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INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

First Session of the International Ocean Colour Co-ordination Group (IOCCG)
Toulouse, France, 22-23 March 1996

SUMMARY REPORT

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1. OPENING

The First Session of the International Ocean Colour Coordination Group (IOCCG) was opened at 9:00 am on Friday 22 March 1996 at the Hotel Capoul, Toulouse, France, by the interim Chairman, Dr Trevor Platt. The Chairman welcomed the participants to the meeting and emphasized that, as with the *Ad Hoc* Workshop on Ocean Colour Data Requirements and Utilization (Sidney, Canada, 21-22 September 1995), one purpose of this meeting was to develop the common voice of the user community. He indicated that it was through the Committee on Earth Observation Satellites (CEOS) that the initiative had come for a group of experts to be formed that would act as a liaison and communication channel between users, managers and agencies in the ocean colour arena. The principal goal of the meeting was to create such a group and define its charter and action plan. He noted that some draft terms of reference had been passed to the group but that they were very general and would need to be refined during the meeting.

Mr John Withrow welcomed the participants on behalf of Dr Gunnar Kullenberg, Executive Secretary of the Intergovernmental Oceanographic Commission (IOC). He noted the high interest of the Commission in promoting the widest possible use of space data and that meetings of experts such as this were seen as a valuable means of accomplishing that goal. The meeting would work to define how co-ordination could be accomplished in the context other efforts already underway.

Dr Jean Louis Counil welcomed the participants on behalf of Dr Alain Ratier of the CNES Earth Observation Directorate and emphasized the need for intercalibration and intervalidation among the various ocean colour sensors. This effort would benefit both scientists and administrators and look to optimize the quality of data by ensuring a clear understanding of what is being measured. He emphasized the importance of complementary sensors such as POLDER.

The Meeting noted that the election of a sitting Chairman would best take place at the end of the meeting and so modified the Agenda (Annex I).

The List of Participants in the meeting is attached as Annex II.

2. REVIEW OF TERMS OF REFERENCE

The Meeting commented on the draft terms of reference coming from the Sidney meeting and subsequently revised by the CEOS Plenary. It found the terms of reference very broad and suggested that they should be made more specific. The Meeting adopted the following terms of reference:

(i) To serve as a communication and coordination channel, at the international level, between and among the providers and users of satellite-ocean-colour data to maximize the benefits that accrue from international investments in ocean-colour science and technology.

(ii) To construct a partnership between the space agencies and the community of users of satellite-ocean-colour data, for development and coordination, at the international level, of the use of satellite-ocean-colour data, with respect to quality, accessibility, diversity of applications inside and outside science, training and expansion of the user community.

(iii) To work closely with the appropriate international bodies, including CEOS, IOC and SCOR; with international scientific programs such as IGBP and GOOS; and with satellite-ocean-colour mission offices and other agencies, such as environmental and fisheries agencies, to harmonize the international effort and thus advance ocean-colour science and its applications.

(iv) To develop the collective voice of the community of users of ocean-colour data and to articulate this voice to the appropriate international bodies, international scientific programs and space agencies, and to serve as an advocate for the value of ocean colour data to the global community.

(v) To promote the long-term continuity of satellite ocean-colour-data sets; the development of operational, ocean-colour-data services and new generations of ocean-colour sensors; and the integration of data from complementary ocean sensors.

In addition to the terms of reference, the Meeting considered that it was necessary to define specific goals on which action could be based and by which progress could be measured. The Meeting adopted the following goals:

(a) Foster Expertise in Using Data (Training)

Broaden the user community for ocean colour, particularly in developing and emerging countries, through training courses and workshops. Facilitate development of data systems in these areas to support and sustain the user communities. Promote international cooperation in research and application development through international symposia, provision of data and software for scientific research and scientific exchange programs. Develop training materials that provide the user with the tools and the capability to utilize real data, both in the course of instruction and after the completion of the course material.

(b) Provide the Voice of User Community

Develop consensus among users on key issues related to satellite-ocean-colour science and technology and communicate the collective view to those who design and operate satellite ocean colour sensors and who develop, distribute and archive ocean-colour-data products. Evaluate, on request, proposals from CEOS members for new sensors, new data products and new applications related to satellite-ocean-colour measurement.

