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## 9th Strategic Implementation Team Meeting

*Dr. Jean-Louis Fellous, CNES (France), Chair, SIT*

The 9th SIT Meeting was held in Paris, 31st May 2001, at CNES Headquarters, and was attended by 35 participants representing 9 SIT Members (Space Agencies), and 8 Institutions involved in the development of the IGOS themes. The main purpose of the meeting dealt with the space component of the Themes more generally with the CEOS contribution to IGOS activities. A progress report of the CEOS Review Team was also presented to SIT.



SIT-9 Participants in Paris

### IGOS Themes

The "Themes" development undoubtedly reached a new stage of its learning process with, for the first time, the full range of steps in the Themes elaboration from concepts to implementation. The growing expectations in terms of Themes so as to fulfill the needs expressed, particularly in the framework of international conventions, reinforced the IGOS philosophy and, as far as CEOS is concerned, the necessity of integrating the space component with the other components.

#### • Ocean Theme

The Ocean Theme, a key element in the learning process, was approved for implementation in June 2000 and placed under the leadership of GOOS. A progress report was presented by Dr. Eric Lindström (NASA) on behalf of Mr. Colin Summerhayes (GOOS) with a specific emphasis on the space component. The rapid response of CEOS member agencies to the challenges put forward in the Ocean Theme Report illustrated the strength of the "CEOS best effort policy". As such were identified the efforts made by NASA and NASDA to warrant a follow-on to Sea-Winds, those made by NASA and ESA/CNES for future salinity missions and those implying EUMETSAT, CNES, NASA and NOAA to provide the TOPEX/POSEIDON-JASON operational continuity.

It was recognised that "time should be given to time" and that updates of the Ocean Theme Report should be made

at suitable intervals (e.g. 3 years), while the achievements in implementation should be made widely known on an annual basis.

#### • Integrated Global Carbon Observation (IGCO)

The terrestrial component initiated as an independent item was presented by Dr. John Townshend (University of Maryland) who showed the efforts made to integrate it in IGCO. As far as the space element is concerned SIT expressed the need for a more focussed set of requirements (accuracy, resolution, ...). SIT also agreed to provide space agencies responses within 12 months after approval of the report by IGOS partners.

SIT welcomed the considerable efforts, led by IOC, which have been made to generate an Ocean Carbon report to be integrated in IGCO.

SIT endorsed the IGCO Theme proposal presented by Dr. Will Steffen (IGBP), recommended its adoption by the IGOS partners and expressed its high appreciation for the work accomplished under the IGBP leadership. SIT noted in particular that new remote sensing equipments are being developed allowing for atmospheric CO<sub>2</sub> concentration measurements with the needed accuracy (few ppm).

SIT welcomed the involvement of IHDP in the proposed Theme.

#### • New Themes

SIT was presented and approved a proposal for an integrated Global Atmospheric Chemistry Observation Theme (IGACO) led by WMO.

Important efforts have made towards establishing objectives and priorities for an Integrated Global Water Cycle Observations (IGWCO) theme. SIT emphasized the need to interface this new theme with others (e.g. Ocean, Carbon). SIT agreed to ensure that space agencies respond to the requirements expressed by the related CEOP project in an appropriate and timely manner.

The interest raised by the idea of a Geo Hazards Theme was noted. The promoters of the idea were encouraged to pursue their thinking and effort in view of developing a theme proposal in the future.

#### CEOS Review

The progress report of the review team was presented by Dr. Yoji Furuhashi (CEOS Chair) and widely appreciated by the participants.





## IGOS Partners 7th Session, June 1, 2001

**Dr. Patricio Bernal**  
IOC/UNESCO (France)  
Former IGOS-P Chair

The Seventh Session of the IGOS Partners, held on the 1st of June, 2001 at UNESCO-IOC Headquarters in Paris, marked the beginning of a period of reflection about the further development of the IGOS concept through proposals for restructuring and management of the Partnership and the further development of the strategic process of themes.

