

WORLD METEOROLOGICAL ORGANIZATION

**INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)**

**JOINT WMO/IOC TECHNICAL COMMISSION FOR
OCEANOGRAPHY AND MARINE METEOROLOGY**

FIRST TRANSITION PLANNING MEETING

ST PETERSBURG, RUSSIAN FEDERATION, 19-23 JULY 1999

FINAL REPORT

JCOMM Meeting Report No. 1

GENERAL SUMMARY OF THE WORK OF THE SESSION

1. OPENING OF THE MEETING

1.1. Opening

1.1.1 The first transition planning meeting for the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) opened at 0930 hours on Monday 19 July 1999 in the conference room of the Arctic and Antarctic Research Institute (AARI), St Petersburg, Russian Federation. On behalf of the Secretary-General of WMO, Professor G.O.P. Obasi, and the Executive Secretary IOC, Dr P. Bernal, the WMO Secretariat representative welcomed participants to the meeting and to the start of the new era which JCOMM represented, in both oceanography and in cooperation between WMO and IOC. In doing so, he first expressed his very sincere and heartfelt thanks, on behalf of both the JCOMM parent Organizations, to the AARI and its Director, Dr Ivan Frolov, for hosting the meeting and for providing such excellent facilities, hospitality and support. He noted that it was particularly fitting that this first meeting to take place in the context of JCOMM should do so at AARI in Russia, in view of the leading role taken for many years by both Russia and the AARI in oceanography and polar science and services, and also because of the long-standing efforts of Dr Frolov himself in support of the former CMM.

1.1.2 The WMO representative recalled that JCOMM was formally established by merging the existing WMO Commission for Marine Meteorology and the Joint IOC/WMO Committee for the Integrated Global Ocean Services System. The present meeting was therefore expected to combine the functions of reviewing and revising the work programmes of CMM and IGOSS with planning the transformation of these bodies and their substructures into JCOMM. It was also expected to develop a procedure for the integration of other existing ocean observing system implementation mechanisms into an overall coordinated structure, as well as begin to address the urgent implementation requirements of GOOS/GCOS. The WMO representative concluded by wishing all participants a very successful meeting and beginning to JCOMM, as well as an enjoyable stay in St Petersburg. He then invited Dr Frolov to address the meeting.

1.1.3 On behalf of the AARI, Dr Frolov also welcomed participants to Russia, to St Petersburg and to the Institute. He expressed his pleasure that such an important and historic meeting was taking place in AARI, noting that the institute had been involved in polar research for more than 80 years. It was now a large institute, which organized all Russian Antarctic research, as well as most of that for the Arctic. This research covered oceanography, meteorology and sea ice studies, as well as many other aspects of polar science. Dr Frolov concluded by wishing all participants a very fruitful meeting and an enjoyable stay in St Petersburg.

1.1.4 The list of participants in the meeting is given in Annex I.

1.2. Election of the chairman

1.2.1 Participants agreed that the existing president of CMM, Mr Johannes Guddal, and chairman of IGOSS, Prof. D. Kohnke, should share the task of chairing the present meeting, with a decision on the interim co-presidency of JCOMM to be made later under agenda item 5.

1.3. Adoption of the agenda

1.3.1 The meeting adopted its agenda on the basis of the provisional agenda prepared by the Secretariats. This agenda is given in Annex II.

1.4. Working arrangements

1.4.1 The meeting agreed its hours of work and other practical session arrangements. The session

documentation was introduced by the Secretariats.

2. JCOMM STATUS REVIEW

2.1 The meeting recalled that JCOMM was formally established through resolutions of the thirteenth WMO Congress (May 1999) and the twentieth IOC Assembly (June/July 1999). The meeting firstly reviewed details of these decisions, including the JCOMM terms of reference and other specific aspects of the joint technical commission agreed by the governing bodies. The JCOMM terms of reference are given in Annex III. The meeting agreed that one of the issues for the present meeting would be to find an effective way to fit together in a coherent structure all the important existing pieces of CMM and IGOSS, as well as other components of existing ocean observing systems. In doing so, it would be necessary eventually to indicate how existing and expected future resources and mechanisms would map onto stated requirements, and to develop procedures for addressing standards and regulatory matters. The meeting further agreed that JCOMM should begin by addressing only the requirements for physical and closely related chemical ocean data, with the implementation requirements of other parts of GOOS to be considered later, either through JCOMM or elsewhere.

