership is open to all Panel members. The Chairperson, appointed by the Panel, has selected the following team members:

- Dr Bill Burnett, NDBC (TT Chairperson);
 - Mr Pierre Blouch, Météo-France;
 - Mr Shaun Dolk, NOAA / AOML;
 - Ms Julie Fletcher, MSNZ;
 - Mr Paul Freitag, NOAA / PMEL;
 - Mr Frank Grooters, KNMI;
 - Mr Michel Guigue, CLS;
 - Mr Ken Jarrott, BOM;
 - Mr Robert Jenson, USACE;
 - Mr Chris Marshall, Environment Canada;
 - Mr David Meldrum, SAMS;
 - Mr Sergey Motyzhev, Marlin Yug;
 - Mr Peter Niiler, SIO;
 - Mr Christian Ortega, CLS;
 - Ms Mayra Pazos, NOAA / AOML;
 - Mr Steve Piotrowicz, NOAA; and
 - Dr V. Rajendran, NIOT.
 - Dr M Ravichandran, INCOIS
 - Dr. Tim Richardson, Liquid Robotics
 - Mr Jean Rolland, Météo-France;
 - Mr Andy Sybrandy, Pacific Gyre;
 - Mr Jon Turton, UK Met Office;
 - Ms Hester Viola, Technical Co-ordinator, DBCP;
 - Mr Bill Woodward, CLS America;
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TERM OF REFERENCE OF THE TASK TEAM ON MOORED BUOYS
(as adopted at DBCP-XXIV)

The DBCP Task Team on Moored Buoys shall:

1. Review and document operational moored buoy systems and their underlying requirements;
2. Liaise with the different communities deploying moorings, including TIP, OceanSITES, seabed observatories, as well as national moored buoy programmes (coastal and global), and promote the development of multi-disciplinary mooring systems;
3. Liaise with the GOOS Scientific Steering Committee (GSSC) and its technical sub-panel for Integrated Coastal Observations (PICO) to facilitate synergy between advances in GOOS implementation and the development of operational capabilities, in particular, for sustained coastal observations, analysis and related services by using mooring systems;
4. Liaise with the JCOMM Expert Team on Wind Waves and Storm Surges (ETWS) regarding the need for in situ wave observations;
5. Compile information on opportunities for the deployment and / or servicing of moored buoys;
6. Monitor technological developments for moored data buoys and liaise with the Task Team on Technological Developments on satellite data telecommunication aspects;
7. Review all relevant WMO and IOC Publications on Instrument Best Practices (e.g., JCOMM, CIMO) to make sure they are kept up to date, address WIGOS issues, and comply with Quality Management terminology;
8. Provide the DBCP Executive Board or the DBCP with technical advice needed for developing moored buoy programmes, including the issues above; and
9. Report to the DBCP Executive Board and the DBCP at its biennial Sessions, with periodically updated Workplans supporting implementation.

Membership:

The membership is open to all Panel members. The Chairperson, appointed by the Panel, has selected the following team members:

- Mr Jon Turton, UK Met Office (TT Chairperson);
 - Dr Bill Burnett, NOAA / NDBC;
 - Mr Richard L. Crout, NOAA / NDBC;
 - Mr Paul Freitag, NOAA / PMEL;
 - Mr Ken Jarrott, BOM;
 - Dr Robert Jensen, USACE;
 - Mr Chris Marshall, Environment Canada;
 - Mr Chris Meinig, NOAA / PMEL;
 - Dr V. Rajendran, NIOT;
 - Mr Ariel Troisi, SHN;
 - Mr Al Wallace, MSC, and;
 - Dr Uwe Send, SIO.
-

TERMS OF REFERENCE FOR THE DBCP TASK TEAM ON CAPACITY-BUILDING
(as adopted at DBCP-XXIV)

The DBCP Task Team on Capacity-Building shall:

