International Ocean-Colour Coordinating Group (IOCCG)

Background

- Established in 1996 (under the auspices of IOC, following a resolution endorsed by CEOS). Chairman Dr. Trevor Platt.

- Consists of a Committee of experts in the field of satellite ocean colour that acts as a liaison and communication channel between users and providers of ocean-colour data

- An Affiliated Program of SCOR (Scientific Committee on Oceanic Research)

- Project Office at Bedford Institute of Oceanography

Sponsors of the IOCCG

Activities of the IOCCG are sponsored by financial contributions from:

- **NASA (National Aeronautics and Space Administration)**
- **NASDA (National Space Development Agency of Japan)**
- **ESA (European Space Agency)**
- **JRC (Joint Research Centre, EC)**
- **IOC (Intergovernmental Oceanographic Commission)**
- **CNES (Centre National d'Etudes Spatiales, France)**
- **CSA (Canadian Space Agency)**

Aims of the IOCCG

- Develop a consensus among users on key issues related to satellite-ocean-colour science and technology
- Advocate the importance of ocean-colour data to the global community
- Optimize quality of data for calibration and validation
- Broaden the user community for ocean-colour data through advanced training courses
- Promote the long-term continuity of satellite ocean-colour data sets
- Facilitate merging and access to ocean-colour data

IOCCG Committee Members

- Twenty members drawn from Space Agencies and ocean-colour communities (Chair, Dr. Trevor Platt)

- Two types of committee members (scientific and agency representatives)

1999 Committee

Aiken, James	-	Plymouth Marine Laboratory, **UK**
Campbell, Janet	-	University of New Hampshire, **USA**
Dantzler, Lee	-	NOAA/NESDIS, **USA**
Frouin, Robert	-	Scripps, **USA**
Ishizaka, Joji	-	Nagasaki University, **Japan**
Kopelevich, Oleg	-	P.P. Shirshov Institute, **Russia**
Lifermann, Anne	-	CNES, **France**
Marra, John	-	NASA HQ, **USA**
Morel, André	-	Laboratoire de Physique, **France**
Navalgund, Rangnath	-	ndian Space Research Organization, **India**
Neumann, Andreas	-	DLR, **Germany**
Parslow, John	-	CSIRO, Tasmania, **Australia**
Platt, Trevor (Chairman)	-	BIO, **Canada**
Rast, Michael	-	ESA/ESTEC, **Netherlands**
Schlittenhardt, Peter	-	Joint Research Center, Ispra, **Italy**
Shillington, Frank	-	University of Cape Town, **South Africa**
Tanaka, Tasuku	-	EORC/NASDA, Tokyo, **Japan**
Ulloa, Osvaldo	-	Universidad de Concepción, **Chile**
Yoder, James	-	University of Rhode Island, **USA**
Yoo, Sinjae	-	KARI, **Korea**

Activities of the IOCCG

- Specialized working groups (scientific issues)
- Training courses in developing countries (broaden user community)
- Coordination with other scientific programmes and international bodies
- Advocacy

IOCCG Working Groups

Small, international scientific working groups commissioned by the IOCCG to investigate key issues in ocean-colour science and to produce a report.

- Minimum band set for ocean-colour sensors (Report No. 1)
- Status and plans for ocean-colour missions (Report No. 2)
- Remote sensing in Case 2 waters (Report No. 3 – in prep.)
- Calibration of sensors to a common standard
- Standard chlorophyll validation data set
- International Ocean Colour Cruise
- Merged long-term, global, chlorophyll data set

IOCCG Training Courses

- Remote Sensing of the Ocean - Chile, November, 1997
- Biogeochemistry of the Arabian Sea - India, January, 1999
- Applications of Marine Remote Sensing – Thailand, November, 1999

(1) Intensive Course on Remote Sensing of the Ocean: Applications for Ocean Colour, Temperature, Wind Stress and Altimetry

Location:

Olmué, Chile, 10 – 22 November, 1997

Sponsors:

IAI, IOCCG, NASDA

Background:

- 36 participants from 15 nations (primarily from Latin America)
- IOCCG sponsored 6 participants from outside Latin America

Course outline:

- radiative transfer in the ocean
- bio-optical properties of the ocean
- estimation of primary production from ocean-colour data
- altimetry, scatterometry and sea-surface temperature
- demonstrations and hands-on exercises: AVHRR, SeaWiFS, OCTS

Invited Lecturers:

D. Halpern, H. Kawamura (IOCCG), V. Lutz, T. Platt (IOCCG), S. Sathyendranath, T. Strub

Conclusion:

- The course stimulated and coordinated marine remote-sensing capability within Latin America.
- Several new research proposals were developed by participants

(2) Biogeochemistry of the Arabian Sea: Synthesis and Modelling

Location:

Bangalore, India, 18 – 30 January, 1999

Sponsors:

JGOFS, C-MMACS, IOC, IOCCG, SCOR, START

Background:

- A three-day JGOFS symposium followed by a 10 day training course
- 40 students from 20 different industrialized and developing countries

Course outline:

- biological processes in the ocean
- modelling the oceanic mixed layer
- modelling bio-geochemical processes in the ocean
- use of satellite data to model oceanic primary productivity
- bio-optical models and ocean-colour remote sensing

Invited lecturers:

K, Banse, K. Denman, G. Evans, V. Garçon, A. Oschlies,
T. Platt (IOCCG), D. Ruiz-Pino, S. Sathyendranath, A. Vezina

Conclusion:

- New research collaborations and new projects developed during course
- Students indicated that it was the first time they had received such a comprehensive training on several aspects of physics, biology and chemistry of the oceans.

(3) Applications of Marine Remote Sensing

Location:

Bangkok, Thailand, 1 – 12 November, 1999

Sponsors:

NASDA (principal sponsor), JRC, IOCCG

Background:

- Selected 30 students from the SE Asia region
- Over 90 applications from 30 different countries received!

Course outline:

- radiative transfer and ocean colour
- case 1/ case 2 water optics and algorithms
- multi-sensor integration methods
- remote sensing for fisheries
- coastal dynamics and sediments/river outflow
- remote detection of harmful algal blooms

Invited lecturers (not finalized):

J. Campbell, (IOCCG), N. Hoepffner, J. Ishizaka (IOCCG), H. Kawamura, S. Matsumura, T. Platt (IOCCG), I. Robinson, S. Sathyendranath, P. Schlittenhardt (IOCCG), T. Tanaka (IOCCG), T. Yanagi

Comments:

- Considering the large number of applications received, there is definitely a need and an interest for this type of training course.
- IOCCG is playing a useful role and responding to real needs in the marine remote-sensing community

Coordination with other international bodies or programmes

- IOCCG supports the CEOS initiative for an IGOS (Ocean Biology Project/Oceans Theme)
- Coordination with the IOC/GOOS regarding remote sensing requirements for global observations
- Coordination with SIMBIOS: calibration of ocean colour sensors etc.