2.2 The meeting recognized that the fundamental objective of JCOMM was to provide a fully integrated and coordinated mechanism for the global management of an operational ocean observing and data management system to provide the full range of marine meteorological and oceanographic variables needed to meet the requirements for such data of marine service providers and users, global climate studies and other major programmes of WMO and IOC. Complementary to this objective was a requirement to ensure that all Members/Member States of the two Organizations could both contribute to and benefit from the work of JCOMM. In the context of these objectives, the meeting agreed that one of the primary initial tasks of JCOMM would be to coordinate the implementation of the common GOOS/GCOS ocean climate module. It therefore also reviewed under this agenda item the requirements for and status of GOOS/GCOS implementation. This review included in particular the results of recent sessions of the GOOS and GCOS Steering Committees, as well as of I-GOOS. In doing so, the meeting considered the respective roles of JCOMM and I-GOOS, and agreed that they were different and complementary - JCOMM was a technical implementation body, while I-GOOS reviewed and recommended on requirements and resources for such implementation.

3. REPORTS ON EXISTING ACTIVITIES

3.1 Participants in the meeting included representatives of all the CMM and IGOSS subsidiary bodies, of all other bodies and mechanisms to be coordinated under or associated with JCOMM, as well as of GOOS and GCOS. Based on reports from these representatives, the meeting reviewed the status of all existing activities relevant to JCOMM. Such reports covered: the main CMM working groups and activities; IGOSS and SOOPIP; DBCP and TIP; GLOSS; IODE and GTSP; ASAP. This review also included the work underway in WMO to analyse, on an ongoing basis, requirements for all types of meteorological, hydrological and oceanographic data, and of the capabilities of satellites and other types of observing systems to meet these.

3.2 The information presented under this agenda item was taken into account in particular when determining the future structure and work programme for JCOMM, considered under subsequent agenda items. Significant points raised during the discussion of the various reports included:

- (i) The importance to the work of JCOMM of obtaining commitments at the national level in terms of both expertise and time from individuals, building on existing commitments to CMM and IGOSS, and in this context the need to convince national agencies of the value to them of contributing to JCOMM;
- (ii) The need to foster and assist national coordination among different agencies in support of JCOMM; a related national problem involved entraining oceanographers in operational activities;
- (iii) The need to include storm surge related activities within JCOMM, in association with wind waves and the WMO Wave Programme; the need to develop wave climatologies, both data

and model based, which was a task for the marine climatology group; the need to develop closer cooperation in wave activities between JCOMM and GOOS, in particular coastal GOOS; the possible requirement for a science steering group for waves, perhaps established under SCOR;

- (iv) In a general sense, the role of JCOMM in the development of climatologies and in climatological data management, including interactions with IODE and CCI;
- (v) The possible merger of existing groups dealing with observations from VOS;
- (vi) The important role to be played by JCOMM in national capacity building, including focussed specialized training, multi-component coastal area workshops, and regional cooperative projects;
- (vii) Instrument testing and intercalibration, and the role of **ad hoc** task teams set up within operational groups for this purpose; also incorporation of new technologies;
- (viii) The importance of carrying forward meteorological and oceanographic data simultaneously in data management streams within JCOMM, and in conjunction with IODE;
- (ix) The importance of the data collection, exchange and processing infrastructure established under IGOSS for both GOOS and JCOMM, and the future role of both the IGOSS SOCs and the RNODCs for IGOSS of IODE;
- (x) The possible incorporation of coastal moored buoy networks within a global ocean observing system;
- (xi) Support for a GLOSS scientific sub-group for climate, but not for a coastal sub-group;
- (xii) The use of the GTSP as both an important data management mechanism for JCOMM, and also as a model for end-to-end data management in general; and in this context the transformation of the GTSP Steering Group into a joint JCOMM/IODE Steering Group for End-to-end Data Management;
- (xiii) Support for GTSP to expand its functions to cover other data types and/or data sources;
- (xiv) Data directory services for JCOMM including the potential use of MEDI and WMO directories;
- (xv) JCOMM-related data centres and data base management procedures.

