SECOND TRANSITION PLANNING MEETING

Paris, France, 14-16 June 2000

FINAL REPORT

JCOMM Meeting Report No. 4

WORLD METEOROLOGICAL ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (OF UNESCO)

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N O T E

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariats of the Intergovernmental Oceanographic Commission (of UNESCO), and the World Meteorological Organization concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

1. OPENING OF THE MEETING

1.1. Opening

1.1.1 The second transition planning meeting for the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM), and second meeting of the interim JCOMM Management Committee, was opened at 0900 hours on Wednesday, 14 June 2000, in the headquarters of the Intergovernmental Oceanographic Commission, Paris, by the interim co-president of JCOMM, Prof. D. Kohnke. Prof. Kohnke welcomed all participants to the meeting and introduced the Executive Secretary of IOC, Dr P. Bernal.

1.1.2 Dr Bernal also welcomed all participants to the meeting and to the IOC Secretariat. In doing so, he recalled that this present second planning meeting for JCOMM was the next important step in a unique process, the implementation of a formal joint body serving two distinct organizations. He recognized that this represented a complex process, with many challenges to be overcome, but stressed that both IOC and WMO were fully committed to its success. JCOMM, as a body dealing with operational marine systems, was critical to the future of oceanography, to global climate studies, and to GOOS in general. He noted that GOOS planning was now well advanced, and that it was up to JCOMM in particular to address implementation issues. Dr Bernal concluded by ensuring the meeting of the full support of the IOC Secretariat in its work, and wishing participants a successful meeting and an enjoyable stay in Paris.

1.1.3 The list of participants in the meeting is in **Annex I.**

1.2. Adoption of the agenda

1.2.1 The meeting adopted its agenda for the session. This is given in **Annex II.**

1.3. Working arrangements

1.3.1 The meeting agreed its hours of work and other practical session arrangements. The documentation was introduced by the Secretariats.

2. REPORTS OF AD HOC GROUPS AND SECRETARIATS

2.1 Report by the *ad hoc* Working Group on Work Plan and Structure

2.1.1 The meeting recalled that the first Transition Planning Meeting for JCOMM had established this **ad hoc** group to prepare an initial report and proposal for a draft JCOMM structure, to be used as a basis for further discussion on this major aspect of JCOMM planning. The report of the group was presented by the Secretariats, since none of the authors of the report were, unfortunately, able to attend the meeting. The report had served as a basis to develop, after some reviews and consultations, the provisional final draft proposal for JCOMM sub-structure discussed under agenda item 3. The meeting recognized that the report had been of great help in defining JCOMM internal structure, and commended the group for a very precise and detailed statement of requirements for the structure.

2.2 Report by the *ad hoc* Working Group on Capacity Building

2.2.1 This **ad hoc** group had also been established by the first Transition Planning Meeting to develop proposals regarding a JCOMM capacity building strategy. The report of the group was also introduced by the Secretariats and by Ms Miriam Andrioli (Argentina), a member of the group. Ms Andrioli had undertaken a survey amongst South American countries (Members of the WMO Regional Association III) concerning their capacity building requirements in the context of JCOMM. The meeting commended this undertaking and considered it as an excellent background for future

action. The report contained also a proposal for an international marine environmental prediction workshop and a summary of the initial plans for GOOS capacity building.

2.2.2 The meeting considered that the survey might serve as an example to be followed in other regions of the world, to gather more background data on Member States' existing capabilities and requirements for capacity building in the context of JCOMM. In particular, the questionnaire used in RA III might (once translated from Spanish to English) serve as a basis for developing a standard form to that effect. The World Wide Web might be used as a vehicle to distribute the questionnaire. The meeting proposed to the Secretariats that the WMO network of regional rapporteurs on marine meteorology might also be a mechanism to conduct and analyse the survey in their respective regions.

2.2.3 At the same time, the meeting recognized that substantial work remained to be done to complete the preparatory work for a JCOMM Capacity Building Strategy, to include a prioritisation of requirements and the identification of resources to meet them. This should be done in close co-operation with GOOS, whose Principles for Capacity Building are an extension of the IOC Training, Education and Mutual Assistance (TEMA) programme principles, tailored for GOOS needs. The meeting therefore decided to re-establish the **ad hoc** group, with the following terms of reference:

(i) Prepare a draft Strategic Plan for Education, Training and Capacity Building in support of JCOMM requirements, bearing in mind:

- (a) the proposed terms of reference for the JCOMM ETIS coordination group;
- (b) that the plan should be built on the principles for capacity building of IOC, GOOS and WMO;
- (c) that JCOMM capacity building activities should be implemented in concert with the relevant activities of IOC, GOOS and WMO.

(ii) Suggest specific activities, and their priorities, for the period 2001-2005.

The meeting agreed that the group should include Miriam Andrioli and Sachooda Ragoonaden, together with representatives of both Secretariats, and that Geoff Holland, chairman of the GOOS Capacity Building Panel, should be invited to chair it. The report of the group should be submitted to the interim co-presidents of JCOMM, and to the Secretariats, by November 2000 at the latest, to allow time for the preparation of the appropriate documentation for JCOMM-I.

2.2.4 Finally on this item, the meeting recognized that the environmental prediction workshop proposed by Bill Appleby, to be hosted by Canada (see details of the proposal in **Annex III**), would most probably be very appropriate to JCOMM capacity building requirements. At the same time, however, it was reluctant to recommend the commitment of potential JCOMM capacity building resources to the workshop prior to the development of the planned strategy and priorities. It therefore requested the Secretariats to communicate with Bill Appleby to this effect, with a proposal that a final decision regarding JCOMM cosponsorship of the workshop should be postponed to early 2001.

2.3 Report by the Secretariats

2.3.1 The report outlined work undertaken by the Secretariats since JCOMMTRAN-I in support of JCOMM development (JCOMM programme activities are reported under agenda item 6). Some items were specifically highlighted, such as:

(i) the definition of an IOC policy and practice for the international exchange of oceanographic and related data and products; an expert meeting on the topic was unable to agree fully on a detailed proposal to be put to the IOC Governing Bodies, and there was clearly a need for further extensive discussions. The forthcoming session of the IOC Executive Council will address the issue in more detail, and decide how to proceed;

(ii) the terms of reference and activities of the IOC Regional Committee for the Southern Ocean (IOCSOC) should be considered in the light of proposed JCOMM and GOOS activities;
(iii) the interim JCOMM arrangements (co-presidents and Management Committee) had been approved by the WMO Executive Council, and the IOC Executive Council was expected to follow suit;
(iv) the lack of an appropriate JCOMM logo; national facilities are invited to make design proposals for such a logo.