This reassessment of the IGOS process and goals coincides with similar assessments being carried out by the Sponsors of the Global Observing Systems and CEOS. This Session adopted two new IGOS themes and set a number of action items to improve information flow, visibility, and outreach. The full report of the meeting will be available soon on the Partners Web-site at <http://www.igospartners.org>. This article presents the major highlights.

### Further Development of the IGOS Concept

A proposal by the IOC for the restructuring of the management of the Partnership proposed to hold meetings at one year intervals and to establish a joint chairmanship of the Partnership between CEOS and the in situ community. In addition, the proposal outlines the need for a permanent staff person to organize and manage the intersessional activities of the Partnership.

A paper by the WMO pointed out that while IGOS has grown in number and enthusiasm, there are many issues about the IGOS P process that need to be clarified, such as the lack of parallelism in the scope of activities of the existing Partners, and the role of IGOS P in developing and managing integrated global observations programmes. It is WMO's contention that the attempt to be all-inclusive in the Partnership has led to some inconsistencies. It concludes by proposing that after a more clear restatement of its goals and principles, the membership could be reviewed to reflect three categories of partners. The first category could be the sponsoring international organizations of the component observing systems, viz. UNESCO-IOC, WMO, FAO, UNEP and ICSU, as well as IGFA and CEOS. The second category could be the observing systems for the atmosphere, ocean and land, including the hydrosphere, biosphere and cryosphere, viz. WMO World Weather Watch/GOS (and WMO Global Atmosphere Watch), GOOS and GTOS. The third category could be the major international cross-domain scientific programmes (GCOS, WCRP and IGBP).

The Sponsors of the Global Observing Systems reported to the Partners that the Terms of Reference are being revised to make the sponsors group more inclusive of other global observing systems, in particular the WMO's Global



Past and Present IGOS-P Chairs at the 7th IGOS-P

Atmosphere Watch and the World Weather Watch. The new TORs will also outline the relationship with the IGOS Partnership.

These proposals represent a consolidation of the level of integration embodied in IGOS and present many new and important concepts to improve the work of the partnership. The Partners decided that these proposals required the study by the Partners and their organizations. It was thus agreed to re-examine them at the next session. The full texts of the proposals can be found in the meeting documents section of the IGOS Partners Web-site at: <http://www.igospartners.org>.

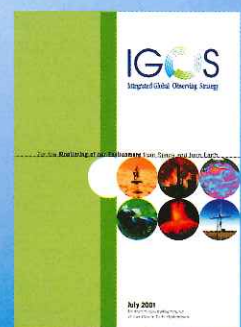
### Theme Development

The progress report on the Ocean Theme highlighted the need to better define the implementation stage for approved themes and for the theme process. The Partners confirmed that IGOS-P forum is not an implementation mechanism in itself. The value of the IGOS-P is to provide a common planning process, oriented to aid in decision making by independent agencies and organizations, and that the themes are to be considered consensual blueprints for action.

Two new themes were adopted at this session: The Integrated Global Carbon Observation Theme (led by IGBP), and the Integrated Global Atmospheric Chemistry Observations theme (led by WMO). Several new proposals were presented at the meeting and the Partners encouraged their further development. These include a Global Water Cycle Theme, a Geo-Hazards theme, and a Coral Reef theme. The full texts of these reports and proposals can be found on the Web-site.

### IGOS Brochure

"As a contribution to the work of the IGOS Partnership, the National Space Development Agency of Japan (NASDA), working with the CEOS and IGOS Secretariats, produced a new IGOS Brochure in July 2001. Please see the following web site at:



[http://nasda.ceos.org/igos\\_brochure.pdf](http://nasda.ceos.org/igos_brochure.pdf)



## Working Group on Calibration and Validation

**Mr. Yves-Louis Desnos**  
 European Space Agency, ESRIN (Italy)  
 Chair, WGCV

The 18th meeting of the CEOS Working Group on Calibration and Validation was hosted by the European Space Agency at their ESRIN establishment in Frascati, Italy from 5 – 7 June 2001. Dr Stephen Briggs, Head of the Earth Observation Department within ESA's new Directorate for Earth and Environment Monitoring from Space, welcomed the participants. He stressed the importance of the Working Groups within CEOS and outlined the preparations underway for the hand-over of the CEOS Chair to ESA in November 2001.