1. Initiate, plan and coordinate the implementation of the Training and Capacity-Building work programme including, in particular, the regular Training Course on Buoy Programme Implementation and Data Management;
2. Keep under review existing training material (paper and electronic) and advise on updating as well as for the development of new material;
3. Review and assess national, regional, and global requirements for capacity-building and develop / improve programmes as appropriate;
4. Liaise with other capacity-building programmes in relevant areas to develop and implement integrated activities, to explore potential synergies and opportunities for efficiently using resources available; liaise in particular with the JCOMM cross-cutting Team on Capacity-Building;
5. Endeavour to mobilize the resources required for DBCP capacity-building, including those needed for the implementation of the Training Courses;
6. Make recommendations to the DBCP Executive Board and / or the DBCP for addressing the issues above; and
7. Report to the DBCP Executive Board and the DBCP at its biennial Sessions.

Membership:

The membership is open to all Panel members. The Chairperson, appointed by the Panel, has selected the following team members:

- Dr Sidney Thurston, NOAA / OCO (TT Chairperson);
 - DBCP Chairperson;
 - DBCP Executive Board members;
 - DBCP Vice-chairpersons (or their respective deputies);
 - DBCP Technical Co-ordinator;
 - Mr Ali Mafimbo (Kenya);
 - Dr G. Latha (India);
 - Johan Stander (South Africa);
 - Lucy Scott (South Africa)
 - Representative of the IOC Secretariat; and
 - Representative of the WMO Secretariat
-

APPENDIX VI

Current DBCP budget line items (as approved at DBCP-XXIII)

The DBCP budget includes the following line items:

1. Contract for the Technical Co-ordinator¹;
2. JCOMMOPS logistical support²;
3. Travel of DBCP Chairperson³;
4. Travel for the Technical Co-ordinator³;
5. Travel of DBCP Representatives³;
6. Bank charge and support cost⁴;
7. Outreach and publication activities⁵;
8. JCOMMOPS Data/Development⁶;
9. JCOMMOPS information system migration⁷;
10. SOT (travel for the Technical Coordinator and/or Representatives);
11. Provision for termination / transition of the Technical Co-ordinator after 2010;
12. Technical developments and evaluations⁸;
13. Capacity-Building⁹;
14. Collaborative Arrangements¹⁰;
15. JTA Chairperson's contract¹¹;
16. JTA Executive Board and Secretariat support; and
17. Contingency.

1: Includes the salary and benefits;

2: Expenses shared with the Argo Information Centre (AIC). This includes office space and use of furniture, personal computer, licenses for basic office software, secretarial support, telephone, Internet and e-mail access, and miscellaneous office supplies;

3: Missions on behalf of the Panel;

4: Bank charges and service charges from the WMO and IOC for supporting the DBCP Trust Fund;

5: DBCP and JCOMMOPS brochures and DBCP Publications;

6: Hardware and software, and host IT support for developing, running, and maintaining the JCOMMOPS Information System;

7: Provision for the migration of the JCOMMOPS Information System;

8: For example, the DBCP Iridium Pilot Project;

9: Support for DBCP-related training courses: travel of trainers and / or trainees; training materials;

10: Support for collaborative arrangements with other international programmes, between Panel Members, or with private companies for the provision of coordination functions, or the deployment and / or operations of instruments; and

11: This expenditure is balanced by an equivalent contribution of the JTA to the DBCP Trust Fund.

APPENDIX VII

Terms of Reference for the DBCP Trust Fund at WMO

(as adopted at DBCP-XXIV and further agreed by way of exchange of letters between the WMO Secretary General¹ and the DBCP Chairperson²)