3.3 The meeting requested the Secretariats to compile all these status reports into a single document, to be printed separately from the meeting report and distributed to newly-nominated members of JCOMM.

4. REVIEW OF REQUIREMENTS

4.1 The meeting recalled that, as specified in its terms of reference, JCOMM must address requirements for marine meteorological and oceanographic data and products in support of the full range of services for marine users, as well as of the WWW and other major programmes of WMO and IOC. In addition, JCOMM was expected to be the primary mechanism for coordinating and regulating the implementation and maintenance of (at least initially) global physical ocean observations for GOOS and GCOS.

4.2 In this context, the meeting noted that, following a proposal from CMM-XII, a document entitled *Global Ocean Observations for GOOS/GCOS – an Action Plan for Existing Bodies and Mechanisms* had been prepared, and recently published as a formal planning document for both GOOS and GCOS. This document reviewed in detail existing implementation mechanisms and presents specific actions required of these mechanisms to support GOOS/GCOS implementation. As such, the document represented a blueprint for the initial support to be provided by JCOMM for the implementation of GOOS and GCOS. The meeting therefore carefully reviewed this document, including in particular the detailed requirements for ocean data developed by the Ocean Observations Panel for Climate (OOPC) and specified therein, with a view to addressing the implementation actions in the JCOMM work plan. The work of the OOPC is summarized in Annex IV. The meeting expressed its appreciation for the development of the *Action Plan*, and noted its importance, not just for JCOMM as a whole, but also at the national level. It therefore requested the Secretariats to arrange, if at all possible, for its translation and publication in at least the four major working languages of WMO and IOC.

4.3 The meeting recognized that JCOMM would also continue to be responsible for the provision of

marine services and of operational marine data in support of the WWW and other WMO and IOC programmes. The meeting therefore also undertook a review of requirements for these applications, so that they could be fully reflected in the work plan. These requirements are partially specified in the *Action Plan*. The meeting agreed that, in general, JCOMM had a function to act as a review mechanism for ocean data requirements for user-oriented products and services. A mechanism was therefore needed for this, as well as to address priorities in the implementation of other requirements developed elsewhere.

4.4 It was agreed that JCOMM was also expected to provide support, within its operational mandate, to relevant research programmes. A review of these programmes and their requirements was therefore presented, including in particular the CLIVAR and the Global Ocean Data Assimilation Experiment (GODAE), with its associated Argo project. This review is summarized in Annex V.

4.5 With regard specifically to Argo, the meeting was informed of Resolution XX-6 of the recent 20th IOC Assembly which, inter alia, concluded 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 location of such deployments*. In this context, the meeting was informed of the intention of the Argo Science Team to develop a comprehensive data and information management system, which would include *audit trails* for the processing of float data from the point of collection. This data system would be open, and include the full history of each float. The meeting noted that this process would provide a mechanism that could be used to satisfy the concerns expressed in the IOC resolution as stated above. **The meeting therefore recommended** that the Argo Science Team take note of this IOC resolution and in particular the need to inform coastal states of floats that are likely to enter their waters, as well as the deployment history of any such floats. Further, in the development of the data and information management strategy, a capacity to view the complete audit of Argo floats should be made available, together with methods for access to data. The meeting, however, did not consider that, at the present time, there was any obligation on Argo to take specific actions relating to floats entering EEZs.