The WGCV plenary provided an opportunity to present the CEOS structure and its various activities, and to recall the WGCV objectives and procedures. The objectives of the WGCV are to enhance technical co-ordination, to promote international

co-operation and to focus Earth Observation calibration and validation activities for the benefit of CEOS Members and the international user community. The achievements were introduced with the presentation of the new WGCV secretariat, installed for three years and lead by Dr Marie-Claire Robinson from RSAC, UK. The new and recently launched WGCV website was presented (<http://www.wgcvceos.org>) and the WGCV's outreach activities introduced. Bookmarks have already been produced, a brochure is in preparation and the WGCV newsletter will continue.

A special WGCV / ISPRS session on Geometric and Radiometric Standards was chaired by Prof. Ian Dowman, ISPRS representative. A joint WGCV / ISPRS taskforce profile was defined to tackle issues relating to geometric and radiometric standards, and preparations for the first meeting of this taskforce, in September 2001, were begun.

A special session on ESA's approach to calibration and validation was lead by Evert Attema. Detailed presentations outlined the global activities planned for the calibration and validation campaigns for ESA's ENVISAT mission. The session included an interesting tour of ESRIN's data processing and handling facility.

The comments received from ISPRS on the CEOS WGCV three-year work plan were discussed, their disposition addressed and the work plan will be amended accordingly. The plan will be implemented via plenary meetings and through the technical work of the subgroups.

The subgroup on Land Product Validation, chaired by Dr. Jeffrey Privette of NASA, met in conjunction with WGCV-18 at ESA-ESRIN from 7 – 8 June 2001 for an LAI intercomparison workshop. This workshop brought together the community involved in LAI field campaigns with the aim of evaluating LAI products from satellites. LAI data collection and analysis procedures and protocols were discussed and defined.

The GOFC Fire Workshop on Satellite Product Validation was held jointly with the CEOS WGCV Land Product Validation subgroup at the Gulbenkian Foundation, Lisbon, Portugal, from 9 – 11 July 2001. Presentations on recent satellite fire product validation activities were given and breakout groups explored opportunities for international collaboration and the development of protocols.

The SAR subgroup workshop was jointly organised by NASDA and ESA, and hosted by NASDA-EORC in Tokyo, Japan from 2 – 5 April 2001. During this well attended and fruitful meeting, Dr Masanobu Shimada of NASDA-EORC formally took over the subgroup chair. The CEOS chair, Dr Furuhashi from NASDA, addressed the participants, whose numbers averaged 60 per day. A total of 66 presentations and 17 posters spanned 7 sessions. Each session was supported by a round table where prepared seed questions were discussed. A CD-ROM containing the proceedings of the workshop is currently being prepared and this will be distributed in September 2001.

The Terrain Mapping subgroup chair has been handed over to Prof. Jan-Peter Muller from UCL. The latest meeting of the group was held on July 10, 2001 in Banff, Canada.

The Microwave subgroup is now chaired by Dr Manuel Martin-Neira from ESA-ESTEC. Preparations are underway to hold a meeting in conjunction with the specialist Microwave Remote Sensing conference due to be held in Boulder, Colorado, USA, in November 2001.

Under the auspices of the Infrared and Visible Observing Sensors subgroup, Dr Ian Barton of CSIRO reported on the very successful Second International Infrared Radiometer Calibration and Intercomparison. This campaign was supported by CSIRO, ESA, EUMETSAT and NOAA and was hosted by the University of Miami, USA, from 27 May – 1 June 2001. A report of the initial results of the campaign will be prepared for the next CEOS Plenary.