3. JCOMM STRUCTURE AND WORK PLAN

3.1 The meeting recognized that this was the key item for discussion at the present meeting. It recalled that JCOMMTRAN-I had agreed the overall concept of an integrated work plan for the Commission, as well a structure to address this, based on broad Programme Areas. The report of the **ad hoc** intersessional group charged with the task of developing further proposals for the Commission sub-structure had been presented under agenda item 2.1. Based on this report and on comments and input received from interim Management Committee members, the Secretariats and the GOOS Steering Committee over the past few months, the meeting again extensively reviewed and revised the draft structure. The final proposals, including draft terms of reference for all components of the structure, are given in **Annex IV.**

3.2 The meeting requested the Secretariats to ensure that the draft proposals were distributed to Member States well in advance of JCOMM-I. This would ensure adequate time for consideration and review of the proposals at the national level, and would also give Member States time to identify potential candidates for chairs and members of the various groups, teams and rapporteurs.

3.3 Also under this agenda item, the meeting considered a proposal from the DBCP/SOOP coordinator, for the establishment of a “JCOMM Operations Centre”, to be based essentially on the existing DBCP/SOOP coordination and information centre, expanded as proposed to include also the Argo Information Centre. This centre would provide essential data and tools, as well as a centralised information and technical support facility, required for coordinating and integrating many of the existing operational ocean observing networks under JCOMM. The meeting strongly endorsed the concept, at the same time suggesting that the name might be changed to more clearly reflect its actual functions. However, the meeting agreed to retain the existing URL of JCOMMOPS, since this was already widely known. It requested the Secretariats to seek the agreement of DBCP and SOOPIP for the proposal, including proposed terms of reference, since these bodies actually provided the funding to support the centre. Following this agreement, a formal proposal to JCOMM-I for the establishment of the centre should be prepared, though it was agreed that the centre could, in practice, begin operating almost immediately on an interim basis. This proposal should specify the mechanism for providing JCOMM guidance to the centre.

4. PREPARATIONS FOR JCOMM-I

4.1 The meeting noted with approval that JCOMM-I would now be held in Akureyri, Iceland, from 19-29 June 2001. By agreement between WMO and IOC, and pending the development and formal approval of common rules and procedures for the conduct of and support for JCOMM, this session would be conducted according to WMO rules relating to sessions of technical commissions. The session would be funded by WMO, which would also be responsible for pre-session documentation and immediate follow-up. Further details relating to preparations for and conduct of the session are given in **Annex V**.

4.2 The meeting next reviewed and finally agreed a draft provisional agenda for JCOMM-I, which is given in **Annex VI**, as well as a draft documentation plan for the session, which is in **Annex VII**. The meeting recognized the requirement that documentation preparation should be undertaken strictly according to this plan, and should adhere to the prescribed WMO formats. It

therefore urged all those responsible for document preparation to adhere to the deadlines and document structure guidelines, which would be provided in due course by the WMO Secretariat. The meeting also noted a draft annotated provisional agenda for the session, which had been prepared by the Secretariats. Participants were requested to pass any comments, proposals and revisions relating to this draft to the WMO Secretariat by 1 July 2000 at the latest. In this context, the meeting also agreed that details of the proposed draft structure for JCOMM should first be discussed under the relevant technical agenda items for JCOMM-I, prior to final adoption of the structure under agenda item 16.

4.3 The meeting agreed that three extended scientific lectures should be presented at the session, during one half day, on the following themes:

- Operational oceanography, including models and applications
- New technologies for operational oceanography
- Oceans and climate

It requested participants to pass the names of potential lecturers on these topics to the Secretariats by the end of July 2000.

4.4 The meeting recognized that, in view of the novelty of the JCOMM concept, many delegates to the session were likely to be unfamiliar with this concept, with the history of its development, and with the goals and objectives of JCOMM. It therefore agreed that a short introductory document on JCOMM should be prepared by the Secretariats, to be presented to the session by the interim co-presidents as part of their report under agenda item 3.

4.5 Finally under this agenda item, the meeting recognized that the chairs of the programme area coordination groups in the proposed new structure would be critical positions in the implementation and operation of JCOMM, requiring both individual expertise and enthusiasm, as well as a commitment on the part of national agencies concerned. Participants were therefore urged to investigate potential candidates for these positions, and to provide names and background details to the interim co-presidents, if possible before the end of 2000.

5. WORK PROGRAMME UNTIL JCOMM-I

5.1 In addition to ongoing programme activities, JCOMMTRAN-I identified a number of specific actions to be undertaken in the one year remaining before JCOMM-I and as part of the transition process. Some of these actions have been completed and some are ongoing. In addition, there remains considerable work to be done as part of the preparation process for JCOMM-I, to complete ongoing programme activities and to initiate work to address new priorities. **Annex VIII** provides a list of activities to be undertaken or continued prior to JCOMM-I.

5.2 The meeting noted with interest the results of the 5th Integrated Global Observing Strategy Partners meeting in Geneva (June 7th, 2000). A team was asked to produce an Oceans Theme Report comprising a strategy for implementation of satellite and complementary **in situ** observations. The authors of the report took pains to ensure that it was fully consistent with the developing implementation strategy for GOOS and GCOS, and that it was consistent with the recommendations of the OceanObs99 conference in St. Raphael in October 1999. The report, which was approved at the 5th IGOS-P meeting, and endorsed by the GOOS Steering Committee at its meeting in Paris (May 10-12, 2000), was included in the documentation for JCOMMTRAN-II. It highlights the need for specific kinds of observations from space and from the oceans, and stresses the need for continuity of key satellite and **in situ** observations. It will be used by the space agencies as part of the argument for continuity of observations of the ocean from space and for identifying important challenges.

5.3 The IGOS-P accepted the Ocean Theme Team Report as the strategy document for the implementation process, and asked partners such as the IOC and the WMO to seek approval for it

from their governing bodies as an aid in underpinning space agency commitments. They will formally request GOOS to accept responsibility for ensuring the over-arching implementation of the strategy as an end-to-end process. CEOS agreed to provide GOOS with appropriate support on the space element side and in resolving outstanding problems. Other arrangements will be needed to ensure parallel support on the **in situ** side. The meeting agreed that this was an important development in ocean observations, and that JCOMM would certainly have an important role to play in the implementation of the **in situ** component. It therefore requested the Secretariats to ensure that JCOMM was fully informed of developments, and agreed that the Management Committee and Observations Coordination Group should plan and oversee relevant JCOMM implementation activities. The meeting also noted that a satellite expert would be part of the Observations Coordination Group.

6. REPORT ON PROGRAMME ACTIVITIES SINCE JCOMMTRAN-I

6.1 The meeting noted that a number of JCOMM programme-related meetings, workshops, training events and other related conferences had taken place in the period since the first transition planning meeting. Details of these are given in **Annex IX**. A number of specific issues had arisen from these events which required the immediate attention of the interim JCOMM Management Committee, the decisions on which are as follows:

(i) *Southern Ocean pressure drifters and global XBT deployments*. The meeting recognized that the anticipated decreases in both these key elements of the global ocean observing system in 2000 and beyond were due essentially budgetary pressures coupled with increasing prices for expendables. The meeting agreed that this was an important generic issue for future planning in JCOMM. In essence, the overall observing system should be robust and flexible enough to be able to cope with short or medium term anomalies in resource availability in individual countries or regions. It also highlighted the need for agencies and governments to establish funding programmes to maintain ocean observing systems operationally, once the value of and need for these systems had been clearly established. The meeting therefore referred this issue as a high priority topic for consideration by the future Observations Programme Area Coordination Group. It also recognized that, since these specific observations were very relevant to global climate studies, the problem should be highlighted by GCOS in its future submissions to COP relating to the adequacy of the global observing systems for climate.