1. The purpose of the DBCP Fund is to support the activities of the Data Buoy Co-operation Panel (DBCP);
2. The DBCP Fund is a Trust Fund within the provisions of Articles 9.7³, 9.8⁴ and 9.9⁵ of the WMO Financial Regulations (Resolution 37, Cg-XV);
3. The Fund shall be managed by WMO under its applicable rules and procedures, according to an annual budget adopted by the DBCP at its regular Sessions and any other directions provided by the DBCP;
4. The budget will be constructed according to a format agreed by the Panel, in which all income and expenditures will be identified in general articles and specific chapters. The format of the budget may be revised by the Panel as necessary. The budget may take note of other monies and resources made available for support of the DBCP activities, but which are not included as part of the Fund. Only those monies placed in the Fund, however, shall be subject to these terms of reference. The DBCP will provide WMO with details of the share to be borne by participating Members and contributors for invoicing purposes;
5. The DBCP Executive Board, under its Terms of Reference, may authorise in writing through its Chairperson the WMO Secretariat to commit any expenditure necessary for the resolution of these issues and the promotion of the Panel's aims and objectives, as long as these are consistent with the DBCP Operating Principles agreed by the Panel at its previous session;
6. The unit of account shall be the United States dollar. When commitments are made, the appropriate funds will be converted, as necessary, to the currency of commitment in at least the amount of the commitment;
7. The income of the Fund will include:
 - (i) Annual contributions from participating Members / Member States;
 - (ii) Funds deposited for specific purposes, hereafter referred to as deposits;
 - (iii) Other contributions from third parties;
 - (iv) Interest on investments as may be made by the Secretary-General in accordance with the provisions of Financial Regulation 12.2⁶ (Resolution 37, Cg-XV); and
 - (v) Miscellaneous income.

1: Letter 11106-08/OBS/WIGOS/OSD/MAR/DBCP-ADM from Michel Jarraud dated 15 December 2008

2: Letter from David Meldrum dated 5 January 2009

3: 9.7: Trust funds, reserve and special accounts may be established by the Secretary-General and shall be reported to the Executive Council.

4: 9.8: The purpose and limits of each trust fund, reserve and special account shall be clearly defined by the Executive Council. Unless otherwise provided by the Congress, such funds and accounts shall be administered in accordance with the present Financial Regulations.

5: 9.9: Income derived from investments of trust funds, reserve and special accounts shall be credited as provided in the provisions applicable to such funds or accounts or at the request of the donors at any time. In other circumstances, Regulation 10.1 shall apply.

6: 12.2: The Secretary-General may make long-term investments of moneys standing to the credit of trust funds, reserve and special accounts, except as may be otherwise provided by the appropriate authority in respect of each such fund or account and having regard to the particular requirements as to the liquidity of funds in each case.

8. The Fund will be used as agreed by the DBCP to:
- (i) Finance technical and operational support services for the DBCP, including in particular for supporting its Technical Co-ordinator salary, benefits, logistical support, and missions; DBCP capacity-building activities; data buoy Technical Evaluation and DBCP Pilot Projects; consultancy and missions of experts acting on behalf of the Panel; practical arrangements for the deployment or servicing of buoys; promotion and exchange of information about the Panel activities;
 - (ii) Finance the share of the DBCP in supporting the activities of JCOMMOPS and the Observing Programme Support Centre (OPSC) as agreed by the Panel at its regular sessions;
 - (iii) Provide support to the Argos Joint Tariff Agreement within the resources set aside by the DBCP under these activities;
 1. (iv) Assist in the establishment and operation of data buoy programmes;
 - (v) Meet appropriate administrative costs incurred by WMO in providing support to DBCP activities;
 - (vi) Meet other administrative costs including such items as meetings and consultants;
 - (vii) Purchase specified goods or services; and
 - (viii) Support other activities required to meet the basic goal of the DBCP Panel;
9. Authority for the disbursement of funds, in respect of contracts and agreements properly concluded, is delegated to the Chairman of the DBCP. The Chairperson of the DBCP will request in writing the Secretary-General of WMO, or his representative, to disburse the funds;
10. Where required by their internal regulations, individual contributors to the DBCP Fund may wish to negotiate additional conditions governing the application, conditions of deposit and disbursement of funds. Such additional conditions shall not inhibit the efficient and proper use of the Fund nor modify the intent of the Fund. They shall require the acceptance in writing by the Chairperson of the DBCP and the Secretary-General of WMO or his representative;
11. The Fund shall be maintained on a continuous basis and amounts standing to the credit of the Fund at the end of any WMO biennial period shall remain in the Fund for use in the subsequent period;
12. Upon liquidation of the Fund for any reason, the DBCP shall make provision for the payment of unliquidated obligations and estimated expenses of winding-up business. It shall then arrange for repayment - to the extent that funds are available and according to the depositors instructions - of deposits for which no equipment or services have been received;
13. At the closure of the Fund:
- (i) Any remaining surplus after (12) above, shall be distributed among the then DBCP Members in proportion to their total contributions and deposits paid by them to the DBCP Fund; and
 - (ii) Any remaining deficit, including provision for the payment of unliquidated obligations and estimated expenses of winding-up business, shall be met by the DBCP Members in an equitable way, to be decided upon by the DBCP.