## The Working Group on Information Systems and Services

**Mr. Peter N. Churchill**  
*European Commission (Italy)*  
*Chair, WGISS*

The CEOS Working Group on Information Systems and Services (WGISS) held its twelfth meeting as a joint WGISS/Sub-group meeting at the EROS Data Center in Sioux Falls, South Dakota from 7-11 May 2001, kindly hosted by the United States Geological Survey (USGS).

Mr. Don Lauer, Chief of Eros Data Center at the USGS, formally opened the 12th meeting of the CEOS Working Group on Information Systems and Services, and the second only joint meeting in conjunction with the CEOS WGISS Sub-groups. The focus for this meeting was 'What has WGISS learned about the WGISS Test Environment', so a joint meeting was organised to provide an optimum means of exchanging ideas related to the WGISS Test Environment (WTE) and subsequent WGISS Test Facility (WTF) focusing on GOFC.

Bringing together WGISS Plenary members with the technical representatives who attend WGISS Sub-group meetings was a means of combining experience and know-how to allow not only a clearer definition of what the Test Facility is capable of, but also identify the most apt means of providing support to GOFC. The overall consensus of this joint meeting was very positive. USGS and the Eros Data Center were excellent hosts and provided a number of conference and meeting rooms, whereby joint meetings could be held for discussing problems and solutions, and the separate WGISS sub-groups were able to split up and concentrate on their own specialist meetings, to discuss Data, Network and Access issues.

The WGISS meeting also made a decision to recommend the new WGISS Vice Chair. The vacancy was announced at CEOS Plenary 13 and WGISS 11 – thereafter candidates were received and reviewed by the current WGISS Chair and Vice-Chair – on the basis of their capacity and support by their agency. A unanimous decision was made to recommend candidate Mr. John Faunden of USGS strongly

as Vice Chair starting at Kyoto Plenary 2001.

Prior to focussing on the core issue of the WTF and its demonstration at CEOS Plenary in Kyoto, WGISS examined its relationship with other information systems and services (ISS) organisations (such as Open GIS Consortium or OGC), Standards Organisations and other CEOS Working Groups. WGISS has established links with each, and are identifying means by which they could be strengthened.

The WTE offers a framework under which WGISS will work in partnership with selected international science and EO projects, to test and develop information systems and services to meet their requirements. Specific Test Facilities will be set up to address the needs of individual projects.

By making available Test Facilities for this purpose, WGISS ISS products will be demonstrated and improved to take account of user requirements.

The focus on the WTE introduced by the WGISS Chair, highlighted two issues:

1. The WGISS Test Environment: What decisions does WGISS need to identify and take in order to build on and proceed with the WTE.
2. The CEOS Plenary demonstration: WGISS needs to decide how to proceed with the Kyoto Plenary demonstration.

The first WGISS Test Facility has been established in partnership with the Global Observation of Forest Cover (GOFC) project / Terrestrial Carbon IGOS Theme. This has been well received by the scientific community, and has derived good support from various CEOS organisations. A considerable amount of very hard work has gone into developing the GOFC Test Facility working towards the major milestone of a demonstration at CEOS Plenary.

For more information, contact CEOS WGISS Chair, Peter N. Churchill ([peter.churchill@jrc.it](mailto:peter.churchill@jrc.it)), European Commission, Directorate General Joint Research Centre, Space Applications Institute, I-20120 Ispra (VA), Italy.






## Ad Hoc Working Group on EO Education and Training (Early Thoughts for Defining a CEOS EO Education and Training Strategy)


**Mr. Mukund Rao**  
ISRO (India)  
Chair, WGEdu

The Ad Hoc CEOS Working Group on EO Education and Training is preparing a multi-pronged strategy for CEOS to consider during the 15th CEOS Plenary meeting to be held in Kyoto. A WGEdu team consisting of NASA, ISRO, CCRS, NASDA, UN-OOSA and ISPRS with contributions and inputs from all WGEdu Members is drafting the Strategy. What are described below are the early thoughts for a possible CEOS Strategy on EO Education and Training and we hope to get comments and suggestions on the framework so as to focus in the Plenary report.