(ii) *Observing systems in Antarctic waters*. The meeting noted the potential problem of governments placing restrictions on the deployment of ocean observing platforms in Antarctic waters, because of perceived environmental concerns related to the Madrid Protocol to the Antarctic Treaty. It was, however, unsure whether the problem was a general one, nor on the appropriate actions to take to assure governments of the great value of such observations and of the minimum environmental risks involved. It therefore requested the WMO Secretariat to bring the matter to the attention of SCAR, through the WMO EC Working Group on Antarctic Meteorology, with a view to ascertain ing the extent of the problem and obtaining advice on possible actions.

(iii) *Standardization of observing practices and instrumentation; intercalibration*. The meeting recognized the importance of utilising commonly agreed, standardized observing practices and instrumentation, and of ensuring full intercalibration and testing whenever new instrumentation or instrument components and devices were introduced. Such issues are discussed in detail in the GOOS Principles. It noted that standardization and intercalibration were already undertaken within individual deployment and operational groups (e.g. SOOPIP, DBCP, etc.), and considered that this remained the most appropriate approach to this question for JCOMM at the present time. It nevertheless recognized that the results of and any questions arising from such work should be regularly reviewed by the Observations Coordination Group, with a view to recommending changes or additional actions to JCOMM.

7. LEGAL AND TECHNICAL ASPECTS OF FLOAT AND BUOY DEPLOYMENTS

7.1 Under this agenda item, the meeting was informed of the status of the Argo project, including funding, implementation activities, follow-up to the IOC Argo Resolution, and establishment of the Argo Information Centre (see **Annex X** for details).

7.2 It noted that an Argo implementation meeting for the Pacific region took place in Tokyo in April 2000. The meeting initiated a coordinated implementation process for Argo floats in the Pacific and parts of the Indian Oceans, and adopted a formal statement emphasising the importance of Argo and pledging the support of all participating countries to this implementation. Other such meetings for Argo implementation in the Atlantic (Paris, July 2000) and in the Indian (to be determined) Oceans are expected to increase Argo visibility and interest amongst concerned Member States. Since the first proposal for an Argo project dates back less than two years and a half, the meeting recognized that progress in developing and implementing the project had been very good.

7.3 The meeting endorsed the concept of an Argo Information Centre, as well as the interim measures taken pending its establishment. It agreed that JCOMM would review progress with the Argo project through its Observations Coordination Group, which would also be charged with developing and overseeing the implementation of procedures for the full integration of Argo into the overall observing system at the appropriate time.

7.4 Regarding float deployment opportunities, offered and/or requested, the meeting agreed that, pending the establishment of the Argo Information Centre, details of these would be made globally available through the following web site:

http://www.jcommops.org/

An alternative solution, for those interested either in offering or using depolyment opportunities, would be to address the Chair of the Argo Science Team, Dr Dean Roemmich (roem@kakapo.ucsd.edu).

8. CLOSURE

8.1 Participants reviewed and approved the final report of the meeting.

8.2 In closing the meeting, the interim co-president of JCOMM, Johannes Guddal, thanked all participants for their substantial input and contributions to what had been a very successful meeting, and a major step forward in the implementation of JCOMM. He also thanked the IOC Secretariat for hosting the meeting and providing such excellent support.

8.3 Speaking on behalf of all participants, Worth Nowlin thanked the two co-presidents, Johannes Guddal and Dieter Kohnke, for their excellent guidance of the meeting and of JCOMM in general. He also thanked the Secretariats for their support for the present meeting and for the ongoing development of JCOMM.

8.4 The second Transition Planning Meeting for JCOMM closed at 1315 hours on Friday 16 June 2000.

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Annex II

AGENDA

1. OPENING OF THE MEETING

1.1 Opening
1.2 Adoption of the agenda
1.3 Working arrangements

2. REPORTS OF AD HOC GROUPS AND SECRETARIATS

2.1 Ad hoc Working Group on Structure
2.2 Ad hoc Working Group on Capacity Building
2.3 Secretariats

3. JCOMM STRUCTURE AND WORKPLAN

4. PREPARATIONS FOR JCOMM-I

5. WORK PROGRAMME UNTIL JCOMM-I

6. REPORT ON PROGRAMME ACTIVITIES SINCE JCOMMTRAN-I

7. LEGAL AND TECHNICAL ASPECTS OF FLOAT AND BUOY DEPLOYMENTS

8. CLOSURE

Proposal for the First International Marine Environmental Prediction Workshop

Date

October 2001 – 5 days – Halifax N.S. (possibly could be held following or before the proposed Atmospheric Ocean Flux Conference presently being organized)

Objectives

- To provide hands on learning experience in various marine prediction parameters
- To expose participants to latest advances in Marine Environmental Prediction
- To provide a forum for discussion of various Marine Environmental Prediction Issues

Format

This would be a hands-on workshop that would incorporate scientific presentations on the latest developments in the various fields. Scientific papers and theme speakers would be scheduled in the morning with hands-on workshops held in the afternoon. Several evenings would be used for panel discussions on relevant issues.

Language

- English

Content

Workshop topics could include marine wind forecast techniques, wave and sea state forecasting, and storm surge. At least a day could be devoted to oceanographic topics such as modelling, currents, temperature, structure, etc. Another day could be devoted to coastal meteorology and oceanography with a third addressing environmental prediction including spill modelling, coupled biological, oceanographic and meteorological systems.

Resources

Environment Canada's Learning Fund has committed $60K CND to support Canadian participation. We would be looking for additional funding from WMO and IOC to support travel of participants to the workshop. There is some flexibility to move the workshop as late as March 2002 if this would facilitate funding.

Organizational Structure

A steering committee will be established. It is proposed that the JCOMM **ad hoc** Capacity Building Task Team be members of this committee. In addition, a scientific program and local arrangements committee will be established.

Draft JCOMM Substructure and Terms of Reference

A. Management Group

TOR

(a) Advise the co-presidents on the short and long-term planning of the work programme of JCOMM and on its implementation;
(b) Advise the co-presidents regarding the resources required for the implementation of the work programme, as well as approaches to identifying and mobilising these resources;
(c) Assist the co-presidents in the coordination and integration of the work of JCOMM, as implemented through the various working groups, teams and rapporteurs;
(d) Review the internal structure and working methods of the Commission, including its relationship to other bodies, both internal and external to WMO and IOC, and develop proposals for modifications as appropriate;
(e) Advise on the implementation of activities and projects referred to JCOMM for action by WWW, WCP, GOOS, GCOS and other programmes, including in particular the GOOS/GCOS Implementation Action Plan;
(f) Contribute as required to the WMO Long-term Planning process, in particular with respect to the development and monitoring of the implementation of the marine programme component.