(c) Advocate the Importance of Ocean Colour Data to Global Community

Develop appropriate information systems such as a newsletter, home page, and data access networks to show the importance of ocean colour data to the global community. Organize workshops and conferences targeted at potential users of the data (e.g. fisheries, coastal resource agencies). Promote demonstration projects that involve both providers and users of ocean-colour data.

(d) Optimize the Quality of Data for Calibration and Validation

Encourage the formation of an international calibration and validation network for ocean colour. Recommend that sea truth measurements conform to accepted international protocols such as the SeaWiFS optics protocols and the JGOFS biogeochemical protocols, and that sensor calibrations be traceable to national calibration standards. Encourage the development of an international protocol for satellite sensor characterization, quality assurance of data, exchange of validation data. Facilitate the formation of a distributed calibration and validation archive and database network.

(e) Advocate the collection of essential ocean & atmosphere data

Identify processes and phenomenon relevant to the application of ocean-colour data and publicize these through CEOS as well as other international fora, such as COSPAR, examining requirements for satellite data. Recommend data-collection strategies to fill existing gaps in time and space, of key variables.

(f) Facilitate merging of Data

Encourage agencies to agree on common formats for data exchange, common data products and algorithms. Facilitate provision of common tools to access data in different formats. Provide assessments of data quality and work to identify and eliminate errors and uncertainties of measurements. Recommend workshops to address issues relevant to data merging and integrated use.

(g) Facilitate Access to Data

Facilitate access to ocean-colour data and ancillary data (wind, ozone, etc). Encourage the provision by relevant agencies of *in situ* data where such data are required for the derivation of secondary products. Recommend that both satellite and *in situ* data transit the data system together and are accessible in common data-exchange formats from the same source.

3. STRUCTURE AND COMPOSITION

(i) Membership

Members of the IOCCG shall be experts, drawn from (or nominated by) the provider and ocean colour communities, selected to reflect a balance of provider and user representation, and geographical distribution.

(ii) Terms of Service

The steering committee shall consist of a chairman and about 20 members.

The term of service shall normally be three years, except where the members participation is governed by space agency nomination.

Extraordinary reappointment to a consecutive term, or a second term at a later date, shall be possible in special circumstances.

The Chairman shall be responsible for representing the IOCCG, and for designating alternate representation when direct representation is not possible.

Inactive members may be terminated by the Chairman, following advice and consent of the other members of the steering committee.

Terms of service shall commence on the first of April.

(iii) **Procedures**

The IOCCG will meet at appropriate intervals as necessary (normally twice a year) with a rotating venue.

It is the aim of the IOCCG to reach conclusions and recommendations by consensus

Within the context of his or her agency's/organization's policies and procedures, each IOCCG Member will endeavour to ensure appropriate coordination with, and to obtain necessary approvals for, the IOCCG plans and activities.

The proposals and recommendations of the IOCCG will be provided through the Chairman to relevant bodies.

The IOCCG may establish, as mutually agreed and on a ad-hoc basis, special working groups to investigate specific areas of interest, cooperation, and coordination, and to report at subsequent meetings.

At each meeting, the time, place and host for the next meeting will be confirmed and the host of the following meeting announced.

(iv) **Project Office**

A standing project office will be located at the IOC Headquarters in Paris or other location agreed upon by the Executive Secretary IOC and Chairman of the IOCCG. The initial location will be the IOC Headquarters in Paris. The minimum staffing requirement will be: (I) a professional with strong technical writing skills and background knowledge of ocean remote sensing; and (ii) a skilled secretary/administrative assistant. This combination of expertise is necessary to accomplish the IOCCG goals as described above.

The project office will report to the Chairman of the IOCCG. The project office will be responsible for supporting the activities of the IOCCG. It will provide information as necessary regarding the activities of the IOCCG and the ocean colour community. It will serve as a clearinghouse for ocean colour information and promote, as far as possible, the development of the user community for satellite-ocean-colour data.

The project office will be supported through contributions to the IOC trust fund for the IOCCG, mainly by agencies and organizations represented in the IOCCG.