The goal of the CEOS Education and Training Working Group is to enable CEOS to promote and facilitate activities that substantially overarch and enhances international cooperation in education and training. This would, hopefully, maximize benefits of the use of Earth Observing satellite data and information in the sustainable management of natural and managed resources, global change research, weather and ocean state databases, ocean colour applications, and in basic and applied research that fosters new knowledge. The improvement of data availability and access, the transfer of satellite data processing and data interpretation methodology, the integration of satellite derived data with other geo-spatial data streams, and improving the training infrastructure necessary to support operational and strategic decision-making are key outcomes envisaged by the WGEdu. WGEdu would also strive to further the goals of the IGOS Partnership - especially in spreading the message of IGOS, the IGOS themes, preparing developing countries to participate in IGOS and enabling them to benefit from EO applications and technology.

The strategy could be grouped into near term, medium term and long-term activities.



The near term strategic approach could take maximum advantage of existing national, regional, and international facilities, programs and projects. WGEdu could act as a coordinating and facilitating body to assess the state of existing EO education and training programs, identify deficiencies, recommend priorities for remedial actions, and provide experts and expertise, as appropriate, for assistance in the implementation of training and education projects. WGEdu could build or provide an over-arching framework for distribution of available EO materials with CEOS agencies to the regional UN Centers and other institutions. CEOS agencies could commit materials/resources and experts for such an overarching "resource base" for the purpose of EO Education and Training. WGEdu would liaise with IGOS-P and work for specific training and awareness programmes on IGOS.

A major element of the near term strategy could be to maximize outreach of EO technology and applications. WGEdu has identified an Internet based training module on EO and GIS as a step towards this. CEOS WGEdu, in collaboration with ISPRS TC VI and sponsorship from ISRO, is developing a 1-month Internet based EO and GIS education programme with the main focus "learn while you can" and adopting distance learning concepts. Many CEOS and other EO education/training agencies have materials/case-studies and networks and thus would be requested to contribute to the development of this education/training programme. When developed, this would be available for access and accreditation from ISPRS and CEOS would be canvassed.

The medium term strategic approach could be to identify and coordinate a limited, well focused, set of pilot or demonstration training projects - on EO application, IGOS, EO technology and so on - through the UN Centres, EO Education and Training institutions and with support of CEOS agencies, IGOS-P agencies, UN agencies and others. Initial emphasis could be on the transfer of expertise and technology to the regional UN Centres and other institutions with the understanding that this knowledge could consequently be diffused to national agencies through the training of participating national personnel. Emphasis could also be on expanding the scope of the Internet based Training and Education Module and establishing a virtual network of a web-programme - leading to award of professional accreditation.

The long-term strategy could be to review the project progress and identify deficiencies (if any), with the objective of promoting, facilitating and coordinating the implementation of program enhancements as technology and methodology improves, and priority regional environmental issues change.

Members of WGEdu are also coordinating on other actions - CCRS/ISRO are coordinating for preparing an inventory of available EO materials with CEOS agencies for distribution and NASDA is hosting a website of WGEdu activities and will post inventories and pointers to EO Education materials on the web.

In doing all these, CEOS WGEdu hopes to link and bridge CEOS agencies with the regional UN Centres and also various other institutions - AIT, ISU, ITC, EURISY, GDTA etc. WGEdu would also link with WGISS, WGCV, DMSG,





## Disaster Management Support Group Carries out Charge from November 2000 CEOS Plenary

**Ms. Helen Wood**, NOAA (USA), Chair, DMSG

**Mr. Richard Ohlemacher**, NOAA (USA), DMSG Secretariat

The Disaster Management Support Group (DMSG) of the Committee on Earth Observation Satellites (CEOS) met twice following the CEOS Plenary in November 2000. The first DMSG meeting was held in January 2001 to map out a work-plan for the year and was hosted by the French space agency — Centre National d'Etudes Spatiales (CNES).