Membership

2 co-presidents
4 Programme Area coordination group chairmen
Representatives of relevant scientific design and planning bodies
No more than 2 other experts, if necessary, to ensure full geographical coverage

B. Data Management Programme Area

1. Data Management Coordination Group

TOR

(a) Plan, initiate and oversee the implementation of the DM work programme;
(b) Advise on actions required to implement, maintain and make available to users a fully integrated ocean/atmosphere data stream, including identification of the required resources;
(c) Ensure full and effective collaboration, coordination and compatibility with other data management bodies and programmes, including IODE, CBS, CCl, CEOS, GOSSP and the WDCs;
(d) Keep under review and encourage the use of advanced information technology in marine data management;
(e) Encourage and assist countries to identify, rescue, digitise and archive historical marine meteorological and oceanographic data;
(f) Develop, where possible generic, QC, metadata, analysis, data flow and data exchange standards, formats and procedures for JCOMM data;
(g) Keep under review the requirements of operational centres for real time, integrated marine data delivery and develop and recommend improved procedures to ensure that data and metadata are available to these centres with appropriate timeliness and quality;
(h) Collaborate with CBS in the development and maintenance of real time data quality and data flow monitoring and follow-up procedures.

Membership

PA/DM coordinator (chair)
Chairs Expert Teams (2)
Rapporteurs (3)
Representatives of IODE, CBS, CCL and WDCs, as necessary

2. Expert Team on Ocean Data Management

TOR

Largely as for GTSPP now, expanded as appropriate to cover surface salinity.

Membership

4-5 selected experts from Member States
Representatives of IODE and WDCs

3. Expert Team on Marine Climatology

TOR

(a) Operate a programme for the development and maintenance of end-to-end systems for the assembly and management of marine climatological data and related metadata sets required for GOOS, GCOS, WCP, other programme and marine users;

(b) Develop and recommend QC, metadata, analysis, data flow and data exchange standards, formats and procedures to meet the requirements and time scales of users;
(c) Keep under review the operations of the MCSS and related existing data management schemes and make recommendations for improvement as necessary;
(d) Design, recommend and maintain data flow monitoring systems;
(e) Encourage and facilitate the enhanced submission of data to the MCSS and other specific data management systems;
(f) Keep under review the work of Data Assembly Centres and recommend enhancements and/or additional centres as appropriate;
(g) Keep under review and, as necessary, propose procedures for the preparation and/or updating of relevant technical publications;
(h) Keep under review developments with Beaufort equivalent scales.

Membership

8-10 selected experts from Member States (including, as a minimum, representatives of MCSS/GCC centres)
Representatives of CBS and CCl as necessary

C. Services Programme Area

1. Services Coordination Group

TOR

(a) Keep under review and advise on the effectiveness, coordination and operation of the Services work program, including performance with respect to timeliness, standards, quality and relevance to established user requirements.
(b) Through the assembly of requirements identified by specialist service groups, and other PAs of JCOMM, provide advice on JCOMM services that need to be implemented or discontinued.
(c) Develop interfaces to representative user groups in order to monitor the strength and weaknesses of existing services.
(d) Ensure effective coordination and cooperation with appropriate groups and bodies of CBS, GOOS and GCOS in the area of service provision;
(e) Liaise with external bodies, in particular those representing user communities.

Membership

PA/Services coordinator (chair)
Chairs expert teams (3)
Rapporteurs (2)
Representatives of user organizations and groups as appropriate

2. Expert Team on Maritime Safety Services

TOR

(a) Monitor the operations of the marine broadcast system for the GMDSS and develop improvements as necessary;
(b) Liaise with IMO, IHO, ICS, Inmarsat and other concerned organizations and bodies on maritime safety issues, including the GMDSS;
(c) Monitor requirements for international coordination of meteorological and related services provided through NAVTEX and propose actions as appropriate;

Membership

Minimum membership to include representatives of the AMC for the GMDSS
Representatives of IMO, IHO, ICS, Inmarsat, other user groups as appropriate

3. Expert Team on Wind Waves and Storm Surges

TOR

(a) Monitor and assist in the implementation of the JCOMM Wind Wave and Storm Surge Programme and propose amendments as required;
(b) Develop technical advice on wave and storm surge modelling, forecasting and service provision and provide assistance and support to Member States as required;
(c) Monitor projects for verification of operational wind wave and storm surge model outputs and assist in their implementation as required;

(d) Ensure effective coordination and cooperation with appropriate GOOS bodies on requirements for and implementation of wind wave and storm surge products and services.

Membership

6-8 selected experts

4. Expert Team on Sea Ice

TOR

(a) Keep under review and catalogue the products and services required by user communities in sea ice areas;
(b) Encourage and advise on the relevant numerical models and forecast techniques for products and services;
(c) Develop technical guidance material, software exchange, specialized training and other appropriate capacity building support with regard to sea ice observations and services;
(d) Maintain linkages with relevant international organizations and programmes, in particular CLIC, IICWG and ASPeCt;
(e) Keep under review the operations of the Global Digital Sea Ice Data Bank, provide guidance as appropriate, and encourage and facilitate enhanced submissions of sea ice data to the bank;
(f) Recommend and promote appropriate QC, error analysis and archiving mechanisms;
(g) Review and propose amendments to formats, nomenclatures and procedures for sea ice data and information exchange as well as to relevant terminology, coding and mapping standards.

Membership

6-8 selected experts

5. Rapporteurs

(a) MPERSS
(b) JCOMM Products Bulletin – Editor

D. Observations Programme Area

1. Observations Coordination Group

TOR

(a) Keep under review and advise on the effectiveness, coordination and operation of the observations work program, including performance measured against scientific requirements, delivery of raw data, measurement standards, logistics and resources.
(b) Provide advice to JCOMM and to Observation Teams on possible solutions for newly identified requirements, consulting as appropriate with relevant scientific groups and CBS.
(c) Taking into account the continuing development of satellite observations and their capabilities, review **in situ** data requirements and recommend changes as appropriate.
(d) Coordinate the development of standardized, high quality observing practices and instrumentation and prepare recommendations for JCOMM.
(e) Examine trade-offs and use of new and improved techniques/developments against requirements and available resources.
(f) Liaise with and input to CBS activities regarding the consolidated requirements database and operational satellites.

Membership

PA/Obs coordinator (chair)
Chairs Ship Observations Team, DBCP, GLOSS, (Argo Science Team), (TIP)
Technical coordinator DBCP/SOG, Rapporteurs as required
Satellite expert
One other expert

2. Ship Observations Team

TOR

Merger of existing TOR for ASAP, SOOPIP, VOS

Membership

Open, existing operators

3. Data Buoy Observations Team

TOR

Existing TOR for DBCP, TIP and Action Groups

Membership

Open, existing DBCP members, Action Groups, TIP

5. Sea Level Observations Team

GLOSS Group of Experts

TOR

Existing GLOSS GE and GLOSS Scientific subgroup

Membership

Existing GLOSS GE and GLOSS Scientific Subgroup
Liaison to PAs DM, ETIS
Liaison to C-GOOS

E. Education, Training and Implementation Support Programme Area

1. ETIS Coordination Group

TOR

(a) Plan, initiate and implement the ETIS work programme, including in particular the JCOMM Capacity Building Strategy;
(b) Keep under review existing training and guidance material (paper and electronic) and advise on procedures for updating, as well as for the development of new material;
(c) Monitor regional requirements for capacity building and develop regional projects as appropriate;
(d) Develop and implement integrated training and support activities, in collaboration with other programme areas and external bodies and programmes (e.g. WMO ET/TCO, IOC-TEMA, GOOS, GCOS, IGOS).