4.6 Further on the subject of Argo, the meeting recognized that it remained, for the present, essentially a pilot project of the OOPC and hence of GOOS/GCOS, and as such outside the area of direct responsibility of JCOMM. In this context, any interaction between JCOMM and the Argo Science Team should, for the moment, be undertaken through the OOPC as the primary JCOMM science advisory body for climate issues. Nevertheless, it was agreed that Argo had enormous potential and was likely to lead eventually to an operational network of profiling floats which would, at that time, become naturally incorporated into the operational networks coordinated by JCOMM. Finally, the meeting recognized that Argo would shortly have an implementation panel, which would facilitate future interactions.

5. TRANSITION TO JCOMM

5.1 The meeting firstly noted that, in line with its status as a technical commission of WMO, JCOMM was an intergovernmental body of technical experts in the field of oceanography and marine meteorology, with a mandate to prepare both regulatory (what Member States **shall** do) and guidance (what Member States **should** do) material relating to marine observing systems and services. The role of the full commission in session was essentially to act as a final review body for activities, proposals and recommendations prepared for it by its sub-structure of working groups and rapporteurs. Based on these, it would then prepare recommendations for actions by Member States, for consideration and adoption by the respective governing bodies of WMO and IOC.

5.2 The meeting agreed that the transition from the existing CMM/IGOSS structure, plus reporting and coordination arrangements for the other ocean observing bodies, to the new JCOMM, required careful design and management. The new structure had to ensure that existing mechanisms which were working and productive were retained, while at the same time providing a structure which was cost-effective and appropriate to addressing user needs. Specifically, the following issues were addressed, with a view to preparing concrete proposals for consideration by the first session of

JCOMM:

- (i) interim and future presidency of the joint technical commission, membership, and coordination at the national level between meteorological and oceanographic communities, to provide the right level and mix of expertise;
- (ii) very importantly, the commission sub-structure of working groups, sub-groups and rapporteurs, to eventually provide a fully integrated approach to fully addressing priority issues, while at the same time retaining the expertise and enthusiasm inherent in existing successful groups;
- (iii) relationship to other programmes and bodies of WMO and IOC, including GOOS, GCOS, CBS, CCI and IODE;
- (iv) training and capacity building within the context of JCOMM and operational oceanography;
- (v) reporting mechanisms and oversight, both internal to JCOMM and also for the commission itself; e.g. to the Executive Councils, and also GOOS/GCOS and elsewhere;
- (vi) coordinated Secretariat support for JCOMM.

The following paragraphs contain the results of the discussions on these subjects.

5.3 The meeting noted the decision of Congress and the Assembly regarding the co-presidency of JCOMM. It recognized that JCOMM-I would undertake the first formal election for these co-presidents, and that it would be for this commission session to ensure that the wishes of the governing bodies concerning the sharing of responsibilities between the meteorological and oceanographic disciplines were fulfilled to the extent possible. As an interim measure until JCOMM-I, and bearing in mind that CMM and IGOSS no longer formally existed, the meeting agreed that the former president of CMM, Johannes Guddal, and the former chairman of IGOSS, Dieter Kohnke, should be the interim co-presidents. It further agreed that the former vice-president of CMM, Sachooda Ragoonaden, and vice-chairman of IGOSS, Hans Dahlin, should continue to be fully involved in the transition process.

5.4 With regard to membership of JCOMM, the meeting requested the Secretariats to act as quickly as possible in requesting Members/Member States to nominate members, in order to entrain national agencies and institutions, as well as individuals, in the JCOMM process. This action should comprise, in the first instance, a joint WMO/IOC circular letter to Members/Member States, directed to the primary contact points for both Organizations, requesting nominations of experts from both communities to the joint commission, according to established procedures for such letters. The meeting strongly encouraged better coordination at the national level between atmospheric and oceanographic communities, in order to help further the coordinated implementation of meteorological and oceanographic services and monitoring, and also provide effective input to and support for JCOMM. In this context, it recommended to the Secretariats that the proposed joint circular letter should also encourage such coordination, and specifically contain quotations of the relevant parts of the WMO/IOC resolution which established JCOMM.