Leaders of the Hazard Teams, lead representatives of space agencies, and a few representatives of commercial remote sensing firms attended this meeting. The second meeting in June, hosted by the European Commission (Research) was the major meeting for the DMSG of the year; and was attended by the DMSG Hazard Teams, actual users (specifically, civil protection authorities) and other experts from around the world. It was conducted as a workshop to implement the direction from CEOS Plenary to shift the primary focus of the DMSG from investigation and demonstration of technical coordination of civil satellite systems in support of disaster management, to specifically support the International Charter on Space and Major Disasters. In addition, the Plenary had tasked the DMSG to give full support to the work of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) in pursuit of decisions taken at UNISPACE III.

### The Charter and DMSG

The DMSG achieved significant progress in offering valuable input to disaster scenario development — intended to serve as guidelines for identifying appropriate satellite data and products to support emergencies. The aim of this aspect of the workshop was also targeted to assist the Parties to the International Charter with scenario definition. The intent of the scenarios is to describe in advance, the satellite data and products that would be useful under specific disaster circumstances. This is meant to offer a standard procedure to use when the emergency on-call officer and project manager make requests for data and services for a specific disaster. Taken together, the scenarios would comprise a handbook of what to do when each type of disaster occurs. The DMSG has spent much time over the past three years bringing experts together from eight different hazard areas to identify the user needs, as well as the respective satellite capabilities to meet these needs. This exercise served to enhance the results of this work. The underlying idea is that the experience of actually preparing for and working through a real event will force agencies to address problems that would otherwise remain simply conceptual. The European Space Agency (ESA) provided draft Scenario Guidelines for the workshop participants to work from as

they developed scenarios for each of their hazard areas.

While the Charter addresses the provision of data only during the crisis/response phase of a disaster, the DMSG mandate is to address all phases of disaster (mitigation, preparedness/warning, and relief/response/recovery). The workshop proceeded to focus on assistance during the response phase as a practical application.

The June workshop also covered other key topics:

- Detailed brief of progress on the International Charter
- Description of the European Global Monitoring for Environment and Security (GMES)
- Involvement of the CEOS WGISS, chaired by Mr. Peter Churchill, European Commission Joint Research Centre, who also chairs the GMES Working Group on Environmental Stress;
- Involvement of the U.N. Office of Outer Space Affairs
- Involvement of the U.N. International Strategy for Disaster Reduction
- Briefing on the British small satellite constellation for disaster support.

The Chair of the interim group that is pulling together the Integrated Global Observing Strategy (IGOS) Geohazards Theme proposal, Professor J.L. Van Genderen of the International Institute for Aerospace Survey & Earth Sciences (ITC) Netherlands, attended the DMSG meeting and presented progress to date. He noted that prospects are good for an IGOS Geohazards Team, which would play a key role in carrying forward some of the work initiated within DMSG. The DMSG is very encouraged by the efforts to explore the creation of an IGOS Geohazards theme team. Several of the DMSG hazards teams (earthquake, landslide, and solid Earth dimensions of volcanoes) are joining the effort to develop a theme proposal.



June DMSG Workshop in Brussels



## DMSG Background

DMSG supports natural and technological disaster management on a worldwide basis by fostering improved utilization of existing and planned Earth Observation (EO) satellite data.

The Disaster Management Support Group began in February 1997 as one of six pilot projects undertaken by the CEOS to demonstrate the concept of an IGOS. It recognized that taking an integrated view of disaster management user requirements for Earth observation data, even if confined to space-based data, would be a notable challenge. CEOS considered this IGOS project to be a high priority due to its direct relevance to life and property, the magnitude of potential benefits to humanity and the environment, and the opportunity to increase and improve the application of space-based data to this field. After its first three years as a pilot project, the Disaster Management Support Project was given a new mandate when the CEOS Plenary in November 1999 established the ad hoc Working Group on Disaster Management Support (DMSG).

The group's objective is to support natural and technological disaster management on a worldwide basis by fostering improved utilization of data from existing and planned EO satellites. With over 300 participants from more than 140 organizations, the DMSG has found strong support among CEOS space agencies and IGOS Partners, as well as an enthusiastic reception from numerous international, regional, and national emergency managers, and distinct interest from the commercial sector.