Membership

PA/ETIS Coordinator (chair)
Chair Task Team Resources
Rapporteurs as appropriate

2. Task Team Resources

TOR

(a) Monitor the existence, fields of interest and procedures of international and national aid programmes, foundations and all other possible sources of funding and advise on proposal development;
(b) Where possible, develop links and contacts to funding sources and aid programme management;
(c) Develop a plan for obtaining resources for JCOMM Capacity Building, in collaboration with GOOS and GCOS.

Membership

2-3 selected experts
Donor agency representatives

3. Regional Rapporteurs

WMO regional rapporteurs
Links to IOC regional bodies

4. Liaison Rapporteurs

GLOSS and other PAs as appropriate
GOOS, GCOS and external capacity building programmes
IOC TEMA programme

5. User Forum

Ad hoc seminars, workshops, conferences involving both data and service providers and users.

PREPARATIONS FOR AND CONDUCT OF JCOMM-I

Introduction

1. The first formal session of JCOMM is planned to take place in Akureyri, Iceland, from 19-29 June 2001, hosted by the Icelandic Meteorological Office (IMO). As agreed by the Executive Councils of WMO and IOC, and pending the development of a common set of rules and procedures to apply to JCOMM, this session will be funded by WMO and conducted entirely according to WMO Regulations relating to sessions of technical commissions. WMO will, in addition, be responsible for coordinating preparations for the session and for the immediate follow-up.

Agenda

2. The draft provisional agenda for the session is given in Annex VI. It is clear that, since most of the ongoing work and proposals to be reviewed at the session will be based on that previously agreed under CMM and IGOSS, and the agenda for JCOMM-I must necessarily reflect this fact. Future commission sessions will, however, have agendas which more closely match the integrated structure and work plan to be agreed at JCOMM-I. It should also be noted that several of the items are formally required to be on the agenda of a technical commission session according to the WMO Technical Regulations.

Pre-session documentation

3. A draft documentation plan for the session is given in Annex VII. WMO will coordinate the preparation of the documents on the basis of this plan, and undertake all translation, reproduction and distribution. The documents will be in six languages (Arabic, Chinese, English, French, Russian and Spanish), and will be made available on the WMO web site. Every effort will be made to conform to the agreed documentation plan, to avoid placing too much stress on the WMO languages and documentation services. It is therefore essential that those responsible for document preparation (including members of the interim Management Committee) should deliver their documents to WMO by the agreed deadlines. It should also be noted that, in line with WMO regulations, documents should, in principle, be available to delegations "…preferably not more than forty-five days prior to the opening of the session…". Also in line with new WMO procedures regarding document structure, the documents will consist largely of draft text for the final report, plus draft recommendations and resolutions as appropriate. Additional commentary and discussion will be included at appropriate places in the draft text, in italics and square brackets, to eventually be removed prior to adoption of the report. Finally, it should be noted that internal WMO policy places a limitation of 80,000 words for the original total pre-session documentation for JCOMM-I.

Conduct of the session

4. Some information relative to the conduct of the session is given in section 2 of the annotated agenda. There will be simultaneous interpretation into six languages, but this interpretation will be available only for one committee or plenary meeting at a time. At the request of the IMO, the session will begin on Tuesday, 19 June 2001. It is hoped that a major part of the substantive agenda can be completed by the end of Friday, 22 June. With the scientific lectures planned tentatively for one half day on the following Monday or Tuesday, this will allow the support services time to prepare the working papers and "pinks" required for the adoption of the final report. Although

the session is scheduled to last until Friday, 29 June, past experience indicates that it can be concluded by the end of Thursday, 28th.

Other preparatory issues

5. The programme area coordinators and officers of JCOMM are clearly critical positions for the success of the new commission. It is therefore essential that the persons nominated by the session to these positions should have technical expertise, be highly motivated, and also have the agreement of their institutions/agencies to devote a relatively significant amount of time to JCOMM work. To assist in the preparation of a list of proposed nominees, members of the committee are therefore requested to assist in the identification of potential candidates, and to inform the co-presidents and Secretariats of these within the next six months. This will allow time for the persons nominated, and their agencies, to be approached prior to the session, and will greatly assist the eventual sessional nominations committee in its work.

6. In addition, most of the working groups and teams (and of course the rapporteurs) will comprise selected experts, to also be nominated at the session. To assist in this process, and following now accepted practice in WMO technical commissions, a letter will be sent to Members/Member States about six months prior to the session. This letter will request them to nominate potential candidates, to attach relevant qualifications and experience, and also to give some assurance of the availability of the persons concerned for JCOMM work. This will then allow the preparation prior to the session of a consolidated list of (hopefully) high quality persons to undertake the expected substantial work plan of the commission.

JCOMM-I

DRAFT PROVISIONAL AGENDA

1. OPENING OF THE SESSION

2. ORGANIZATION OF THE SESSION

   2.1 Consideration of the report on credentials
   2.2 Adoption of the agenda
   2.3 Establishment of committees
   2.4 Other organizational matters

3. REPORT BY THE INTERIM CO-PRESIDENTS OF THE COMMISSION

4. REPORTS BY THE CHAIRMEN OF THE MAJOR SUBSIDIARY AND REPORTING BODIES

5. SCIENTIFIC INPUT AND REQUIREMENTS

   5.1 Climate
   5.2 Operational users
   5.3 Other

6. MARINE METEOROLOGICAL AND OCEANOGRAPHIC SERVICES

   6.1 Maritime safety services
   6.2 Wind waves and storm surges
   6.3 Sea ice
   6.4 Marine pollution related services
   6.5 JCOMM products bulletin
   6.6 Other service issues

7. DATA MANAGEMENT

   7.1 Marine climatology
   7.2 Ocean data
   7.3 Buoys and floats
   7.4 Infrastructure
   7.5 Integration issues

8. OBSERVING SYSTEMS

   8.1 Ship-based observations
   8.2 Buoys and floats
   8.3 Remote sensing
   8.4 Sea level
   8.5 Integration issues

9. REVIEW OF TECHNICAL REGULATIONS OF INTEREST TO THE COMMISSION

10. GUIDES AND OTHER TECHNICAL PUBLICATIONS

11. EDUCATION AND TRAINING, TECHNOLOGY TRANSFER AND IMPLEMENTATION SUPPORT

    11.1 Specialized education and training
    11.2 Technology transfer and implementation support
    11.3 Regional development
    11.4 Resources