5.5 The meeting noted that the formal reporting mechanism for JCOMM would be to the governing bodies (Executive Councils, Congress and the Assembly) of WMO and IOC, which would have to approve recommendations of JCOMM which involved expenditure and/or actions on the part of either of the Organizations as a whole, or of individual Member States. In addition, the meeting recognized the importance of close liaison with GOOS and GCOS in particular. In this context, it recommended that either or both of the co-presidents should become **ex officio** members of both the GOOS and GCOS Steering Committees, and that I-GOOS should invite the co-presidents to provide regular status reports from JCOMM to I-GOOS sessions. The meeting further agreed on the importance of close interactions with other technical bodies of WMO and IOC, in particular CBS and IODE. It considered that such interaction could best be effected, at least initially, through joint working groups or other bodies, or through reciprocal membership on working groups. In this context, it specifically agreed to the establishment of the Joint IODE/JCOMM Steering Group on End-to-end Data Management (see paragraph 3.3(xii) above); to the nomination by JCOMM of experts to the CBS Rolling Requirements Review process and to GOSSP; and to the reciprocal membership of JCOMM and IODE officers on their respective management groups. It requested the interim co-presidents and the Secretariats to arrange for appropriate participation in these activities, pending formal approval of this action by

JCOMM-I.

5.6 The meeting noted the information provided by the Secretariats with regard to future joint Secretariat support to the work of JCOMM, as well as the necessity to resolve a number of small but important regulatory and constitutional differences between the cosponsoring Organizations. It urged the Secretariats to ensure that these issues were resolved as soon as possible, and in as transparent a way as possible, to ensure that they provided no future impediment to the implementation and operation of JCOMM.

5.7 With regard to the future structure of JCOMM, and in the context of the overall JCOMM objectives and terms of reference, the meeting agreed that it needed to begin a process in which oceanography and marine meteorology would transition from the existing largely unconnected set of monitoring, data management and service activities to a fully coordinated and integrated system. This transition process, however, must be incremental and evolutionary, not revolutionary, and must ensure the preservation of existing essential activities of CMM and IGOSS, particularly in the marine services area. The transition process should selectively broaden and modify the tasks of existing mechanisms towards an agreed new structure, with priority being given in the JCOMM work plan to activities which would lead to consolidation and integration.

5.8 In this context, the meeting agreed that a schematic of the future system to be managed by JCOMM might be as given in Annex VI, in which a coordinated set of data providers would feed into an integrated data management system of overlapping real time and non-real time components. This system would, in turn, deliver data and products to a comprehensive range of user interests, either directly or through intermediate service providers. The system would need to be backed by a comprehensive and effective capacity building and support process. As a first step towards this ideal, the meeting further agreed that the basic JCOMM structure should be as shown in Annex VII, in which the co-presidents would be advised and assisted by a Management Committee in the overall guidance and management of the work of JCOMM. This work would, in turn, be categorized and structured (in accordance with the JCOMM Terms of Reference) in four broad Programme Areas (PA) – Products and Services, Observations, Data Management and Education, Training and Implementation Support. Each Programme Area might be placed under the overall responsibility of a Coordinator, assisted as necessary by a small team of experts.

5.9 The meeting recognized that all the existing bodies which now formed part of JCOMM (both internal and external to CMM and IGOSS) contained elements which contributed to some or all of these Programme Areas, as illustrated in the tabulation in Annex VIII. While this was logical and even desirable in many ways, it also complicated the transition process, including the preparation of recommendations regarding an initial substructure for JCOMM which would retain these bodies to the extent possible, while at the same time supporting the programme structure in Annex VII and facilitating the longer term transition to the idealised system in Annex VI. To begin this process, the meeting agreed to establish an **ad hoc** group, which was tasked with preparing a first draft sub-structure for JCOMM, based on the considerations in paragraphs 5.7 to 5.9 and on the schematics in Annexes VI to VIII. The group should also take into account decisions made on the interim work programme as recorded under agenda item 7, as well as the liaison proposals noted in paragraph 5.5 above. The **ad hoc** group would be chaired by the interim co-presidents, and would also include W. Appleby, F. Gerard, S. Khodkin, P. Parker, T. Pierce, V. Ryabinin and R. Wilson. The group would work primarily by correspondence, except when **ad hoc** meetings of two or more members could be inexpensively arranged, and should have an agreed draft structure available for consideration by all the members of the present transition planning meeting by March 2000.