For further information please see the web-site at [disaster.ceos.org](http://disaster.ceos.org); or please contact:

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## Working Group on Calibration and Validation

The 18th meeting of the WGCV consolidated views on ways the group can benefit from cooperation with the WGISS working group. Joint activities were proposed, including a web-based approach to the integration of satellite-derived data and products over core land validation test sites.

Noting the recommendations of the WMO/CEOS report number 140 on Strategy for Integrating Satellite and Ground-based Observations of Ozone, the WGCV recommended the formation of a subgroup on Atmospheric Chemistry. At the WGCV-18, terms of reference for such subgroup were defined and this recommendation will be put forward to CEOS plenary.

The 19th WGCV plenary meeting will be hosted by CCRS/CSA in Canada in the March – April 2002 time frame. Offers have also been received to host WGCV-20 and WGCV-21.

Thanks to international co-operation and co-ordination, the CEOS Working Group on Calibration and Validation will continue to focus on means to ensure long-term confidence in the accuracy and quality of Earth Observation derived data and products.

For more information, see the WGCV web site at <http://www.wgcvceos.org> or contact the WGCV Chair, Yves-Louis Desnos (email: [Yves-Louis.Desnos@esa.int](mailto:Yves-Louis.Desnos@esa.int)).

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## CEOS Working Group on EO Education and Training

SIT to focus on specific issues of the information services, calibration/validation, DMS support and strategy planning for EO applications. WGEdu would also work with IGOS-P agencies, inter-governmental bodies and programmes and the UN system in furthering the goals of capacity-building and enabling transfer of knowledge.

An International workshop on EO education and training; Curricula review for regional UN Centers and Joint ISPRS and WGEdu meetings will take place during September 3-7, 2001 at ESRIN, Frascati, Italy under the auspices of UN-OOSA and hosted by ESA. The Strategy direction would be discussed in this broader forum. It is also hoped that we would get comments and suggestions from readers of this article on the direction for CEOS to take in support of EO Education and Training. WGEdu would integrate all these materials and draft a Strategy for consideration by CEOS Plenary.



## From the CEOS Chair

**Mr. Tomiji Sugawa**  
MEXT  
CEOS Co-Chair



**Dr. Yoji Furuhashi**  
NASDA  
CEOS Co-Chair



More than half of the year 2001 has quickly passed by, and we are now speeding our preparations for the 15th CEOS Plenary meeting to be held in Kyoto, 6th – 7th November 2001. Thanks to a considerable team effort by all of our colleagues who are active in supporting CEOS activities, I am convinced that 2001 can be remembered as a year of considerable progress in our activities and organisation.

In the previous Newsletter, MEXT/NASDA presented our first priority in 2001 as the pursuit of the primary CEOS objective of international program harmonisation - through our contribution to IGOS. We identified the specific objectives of:

- (1) Reinforcing the structure and technical progress of the IGOS Themes, especially Oceans and Carbon Observations;
- (2) Increasing the visibility of IGOS;
- (3) Encouraging and supporting the CEOS Working Group activities.

The IGOS Themes are evolving rapidly, with the Ocean Theme in its implementation phase and the Carbon Theme developing into an Integrated Global Carbon Observation Theme. A new Theme, the Integrated Global Atmospheric Chemistry Observations (IGACO) Theme was adopted at the last IGOS Partners meeting in June. We would like to support the progress of these Theme activities by establishing close contact between each Theme Team and CEOS members - seeking active commitment and contribution by space agencies, in particular through the Strategic Implementation Team.