14. The Fund will be terminated not later than one year after the formal termination of the DBCP;

15. All funds credited to the DBCP Fund shall be subject to these terms of reference and to the Terms of Reference of the DBCP; and

16. Any revision or amendment to the present Terms of Reference is subject to a decision of the DBCP and the agreement of WMO.

APPENDIX VIII

Financial Regulations applicable to the Intergovernmental Oceanographic Commission (IOC)

(Excerpt from the Decisions by 157th Executive Board of the UNESCO)

Article 1 - Creation of a Special Account of UNESCO

- 1.1 In accordance with Article 6, paragraph 6, of the Financial Regulations of UNESCO, there is hereby created a Special Account for the Intergovernmental Oceanographic Commission, hereinafter referred to as IOC.
- 1.2 The following Regulations shall govern the operation of this Special Account.

Article 2 - Financial period

The financial period shall correspond to that of UNESCO.

Article 3 - Income

- 3.1 As provided in its Statutes, the income of IOC shall consist of:
 - (a) funds appropriated for this purpose by the General Conference of UNESCO;
 - (b) voluntary contributions from States, international agencies and organizations, as well as other entities allocated to it for purposes consistent with the policies, programmes and activities of UNESCO and IOC;
 - (c) such subventions, endowments, gifts and bequests as are allocated to it for purposes consistent with the policies, programmes and activities of UNESCO and IOC;
 - (d) fees collected in respect of the execution of projects entrusted to IOC, from the sale of publications, or from other particular activities; and
 - (e) miscellaneous income.
- 3.2 The Executive Secretary of IOC, hereinafter referred to as the Secretary, may accept income as set forth in Article 3.1 on behalf of IOC, provided that, in any case which would involve IOC in an additional financial liability, the Secretary shall obtain the prior approval of the IOC Executive Council and the consent of the Executive Board of UNESCO.
- 3.3 The Secretary shall report to the IOC Assembly and the IOC Executive Council on any subventions, contributions, grants, gifts or bequests accepted.

Article 4 - Budget

- 4.1 The Secretary shall prepare, in a form to be determined by the IOC Assembly, a biennial programme and budget and shall submit it to the IOC Assembly for approval.
- 4.2 The appropriations voted in the budget shall constitute an authorization to the Secretary to incur obligations and to make expenditures for the purposes for which the appropriations are voted and up to the amounts so voted.

- 4.3 The Secretary is authorized to transfer funds between activities under the same appropriation line. The Secretary may be authorized by the IOC Assembly to transfer funds, when necessary, between appropriation lines within the limits established by the Appropriation Resolution voted by the IOC Assembly and shall report to the IOC Executive Council on all such transfers.
- 4.4 The Secretary is required to maintain obligations and expenditures within the level of the actual resources that become available to the General Account mentioned in Article 5.1 below.
- 4.5 Appropriations shall remain available for obligation during the financial period to which they relate.
- 4.6 The Secretary shall make allotments and any modifications thereon, within the limits of the Appropriation Resolution, which shall be communicated, in writing, to the officials authorized to incur obligations and make payments.
- 4.7 Appropriations shall remain available for 12 months following the end of the financial period to which they relate to the extent that they are required to discharge obligations for goods supplied and services rendered in the financial period and to liquidate any other outstanding legal obligations of the financial period.
- 4.8 At the end of the 12-month period provided for in Article 4.7 above, the then remaining unspent balance of obligations retained shall revert to the General Account mentioned in Article 5.1 below.