5.10 The meeting further agreed that, as an integral part of its work, the **ad hoc** group on structure should develop an overall strategy statement relating to the transition from the existing structure to that illustrated in Annex VI.

6. JCOMM-I

6.1 Thirteenth WMO Congress authorised and provided funds for a full session of JCOMM to take place in the biennium 2000-2001. The meeting therefore agreed that WMO should take the lead responsibility for the preparation, conduct and follow-up to JCOMM-I, on the understanding that IOC would, in principle, become the lead agency for JCOMM-II, approximately four years later. In this case, this first session would also take place in full accordance with WMO rules and procedures, as had been the practice previously for IGOSS.

6.2 The meeting noted with interest and appreciation that Iceland had already offered formally to host this first session in June 2001. In view of the complexity of the transition process as already discussed under agenda item 5; of the long lead time required for the thorough preparation of such a session required by WMO; of the need for having clear and realistic proposals ready for consideration by the commission in session regarding initial structures, work programme and the ongoing transition process; and of the important ongoing and uncompleted work programme of CMM and IGOSS, the meeting considered that two years was probably realistic as a lead-up period for the session. At the same time, it recognized the importance for Member States of having this first session as soon as possible, as well as of presenting decisions and recommendations of the new commission to the respective governing bodies at the earliest opportunity. It therefore requested the WMO Secretariat, in consultation with the host country, to investigate the possibilities for holding the session earlier than the proposed date of June 2001, at the very least in April 2001 to allow consideration of decisions by the governing bodies in May and June 2001 respectively.

6.3 The meeting then reviewed and agreed a draft agenda and format for the session, within the context of WMO rules on such matters and on the basis of proposals from the Secretariats. A basic draft agenda is given in Annex IX. The meeting recognized that details of agenda sub-items, as well as a documentation plan for the session, could only be prepared after the **ad hoc** group on structure had completed its work. It therefore requested the Secretariats to undertake the preparation of this additional detail at an appropriate time, for further consideration and agreement by meeting participants. The meeting also agreed on the desirability of having a number of scientific lectures, to be given as part of the session. At the same time, it recognized the importance, to both Member States and the Secretariats, of keeping session time and costs to a minimum. It therefore agreed that the number of such lectures should be restricted to a maximum of three, covering three of the following general themes:

- (i) Operational oceanography, including models and applications;
- (ii) New technologies for operational oceanography;
- (iii) Oceans and climate;
- (iv) Capacity building requirements for operational oceanography.

Neville Smith agreed to provide the Secretariats with the list of keynote speakers for the Oceanobs99 Conference, as a source of potential lecturers covering all proposed topics.

7. WORK PROGRAMME UNTIL JCOMM-I

7.1 The meeting agreed that this was one of the most important items on the agenda. CMM, IGOSS and the other bodies to report to JCOMM all had comprehensive, ongoing work programmes. These needed to be incorporated into a programme of work for the new technical commission for the time remaining until JCOMM-I, to ensure that key action items were completed, and that actions were also taken to address new issues, particularly relating to GOOS/GCOS implementation as specified in the action plan. At the same time, the integrated work plan should reflect the proposed Programme Area structure as agreed under agenda item 5, and give priority to those actions which enhanced the integration and consolidation process. In the wide-ranging discussions on this topic, the following issues were noted in particular:

- (i) Incorporation of procedures and capabilities for evaluating system performance and cost-effectiveness, as well as intercalibrating and testing existing and new technologies;
- (ii) Requirements and procedures for the preparation of regulatory and guidance material;

- (iii) Coordinating and optimising existing observing networks, and generally enhancing the quantity and quality of available ocean data in support of diverse user requirements;
- (iv) Use of international conventions (e.g. FCCC, OPRC, UNCLOS, SOLAS, regional conventions such as HELCOM) to support JCOMM work and facilitate regulation;
- (v) Data exchange procedures and formats, including enhanced and standardized use of internet technology and facilities;
- (vi) Development of a capacity building strategy;
- (vii) Preserving current work and priorities relating to operational marine forecasting and services, while at the same time addressing urgent requirements for ocean data for climate;
- (viii) The likely publication of a coastal GOOS implementation design prior to JCOMM-I.