12. RELATIONSHIP WITH OTHER PROGRAMMES/BODIES OF WMO AND IOC

    12.1 GOOS and GCOS
    12.2 Other WMO and joint WMO/IOC programmes
    12.3 Other IOC Programmes

13. RELATIONSHIP WITH OTHER ORGANIZATIONS AND BODIES

    13.1 UN System Agencies (ICSPRO, ACC/SCOCA)
    13.2 UNCED follow-up, CSD, the Conventions
    13.3 The Integrated Global Observing Strategy Partnership
    13.4 Non-UN System organizations and programmes
    13.5 Industry and commerce

14. LONG-TERM PLANNING

15. SCIENTIFIC LECTURES

16. ESTABLISHMENT OF WORKING GROUPS AND NOMINATION OF RAPPORTEURS

17. INTERSESSIONAL WORK PROGRAMME

18. REVIEW OF PREVIOUS RESOLUTIONS AND RECOMMENDATIONS OF CMM AND IGOSS AND OF RELEVANT RESOLUTIONS OF THE GOVERNING BODIES OF WMO AND IOC

19. ELECTION OF OFFICERS

20. DATE AND PLACE OF THE SECOND SESSION

21. CLOSURE OF THE SESSION

First Session of the
Joint WMO/IOC Technical Commission for Oceanography and
Marine Meteorology

DOCUMENTATION PLAN

Agenda item	Short title	Length	By	Submission date
2.2	Provisional agenda	S	WMO Secretariat	July 2000
2.2	Explanatory memorandum	M	WMO Secretariat	July 2000
3	Report by the co-presidents	M	Co-presidents	February 2001
4, 6, 7	Report by the chair CMM/WG MMS	M	Chair	November 2000
4, 8	Report by the chair CMM/WG MOS	M	Chair	November 2000
4, 11	Report by the chair CMM/WG ETIS	M	Chair	September 2000
4, 7, 8	Report by the chair IGOSS/SOOPIP	M	Chair	October 2000
4, 7, 8, 11	Report by the chair GLOSS	M	Chair	March 2001
4, 8	Report by the chair DBCP	M	Chair	December 2000
4, 8	Report by the chair ASAPP	M	Chair	November 2000
5.1	Requirements for ocean data for climate	M	Chair OOPC	October 2000
5.2 and 5.3	Other data requirements	M	WMO/IOC Secretariats	September 2000
6.1	Maritime safety services (plus 1 recommendation)	M	WMO Secretariat	August 2000
6.2	Waves and surges (plus 1 recommendation)	M	Chair CMM waves group	February 2001
6.3	Sea ice	S/M	Chair Sea Ice group and WMO Secretariat	September 2000

Agenda item	Short title	Length	By	Submission date
6.4	Pollution/MPERSS (plus 1 recommendation)	M	Secretariat and rapporteur	December 2000
6.5	Products Bulletin	S	Editor of bulletin	January 2001
6.6	Other issues, including user interface	M	WMO Secretariat	April 2001
7.1	Marine climatology (plus 2 recommendations)	L	WMO Secretariat and chair CMM/SGMC	January 2001
7.2	Ocean data (plus 1 recommendation)	M	IOC Secretariat, TC/SOOPIP and chair GTSPP	February 2001
7.3	Buoys and floats (plus 1 recommendation)	M	IOC Secretariat, TC/DBCP, MEDS and chair Argo	January 2001
7.4	Infrastructure (codes, formats, communications, etc.) (plus 1 recommendation)	M	WMO Secretariat	August 2000
7.5, 8.5	Integration issues (plus 1 recommendation)	S/M	WMO/IOC Secretariats	March 2001
8.1	Ship-based observations (plus 1 recommendation)	M/L	WMO Secretariat and TC/SOOPIP	January 2001
8.2	Buoys and floats	M/L	IOC Secretariat, TC/DBCP, Argo	February 2001
8.3	Remote sensing	M	WMO Secretariat	January 2001
9	Review of Technical Regulations (plus 1/2 recommendations)	M/L	WMO Secretariat	November 2000
10	Guides	M	WMO/IOC Secretariats	December 2000
11	ETIS	M	WMO/IOC Secretariats	October 2000

Agenda item	Short title	Length	By	Submission date
12.1	GOOS	M	IOC Secretariat	February 2001
12.1	GCOS	S/M	GCOS Secretariat	March 2001
12.2	WMO programmes	M	WMO Secretariat	January 2001
12.3	IOC programmes	M	IOC Secretariat	December 2000
13	Relationships (plus 1 recommendation)	M	WMO/IOC Secretariats	October 2000
14	Long Term Planning	S	WMO Secretariat	September 2000
16	Establishment of Working Groups etc. (plus 5 resolutions)	L	WMO Secretariat	August 2000
17	Work Programme	L	WMO/IOC Secretariats	March 2001
18	Review of Resolutions etc. (plus 1 resolution and 1 recommendation)	M	WMO Secretariat	September 2000

Work plan until JCOMM-I

Document preparation. Documents for JCOMM-I will be prepared according to the document plan given in document 8 for the present session. This envisages completion of the documentation by April 2001. In particular, the documents from the chairs of the different existing JCOMM subsidiary bodies are expected to contain draft proposals and recommendations for the session when appropriate, together with proposals for future work, which will be included in the integrated work plan for the commission.

Other documents needed before JCOMM-I include:

(a) the *JCOMM background paper*, to be drafted by the Secretariats and reviewed by the interim co-Presidents, to be made available by February 2001;

(b) the *proposal regarding the inclusion of surface salinity measurements within the present GTSPP tasks*, to be drafted by Bob Keeley and made available by November 2000

VOSClim project. A first planning meeting for the project took place in Southampton in November 1999. A second project meeting will be held in Asheville in October 2000, and it is expected that implementation will be underway by the end of 2000, for completion some time in 2001.

TIP: The TAO Implementation Panel will meet in Perth in November 2000.

PMO workshop. A third regional workshop, for English speaking PMOs from Africa, will be held in Cape Town in November 2000, with support from NWS/NOAA. This follows previous such workshops in Valparaiso and Melbourne. It will be in English only and around 25 participants are expected. A similar workshop for French-speaking PMOs from Africa will be held later.

GLOSS/GE session: The Group of Experts on GLOSS will held its 7th session in Hawaii in [April/May] 2001.

ASAPP and DBCP. The annual sessions of the ASAP Panel and the DBCP will take place respectively in Reading, U.K., in September and in Victoria, Canada, in October 2000. As usual the latter will encompass a 1.5-day technical workshop, where 50-60 participants are expected.

Argo Information Centre. Interim arrangements for this centre are already in place through the DBCP/SOOP coordinator. Some funds for the separate Argo coordinator position have been offered, and it is hoped that IOC will be able to establish the Toulouse post and the centre before JCOMM-I.

Integrated work plan and capacity building strategy. Both a fully integrated work plan and capacity building strategy for JCOMM will be completed and formally presented to JCOMM-I as a part of the session documentation.

WIOMAP. A draft of the WIOMAP Project document has been prepared (by Sachooda Ragoonaden acting as WMO consultant). This still requires some revision, but it is expected to be submitted to potential funding bodies by late 2000.