Significant progress has been achieved on the issue of 'IGOS Visibility', including inputs to the UN Commission on Sustainable

Development, the UN Framework Convention on Climate Change Conference of the Parties (COP) and the Intergovernmental Panel for Climate Change (IPCC). To further promote this initiative, an 'Open Session' is planned to be held in conjunction with the Kyoto Plenary meetings in November, where highlights of the CEOS and IGOS-P activities will be presented to an audience including observers from the Conventions and Governments. Last but not least, the CEOS WGs have been working hard to bring their results forward to the Kyoto Plenary. The WGISS test facility will be demonstrated in Kyoto, bringing their accomplishments to the CEOS Plenary and IGOS Partners. The WGs for Cal/Val, Disaster, and Education will also report on their progress and it is expected that specific recommendations will be adopted for their future way ahead.

The CEOS Review Team has been taking a major step to review the results of CEOS efforts, especially relating to participation in IGOS Partnership over the past years. I am hopeful that we can establish clear recommendations for the future development and success of CEOS.

Japan is in the midst of an unusually hot summer now, but we typically expect to have the most pleasant weather of the year at the time of the November Plenary in Kyoto. As the host, it is the hope of MEXT/NASDA, to provide you with a successful and productive series of meetings in Kyoto, which will reinforce the potential benefits of CEOS to all member agencies and which will encourage your future active participation.

Contributions for future issues of the CEOS Newsletter from the CEOS Members and Associates, and subscriptions to the CEOS Newsletter, please contact CEOS Japan Secretariat : ceos-jpn@nasda.go.jp, or misawa@restec.or.jp [http://nasda.ceos.org/ceosnews\\_menu\\_e.html](http://nasda.ceos.org/ceosnews_menu_e.html)

## Meeting Calendar

As of August 2001

Activities	2001											
	April	May	June	July	August	September	October	November	December	January	February	March
<b>CEOS Plenary</b>								▲ 6-7 15th Plenary MEXT/NASDA, Kyoto				
<b>CEOS WGISS</b> (Working Group on Information Systems & Services) Subgroups/Task Team		▲ 7-11 WGISS-12/SubG USGS				▲ 25-28 WGISS-13, NASDA, Tokyo ▲ 4-7 SGs, EUMETSAT/Darmstadt					▲ WGISS-14 CNES	
<b>CEOS WGCV</b> (Working Group on Calibration and Validation) Subgroups	▲ 2-5 SAR SG Workshop NASDA, Tokyo	5/27-6/1 WOS Miami	▲ 5-7 WGCV-18 ESA/ESRIN Frascati, Italy	▲ 9-11 LPV, Lisbon ▲ 10 TM SG, Banff, Canada			▲ WGCV / ISPRS	▲ Microwave RS conf. Boulder, Colorado				▲ WGCV-19 CCRS/CSA, Canada
<b>CEOS DMSG</b> (Ad Hoc Working Group on Disaster Management Support)			25-27 ▲ Workshop EC/Brussels									
<b>CEOS WGEdu</b> (Ad Hoc Working Group on EO Education and Training)						▲ 3-7 Workshop #2 UN-OOSA/ESA, ESRIN, Frascati						
<b>IGOS/SIT</b> (Strategic Implementation Team) Themes:		31 ▲ SIT-9 CNES, Paris	▲ 12-14 GOF C S/C ESA/ESRIN	23-24 ▲ IGOS Geo Hazard ad-hoc WG ICSU/UNESCO, Paris		20-21 ▲ IGCO Workshop CNES, Paris						
<b>IGOS Partners</b>			▲ 1 IGOS-P7 IOC, Paris					▲ 6 IGOS-P8 MEXT/NASDA, Kyoto				
<b>Others</b>	▲ 16-27 CSD9 New York		16-27 ▲ COP6 bis Bonn	▲ 10-13 Open Science Conf. IGBP, Amsterdam	▲ 20-22 APAN Malaysia	24-29 ▲ IPCC London	▲ 1-5 IAF Toulouse	▲ 10/29-11/9 UN FCCC COP7 Marrakech Morocco	▲ 27-29 RPAP Cambodia		▲ 28-2/8 CSD10 PrepCom II New York	18-29 ▲ PrepCom III New York

▲ : determined ▲ : to be determined  
(Date, Host organization/Location)

CEOS-related meetings are open only to designated participants.

For further information contact in each area allocated:

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