7.2 The meeting recognized that all these considerations could not, and probably should not, be implemented immediately within an integrated work plan. At the same time, it was essential to begin the process. In this context, the meeting agreed an outline approach to an integrated work plan, based almost entirely on ongoing activities but structured into programme areas. This is given in Annex X. The meeting recognized that this outline plan provided an essential input to the work of the **ad hoc** group on JCOMM structure. It further stressed the importance of quantifying JCOMM objectives and linkages; of expanding the concept of lead groups on specific issues to encompass other expertise; and of recognizing the wide spectrum of JCOMM work, encompassing time scales from real-time to long time delay, and from raw observation to primary user (more often modelling and forecast centres than end users).

7.3 The meeting agreed that substantial further work was required to fully develop this outline plan, including the incorporation of the activities of bodies other than CMM and IGOSS, as well as actions specified in the Action Plan. It requested the **ad hoc** group on structure to undertake this work, in view of the closely interlinked nature of the two issues. Once this group had reached agreement on both a proposed structure and work plan, this should be reviewed and agreed first by the full interim Management Committee (see paragraph 8.1 below), and then circulated to the newly nominated members of the commission for information and to ensure that they are fully included in the planning process for JCOMM as soon as possible. At the same time, both the proposed structure and work plan should also be circulated to chairs and members of existing bodies, to seek their views and input and to keep them fully involved in the implementation process. In this context, the meeting requested the Secretariats to ensure that the letter inviting nominations of members of JCOMM should also indicate that all the present activities of existing groups should and must continue until JCOMM-I, with the proviso that steps should be taken towards a graduated integration and consolidation wherever feasible. At the same time, the report of the present meeting should be distributed to all these existing groups, for information and to ensure their ongoing involvement in JCOMM.

7.4 The meeting agreed that JCOMM would need to interact closely on many issues with existing regional bodies and activities within both WMO and IOC, including GOOS regional projects, both to ensure that regional needs were being met, and also to obtain regional input and support for JCOMM implementation work. In this regard, it noted in particular:

- (i) that the relation of JCOMM to regional GOOS would need to be clarified over the next two years, though in some cases it was clear already that regional GOOS activities were of significance to the JCOMM programme;
- (ii) that eventually the GSC may request JCOMM to give advice on technical aspects of the work of regional GOOS bodies;
- (iii) that the WMO regional marine rapporteurs were potentially a valuable resource for JCOMM, in providing direct contact with regional bodies and concerns and also as a means for raising awareness of JCOMM objectives and activities at the regional level.

7.5 The meeting reiterated that capacity building, in all its manifestations, was critical to the success of JCOMM as an entity, to achieving its objectives and implementing its programme, and particularly to ensuring that all countries could participate in and benefit from its work. In this context, the meeting agreed that JCOMM required a more structured approach to capacity building than had previously been

the case for CMM and IGOSS. At the same time, the JCOMM capacity building programme should be compatible with the developing GOOS capacity building strategy. The meeting therefore decided to establish an **ad hoc** Task team on JCOMM Capacity Building. The team would comprise W. Appleby (chairman), M. Andrioli and S. Ragoonaden, with support and input from the Secretariats (C. Summerhayes and P. Dexter), and would have the following terms of reference:

- (i) Evaluate, to the extent possible, the requirements of Member States for capacity building support in the context of JCOMM;
- (ii) Develop a set of priorities for JCOMM capacity building, encompassing education, training and implementation support;
- (iii) Interact with and contribute to the development of the GOOS capacity building strategy.

The task team should take the list of capacity building activities given in Annex X as a starting point in developing priorities, and should if possible complete its work by mid-2000.