MPERSS. IMO has strongly supported the MPERSS concept and is assisting in its implementation. MPERSS has already effectively been implemented in a number of parts of the world. Operational trials of the system are taking place in the Mediterranean, in co-ordination with the Regional Marine Pollution Emergency

Response Centre for the Mediterranean Sea (REMPEC) in Malta. The WMO Secretariat will participate in the meeting of REMPEC focal points in October 2000.

IGOS Partners and COP. The IGOS partners (which include WMO and IOC) have developed Oceans as an initial theme to facilitate implementation of the strategy. A presentation on IGOS and its oceans theme will be made separately to the session. It is expected that JCOMM, through various subsidiary bodies, will be directly involved in the implementation of this theme, for which IOC and WMO are to play a co-ordinating role. This work is likely to commence fairly soon. A number of decisions of recent Conferences of the Parties (COP) to the FCCC have provided an excellent political impetus to enhance marine observing systems for climate, as well as possibilities to obtain funding for the support of developing countries in this work. JCOMM will now have to work quickly with GCOS and GOOS to develop a strategy to properly exploit this opportunity. Results of this work will be presented to JCOMM-I.

PROGRAMME ACTIVITIES SINCE JCOMMTRAN-I

Introduction

1. A number of activities within the consolidated JCOMM programme have taken place since the first JCOMM Transition Planning Meeting (St. Petersburg, July 1999). These are noted briefly below, under different categories.

Meetings

2. The following meetings now regarded as falling within the JCOMM programme took place during the period:

(i) Eleventh session of the ASAP Panel, Norrkoping, Sweden, September 1999
(ii) Fifteenth session of the DBCP and nineteenth meeting on the Argos Joint Tariff Agreement, Wellington, New Zealand, October 1999;
(iii) First planning meeting for a VOS Climate Project, Southampton, U.K. November 1999; the VOSClim Project Document will be available at the meeting;
(iv) Meeting of Experts on a JCOMM Polar Strategy, Geneva, December 1999; subsequently, an extensive review report on a polar region observations strategy for JCOMM was prepared by a consultant, Mr G. Holland, and this will be available at the meeting;
(v) Third session of the Ship-of-Opportunity Implementation Panel, La Jolla, USA, March 2000;
(vi) Eighth session of the JCOMM Subgroup on Marine Climatology, Asheville, USA, April 2000;
(vii) MedGLOSS meeting, Haifa, Israel, May 2000. In addition, a GLOSS Scientific Subgroup has been formally established (chair Gary Mitchum). This SSG will initially address issues such as extreme sea levels, air pressure data availability, requirements for bottom pressure measurements, and (later) a reassessment of the GLOSS/WOCE/CLIVAR sea level networks.
(viii) Eighth session of the Steering Group for the Digital Sea Ice Data Bank, Ottawa, Canada, April/May 2000.

Workshops

3. The following JCOMM related workshops took place during the period:

(i) CLIMAR99, Workshop on the Applications of Marine Climatology, Vancouver, Canada, September 1999; approximately 80 participants;
(ii) Technical Workshop with DBCP-XV, Wellington, New Zealand, October 1999; approximately 60 participants;
(iii) Workshop on the Remote Sensing of Sea Ice, Ottawa, Canada, May 2000; approximately 50 participants.

Training events

4. The following training courses and workshops were convened under the consolidated JCOMM programme during the period:

(i) International Workshop for Port Meteorological Officers from Asia and the Pacific, Melbourne, Australia, November 1999;
(ii) GLOSS Training Course, Sao Paulo, Brazil, September 1999;
(iii) GLOSS Training Course, Jeddah, Saudi Arabia, April 2000.

External events

5. The major external event of significance to JCOMM which occurred during the period was OCEANOBS99 (Conference on Ocean Observations for Climate), St Raphael, France, in October 1999.

STATUS OF ARGO AND RELATED MATTERS

1. The status of funding for the Argo project can be summarized as follows: (*the figures refer to the number of floats*)

Country	Already funded	Proposed over next 3 years
Australia	20	90
Canada	10	150
European Community		80
France	20	150
Germany		150
Japan	20	300
Republic of Korea		75
United Kingdom	15	150
USA	195	1125
Total	**280**	**2270**

(Some other countries have expressed interest in being able to provide floats).

2. An Argo implementation meeting for the Pacific region took place in Tokyo in April 2000. The meeting initiated a coordinated implementation process for Argo floats in the Pacific and parts of the Indian Oceans, and adopted a formal statement emphasising the importance of Argo and pledging the support of all participating countries to this implementation. Other such meetings for Argo implementation in the Atlantic (Paris, July 2000) and in the Indian (to be determined) Oceans are expected to increase Argo visibility and interest amongst concerned Member States. Since the first proposal for an Argo project dates back less than two years and a half, the meeting recognized that progress in developing and implementing the project had been very good.

3. As a follow up of IOC Resolution XX-6 on Argo (attached) the Secretariats issued a Joint IOC-WMO Circular Letter, a key purpose of which was to ask for the nomination in each interested country of a national focal point for the Argo programme. This person would be responsible for the exchange of all relevant information between the country and the intergovernmental or international concerned bodies (e.g. the Secretariats, the Argo Science Team, etc.). Up to now, 24 countries had designated an Argo national focal point.

4. Argo floats deployed on the high seas may drift into EEZs, as is presently the case with the surface drifters deployed by many Member States. Recognizing this, IOC Resolution XX-6 requires that *"the concerned coastal states must be informed in advance, through appropriate channels, of all deployments of profiling floats which might drift into waters under their jurisdiction, indicating the exact location of such deployments."*

5. To meet this requirement, IOC, with external funding provided by Argo operators and other interested agencies, is establishing an international Argo Information Centre

staffed by a Co-ordinator (half-time position). This coordinator will work directly under the supervision of Mr Etienne Charpentier, the Technical Co-ordinator of the DBCP and SOOP Programmes, in Toulouse, France. The centre will inform designated contact points in Member States about planned float deployments, how to track float positions, and how to access float data, in compliance with the IOC Resolution. Letters were sent to potentially interested agencies in various countries to request financial contributions to support the Centre. Positive answers have so far been received from a few of them.

6. As an interim measure, an Argo Internet forum has been set up by the Technical Co-ordinator of the DBCP. The forum will be used for float deployment notification purposes (and other purposes if desired - e.g. documents sharing, discussion on technical issues, etc.). Its URL is:

http://argo-forum.jcommops.org/

The functioning of the forum is simple: whenever a Member State deploys floats, the float operator who deployed the instruments will place relevant information on the forum, under the heading "Float deployment notification". Information will therefore become public and automatic notification will be sent to all the known Argo national focal points, whose E-mail addresses have also been added in the forum.