4. NEAR-TERM WORK PLAN

(i) *Ensure that all ocean colour sensors receive maximum support during sensor reviews.*

- Solicit information on and take appropriate action regarding anticipated project reviews where IOCCG support would benefit ocean-colour sensor deployment;
- Stimulate affiliate support for ocean-colour-sensor requirements in the context of CEOS;
- Work to integrate MOS data more closely with other ocean-colour data. Work to broaden access to these data;
- Act as an advocate for ocean-colour sensors in program reviews at space agencies and in other fora dealing with setting priorities for deployment of space based sensors.

(ii) *Develop an approach and plan for continuous, long-term, time series of ocean-colour data, including intercalibration and intervalidation.*

- Implement actions coming out of the IOCCG Workshop on Ocean Colour Calibration and Validation (Toulouse, 25-25 March 1996);
- Facilitate complementary, well-defined, global, intercalibration/intervalidation programs;
- Hold a short informal IOCCG meeting following the calibration and validation workshop;
- Approach other global scientific programs for assistance in collecting required data sets.

(iii) *Expand the use of ocean colour data and products.*

- Develop a training plan for both scientific and operational applications
- Encourage the use of ocean-colour data through provision of higher-level products and exchange of *in situ* data;
- Facilitate the distribution of software tools for data access and processing, and for product preparation.

(iv) *Consolidate ocean colour requirements.*

- Liaise with IGBP and other international programs having an interest in ocean colour to consolidate ocean-colour requirements;
- Encourage the distribution of the highest quality data and products;
- Provide a point of contact for space agencies regarding ocean-colour requirements.

(v) *Promote the widest possible use of ocean colour data.*

- Hold a workshop to develop concrete ideas for data merging and integration;
- Facilitate the distribution of algorithms for the processing of ocean-colour data;
- Encourage the participation of developing countries in assembling global data sets.

(vi) *Provide for the widest possible dissemination of information regarding ocean-colour data.*

- Make available instructions for accessing data and publicize data distribution policies;
- Publish a list of meetings concerning ocean-colour data;
- Disseminate information via Internet, including the use of a list server, for IOCCG activities;
- Publish and distribute a Newsletter (printed and electronic).

5. ELECTION OF THE CHAIRMAN

The Meeting unanimously elected Dr Trevor Platt as Chairman. Dr Platt thanked the members of IOCCG for their support of his chairmanship and emphasized that it would be necessary for all participants to carry their enthusiasm beyond the meeting room if the activities outlined by the group were to be successful.

6. CLOSURE

Dr Tanaka informed the Meeting of the willingness of Japan to host the next session of the IOCCG in Tokyo in February/March 1997 in conjunction with the OCTS Science-Team Meetings. The Group expressed its thanks to Dr Tanaka for his generous offer in support of the IOCCG.

The Chairman thanked the participants for their work during the meeting. On behalf of the IOCCG, he congratulated Dr Counil and CNES for the excellent arrangements for the meeting.

The Meeting was closed at 12:30 pm on 23 March 1996.

ANNEX I

AGENDA

1. OPENING

The Meeting will commence at 0900, 22 March 1996, in Toulouse, France. The Meeting will review and approve the Agenda after making any necessary changes.

2. REVIEW OF TERMS OF REFERENCE

The Meeting will review and approve the draft terms of reference developed at the IOC *Ad Hoc* Workshop on Ocean Colour Data Utilization and Requirements (Sidney, 21-22 September 1995) and as modified by the ninth plenary of the Committee on Earth Observation Satellites (Montreal, 11-13 October 1995).

3. STRUCTURE AND COMPOSITION

The Meeting will review the list of participants and decide what other organizations should be invited to nominate representatives. The Meeting will review the structure of the Group and project office as set forth in the report of the *Ad Hoc* Workshop.

4. NEAR-TERM WORK PLAN

The Meeting will, using its terms of reference, develop and adopt a short term WORK PLAN of sufficient duration to insure the launch of the sensors foreseen for the immediate future. Since much of the immediate work will involve calibration and validation this discussion could serve as a basis for activities developed at the Ocean Colour Validation and Calibration Workshop being conducted the following week.

5. ELECTION OF THE CHAIRMAN

6. CLOSURE

The meeting will close at 1700 on 23 March 1996.

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