7.6 The meeting noted with appreciation the existence and value of the IGOSS Electronic Products Bulletin (EPB), which would now become the JCOMM EPB. The meeting recalled the proposed development of a GOOS Products and Services Bulletin, which would serve a different purpose in providing examples of typical GOOS products, including some drawn from the JCOMM (formerly IGOSS) EPB. An advisory board for the bulletin had already been established, chaired by Johannes Guddal. The meeting agreed that this bulletin would provide a very important window and tool for JCOMM as well as GOOS, and should be sufficiently robust to withstand changes in personnel and availability of different products. In view of its potential value, and of the involvement already of many people involved in JCOMM, the meeting agreed that the bulletin should be cosponsored by JCOMM, and encouraged the board to work quickly towards its implementation.

7.7 The meeting noted with interest the proposal from the International SeaKeepers Society for its yachts, equipped with appropriate observing and communications facilities, to become formally part of the global VOS programme and be recognized as contributing to global GOOS. It was informed that the society was already discussing with NOAA/USA on issues relating to instrumentation, quality control, calibration and communications. The meeting considered that these yachts were indeed of some potential value to an integrated global ocean observing system, for both meteorological and oceanographic variables. At the same time, the members of the International SeaKeepers Society could become valuable partners in the work to develop and expand the observing system to support many applications. It therefore agreed that, subject to an evaluation of the viability of the proposal from the point of view of both scientific and technical integrity in the international context, the proposal should be accepted, with the SeaKeepers yachts becoming a type of Yacht-of-Opportunity Programme within the wider SOOP/VOS. The meeting requested the Secretariats to pass details of the proposal to the Coastal GOOS Panel (C-GOOS) for scientific evaluation, and to the combined VOS group for technical evaluation. These evaluations should, if possible, be undertaken within six months, and in the meantime the Secretariats should inform the president of the society of the views and actions of JCOMM on the subject.

7.8 The meeting further noted with interest the plan by a number of major oceanographic institutions worldwide to establish a Partnership for Observation of the Global Ocean (POGO), which had as a primary aim to enhance cooperation and coordination among these institutions in support of long-term, sustained ocean monitoring. The meeting clearly recognized the potential importance and value of POGO to the future work of JCOMM, and stressed the need to develop a strategy for close cooperation between JCOMM and POGO in the context of operational ocean monitoring. It requested the interim co-presidents and the Secretariats to maintain close contact with POGO officials, with a view to preparing such a strategy.

8. CLOSURE

8.1 Based on the results of discussions under preceding agenda items, and in particular on the remaining unfinished tasks relating to structure, work programme and capacity building, the meeting

agreed on the need to establish an interim JCOMM Management Committee, to finalize these tasks and generally to oversee and manage the work of the Commission in the years leading up to JCOMM-I. It agreed that participants in the present meeting should constitute the membership of this committee, and that its terms of reference were:

- (i) finalize preparations for JCOMM-I, in particular relating to a draft structure, work plan (including initial integration steps), capacity building strategy, agenda for the session and related matters;
- (ii) provide oversight for the overall ongoing work programme of the commission, interact with existing implementation bodies, and propose and assist in steps to further integration of bodies and activities to the extent possible.

It was further agreed that it would be desirable for this group to meet at least once during this period, and requested the co-presidents and the Secretariats to plan and implement such a meeting, preferably no later than May 2000.

8.2 Participants then reviewed and approved the final report of the meeting.

8.3 In closing the meeting the interim co-president, Dieter Kohnke, offered his sincere thanks once again, on behalf of all participants, to the AARI, to Dr Ivan Frolov its Director, to Dr Sergey Priamikov and to all their co-workers, for the excellent facilities, support and hospitality which they had provided for the meeting, which had contributed substantially to its success. He also thanked all participants and the Secretariats for their contributions to what had been a significant and substantial step in the development of operational oceanography.

8.4 Speaking on behalf of all participants, Dr Vladimir Ryabinin thanked both the co-presidents for their very able conduct of the meeting, and wished them success during the remainder of their mandate.

8.5 The first Transition Planning Meeting for JCOMM closed at 1200 hours on Friday 23 July 1999.

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