Article 5 - The General Account

- 5.1 There shall be established a General Account, to which shall be credited the income of IOC as described in Article 3 above and which shall be used to finance the approved budget of IOC.
- 5.2 The balance remaining in this General Account shall be carried forward from one financial period to the next.
- 5.3 The uses to which this balance may be put shall be determined by the IOC Assembly.

Article 6 - Trust Funds, Reserve and Subsidiary Special Accounts

- 6.1 In addition to a Working Capital Fund, the Secretary shall establish a Reserve Fund to cover end-of-service indemnities and other related liabilities; the Fund shall be reported to the IOC Assembly at the time of the budget approval.
- 6.2 Trust Funds, Subsidiary Special Accounts and any other Reserve Accounts may be established by the Secretary, who shall report to the IOC Assembly and the IOC Executive Council.
- 6.3 The Secretary may, when necessary, in connection with the purpose of a Trust Fund, Reserve or Subsidiary Special Account, prepare special financial regulations to govern the operations of these funds or accounts and shall report thereon to the IOC Assembly and the IOC Executive Council. Unless otherwise provided these funds and accounts shall be administered in accordance with these Financial Regulations.

Article 7 - Accounts

- 7.1 The UNESCO Comptroller shall maintain such accounting records as are necessary and shall prepare, for submission to the IOC Assembly and the IOC Executive Council, the biennial accounts showing, for the financial period to which they relate:
- (a) the income and expenditure of all funds;
 - (b) the budgetary situation including:
 - (i) original appropriations;
 - (ii) the appropriations as modified by any transfers;
 - (iii) the amounts charged against these appropriations;
 - (c) the assets and liabilities of IOC.
- 7.2 The Secretary shall also give such other information as may be appropriate to indicate the current financial position of IOC.
- 7.3 The biennial accounts of IOC shall be presented in dollars of the United States of America. Accounting records, may, however, be kept in such currency or currencies as the Secretary may deem necessary.
- 7.4 Appropriate separate accounts shall be maintained for all Trust Funds, Reserve and Subsidiary Special Accounts.

Article 8 - External audit

The audited accounts of IOC, which constitute an integral part of the statement of the financial position of UNESCO, and the report of the External Auditor of UNESCO on IOC, shall be submitted to the IOC Assembly for approval.

Article 9 - General provision

Unless otherwise provided in these Regulations this Special Account shall be administered in accordance with the Financial Regulations of UNESCO.

APPENDIX IX

DBCP DATA POLICY (as adopted at DBCP-XXV)

Data access policy

The DBCP encourages timely, free and unrestricted access to data. Real time data sharing is achieved via the Global Telecommunications System¹⁸ of WMO. DBCP also cooperate with data contributors to ensure that data can be accepted into and be used through the NODC and WDC network of the IOC/IODE as long-term repositories for oceanographic data and associated metadata.

At present, all of the archiving agencies and many of the operational and research bodies make provision for the release of drifter data to scientific and other customers. In particular, many data are available via the web, either in the form of track plots or as datasets. In many cases, the policies relating to the release and use of these data are not immediately clear. The Panel is seeking clarification from these agencies, and from its action groups, with a view to developing a coordinated data access policy for drifter data within the letter and the spirit of the WMO data exchange policy defined in WMO Congress Resolution 40 (Cg-XII) and the IOC oceanographic data exchange policy defined in IOC Assembly Resolution XXII-6.

Data archiving

Drifter data inserted on the GTS are routinely archived by ISDM, the IODE Responsible National Oceanographic Data Centres (RNODC) for Drifting Buoys. The AOML DAC archives all data from the GDP, and any other drifter data that are made available to it. The Panel and its action groups will actively encourage all buoy operators to forward their data to one or other of these responsible global archives.

Instrumental Metadata

There has been an increasing demand for instrumental metadata in recent years to serve a number of applications - and climate studies in particular. The DBCP has established its own metadata collection system at JCOMMOPS and is participating in the water temperature metadata Pilot Project (META-T).