Resolution XX-6

THE *Argo* PROJECT

The Intergovernmental Oceanographic Commission,

Considering that:

(i) the Global Ocean Data Assimilation Experiment (GODAE) is being planned as a pilot project in the context of the UN-sponsored programmes of GOOS, GCOS and CLIVAR, to contribute to short-term ocean forecasting, to provide boundary conditions for forecasting in coastal seas, and to contribute to seasonal to inter-annual atmospheric forecasts,

(ii) GODAE will meet the pressing need for: (a) a vastly improved co-operation and integration of remote and *in situ* data streams, and (b) improved ocean models and data assimilation techniques to exploit this information, to meet various kinds of user's requirements, such as the stated requirements of the Conference of Parties to the Framework Convention on Climate Change for observational data to support its needs for monitoring and assessing climate change and its impacts,

(iii) a major focus of the International GODAE Steering Team has been the development of a proposal for a global array of about 3,000 profiling floats, now known as the *Argo* project, which will be deployed in open ocean waters to cover the global ocean, and will measure temperature and salinity profiles in the upper 2,000 metres of the water column,

(iv) the data and data products derived from those floats will be freely available in real-time and delayed mode through IOC and WMO data exchange systems, as well as other appropriate international mechanisms, and will support operational oceanography and marine meteorology,

(v) those profiling floats are measuring instruments using modern technology; they drift freely at depths as great as 2,000 metres, rising to the surface every week or two to transmit data to shore *via* satellite,

Considering further that the *Argo* project shall be fully consistent with UNCLOS,

Noting the absence of a specific international legal instrument regulating profiling floats, drifting buoys, and other similar objects deployed in the oceans,

Recognizing that:

(i) just as with existing surface drifting buoys, some of these new instruments may drift into waters under national jurisdiction,

(ii) the *Argo* project is operational, is now being implemented, but is not yet global,

Strongly supporting the objectives and activities of GODAE which, as part of GOOS and GCOS, enjoys co-sponsorship by IOC, WMO, UNEP and ICSU,

Noting that the *Argo* project presents an excellent opportunity to improve ocean and climate forecasting, with consequent benefits for the protection of life and property and effective planning for the effects of seasonal to inter-annual climate variability,

Acknowledging paragraph 3.4.4.26 of the general summary of the Thirteenth World Meteorological Congress, which specifically addresses and endorses the *Argo* project,

Recognizing the need to ensure that Member States gain maximum benefit from the data of the *Argo* project in real-time and at longer time scales, and that they have the possibility to participate in and contribute to the project,

Accepts the *Argo* project as an important contribution to the operational ocean observing system of GOOS and GCOS, as well as a major contribution to CLIVAR and other scientific research programmes;

Concludes that concerned coastal states must be informed in advance, through appropriate channels, of all deployments of profiling floats which might drift into waters under their jurisdiction, indicating the exact locations of such deployments;

Instructs the Executive Secretary IOC, in close collaboration with the Secretary-General of WMO and in consultation with the Executive Director of UNEP:

(i) to inform all Member States, the IHO, and appropriate UN agencies, including IMO and FAO, of the acceptance of the *Argo* project by IOC and WMO;

(ii) to inform all Member States how to determine float locations and access float data;

(iii) to consider how all Member States might participate in and benefit from the *Argo* project, as well as propose options to that end; and

(iv) to appeal for international co-operation in making the *Argo* project a success;

Further instructs the Executive Secretary IOC to consult with the ABE-LOS and J-COMM on the legal and technical implications respectively of the deployment of profiling floats, drifting buoys, and other similar objects in the ocean, including the feasibility of drafting a legal instrument.

Financial implications: none

LIST OF ACRONYMS AND OTHER ABBREVIATIONS

ABE-LOS	Advisory Body of Experts on the Law of the Sea (IOC)
AMC	Area Meteorological Coordinator (MPERSS)
ASAP	Automated Shipboard Aerological Programme
ASPeCt	Antarctic Sea Ice Processes and Climate
CBS	Commission for Basic Systems (WMO)
CCl	Commission for Climatology (WMO)
CEOS	Committee on Earth Observation Satellites
CLIC	Climate and Cryosphere project (WCRP)
CLIVAR	Climate Variability and Predictability (WCRP)
CMM	Commission for Marine Meteorology (WMO)
COP	Conference of the Parties to FCCC
CSD	Commission on Sustainable Development
DBCP	Data Buoy Co-operation Panel (WMO-IOC)
DM	Data Management
EC	Executive Council
EEZ	Exclusive Economic Zone
ETIS	Education, Training and Implementation Support (of JCOMM)
FAO	Food and Agriculture Organization (UN)
FCCC	Framework Convention on Climate Change (UN)
GCOS	Global Climate Observing System
GLOSS	Global Sea-Level Observing System
GMDSS	Global Maritime Distress and Safety System (IMO)
GODAE	Global Ocean Data Assimilation Experiment
GOOS	Global Ocean Observing System
GOSSP	Global Observing Systems Space Panel
GTSPP	Global Temperature Salinity Profile Programme
ICS	International Chamber of Shipping
IHO	International Hydrographic Organization
IICWG	International Ice Charting Working Group
ICSPRO	Inter-Secretariat Committee on Scientific Programmes Relating to Oceanography
ICSU	International Council for Science
IGOSS	Integrated Global Ocean Services System
IMO	International Maritime Organization
IMO	Icelandic Meteorological Office
IOC	Intergovernmental Oceanographic Commission (of UNESCO)
IOCSOC	IOC Regional Committee for the Southern Ocean
IODE	International Data and Information Exchange (IOC)
IGOS-P	Integrated Global Observing Strategy Partners
JCOMM	Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology
MCSS	Marine Climatological Summaries Scheme
MEDS	Marine Environmental Data Service (Canada)
MPERSS	Marine Pollution Emergency Response Support System
NOAA	National Oceanic and Atmospheric Administration (USA)
NWS	National Weather Service (USA)
OOPC	Ocean Observations Panel for Climate (GOOS/GCOS/WCRP)
PA	Programme Area (JCOMM)
PMO	Port Meteorological Officer
QC	Quality Control

LIST OF ACRONYMS AND OTHER ABBREVIATIONS

REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean
SCAR	Scientific Committee on Antarctic Research
SOC	Specialized Oceanographic Centre (IGOSS)
SOG	Ship Observations Group
SOOP	Ship-of-Opportunity Programme
SOOPIP	JCOMM Ship-of-Opportunity Programme Implementation Panel
TAO	Tropical Atmosphere Ocean Array
TEMA	IOC Training, Education and Mutual Assistance
TOR	Terms of Reference
UNCED	United Nations Conference on Environment and Development (Rio de Janeiro, 1992)
UNCLOS	United Nations Convention on the Law of the Sea (Montego Bay, 1982)
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
URL	Uniform Recourse Locator (Internet)
VOS	Voluntary Observing Ship
WCP	World Climate Programme (WMO)
WCRP	World Climate Research Programme (WMO/IOC/ICSU)
WDC	World Data Centre
WIOMAP	Western Indian Ocean Marine Applications Project
WMO	World Meteorological Organization
WMO-EC WG/AM	WMO-EC Working Group on Antarctic Meteorology
WOCE	World Ocean Circulation Experiment (WCRP)
WWW	World Weather Watch (WMO)
XBT	Expendable Bathythermograph