Quality control

Quality control procedures are in place to ensure the usefulness of real time data and also of data archives. A well-defined feedback mechanism is required to control real time data (see the DBCP QC Guidelines¹⁹).

More information :

- WMO data policy Resolution 40²⁰
- IOC Oceanographic Data Exchange Policy²¹
- CLIVAR data policy²²

18 : <http://www.jcommops.org/DBCP/1gtsinfo.html>

19 : <http://www.jcommops.org/dbcp/2qgd.html>

20 : http://www.wmo.int/pages/prog/www/ois/Operational_Information/AdditionalDataProducts/02_Resolution%2040.pdf

21 : http://www.ioc-unesco.org/index.php?option=com_oe&task=viewDocumentRecord&docID=338

22 : http://www.clivar.org/data/data_policy.php

APPENDIX X

Current key DBCP personnel (as elected / appointed at DBCP-XXV)

NORTH AMERICA

Mr Al WALLACE (Chairperson)
Director, Weather and Environmental
Operations
201-401 Burrard Street
VANCOUVER, BC V6C 3S5
Canada
Tel.: +1 604 664 9090
Fax: +1 604 664 9004
E-mail: al.wallace@ec.gc.ca

ASIA

Dr V. RAJENDRAN
Vice-Chairperson, DBCP, Asia
Project Director, Head-Ocean Acoustic &
Ocean Observation Systems Group
National Institute of Ocean Technology
NIOT Campus
Velachery – Tambaram Main Road
PALLIKARANAI, CHENNAI – 600 100
India
Tel.: +91 44 2246 2039 (D) / 6678 3400
Fax: +91 44 2246 0645 / 2246 0275
E-mail: raju@niot.res.in

EUROPE

Mr Jean Rolland (Vice-Chairperson)
Météo-France
Centre de Météorologie Marine (CMM)
13 rue du Chatellier
BP 90411
29604 Brest
FRANCE
Tel: +33 2 98 22 18 53
Fax: +33 2 98 22 18 49
Email: jean.rolland@meteo.fr

SOUTHERN HEMISPHERE

Mr Ken JARROTT (Vice-chairperson)
Head, Observation Systems Section
Bureau of Meteorology (BOM)
G.P.O. Box 1289
MELBOURNE. VIC 3001
Australia
Tel.: +61 3 9669 4163
Fax: +61 3 9669 4168
E-mail: k.jarrott@bom.gov.au

TECHNICAL CO-ORDINATOR

Ms Hester VIOLA

Technical Co-ordinator, DBCP and SOT
JCOMMOPS
8-10 rue Hermès
Parc Technologique du Canal
F-31526 RAMONVILLE SAINT AGNE
France
Tel.: +33 5 61 39 47 82
Fax: +33 5 61 75 10 14
E-mail: support@jcommops.org

FINANCE ADVISOR

Mr A. T: Frank GROOTERS
Senior Consultant, International Relations
Department
Royal Netherlands Meteorological Institute
(KNMI)
Wilhelminalaan 10, Postbus 201
3730 AE DE BILTt
The Netherlands
Tel.: +31 30 220 6691
Fax: +31 30 221 0407
E-mail: frank.grooters@knmi.nl

IOC SECRETARIAT

Dr Boram LEE
Operational Observations and Services
Intergovernmental Oceanographic
Commission (IOC)
UNESCO
1, rue Miollis
75732 PARIS CEDEX 15
France
Tel.: +33 1 45 68 39 88
Fax: +33 1 45 68 58 12
E-mail: b.lee@unesco.org

WMO SECRETARIAT

Mr Etienne CHARPENTIER
Observing Systems Division
Observing and Information Systems
Department
World Meteorological Organization
7 bis, avenue de la Paix
Case postale No. 2300
CH-1211 GENEVE 2
Switzerland
Tel.: +41 22 730 8223
Fax: +41 22 730 8128
E-mail: ECharpentier@wmo.int