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Results of the 17th CEOS Plenary in Colorado Springs

Mr. Gregory W. Withee, NOAA (USA), CEOS Chair 2003

NOAA Assistant Administrator Gregory W. Withee chaired the 17th Plenary Meeting of the Committee on Earth Observation Satellites, November 19-20, in Colorado Springs, Colorado, USA. Over 100 participants represented 19 CEOS Member space agencies as well as 17 Associates. The Plenary was preceded by a CEOS Special Event on November 18 that highlighted areas of CEOS emphasis this past year on satellite data utilization (as presented by the CEOS ad hoc Utilization Team) and on education, training and capacity building (as presented by the CEOS Working Group on Education and Training together with the CEOS WSSD Follow-up Programme Team).

Plenary keynote speakers included Colorado Springs Mayor Lionel Rivera, NOAA Administrator Vice Admiral Conrad Lautenbacher, NASA Associate Administrator Ghassem Asrar and USGS Director Charles Groat. Plenary presentations and discussion focused on the Utilization Team report and recommendations; the WSSD Follow-up Programme report on developments within its modules and on its two Africa workshops with associated capacity building recommendations; reports and recommendations of the WGISS and WGCV standing working groups and the ad hoc WGEdU working group; the July 2003 Earth Observation Summit and follow-up Group on Earth Observations (GEO); and on the CEOS Strategic Implementation Team and its focus on implementation of IGOS Themes. Additional presentations were made on the CEOS Coordinated Enhanced Observation Period (CEOP); the 2nd GCOS Adequacy Report; WCRP space mission requirements; CEOS interests in connection with the UN Framework Convention on Climate Change; UNISPACE follow-on activities; CEOS-related radio frequency issues; and updates on Members and Associates' significant events. The Plenary also featured presentation of a commissioned film, "CEOS

Looks at Planet Earth," produced by NASA's VisAnalysis Laboratory; demonstrations of NOAA's Science on a Sphere (created to aid scientific visualization and foster science education), and CEOS Working Group demonstrations. The CEOS working dinner featured remarks by James Rattling Leaf and a performance by Native American dancers.

Plenary outcomes include the approval of a set of 9 CEOS data utilization recommendations as well as 12 utilization principles to encourage adoption of remote sensing; approval of a set of 8 CEOS WSSD Follow-up Programme capacity building principles; approval of a Resolution on Principles of Satellite Data Provision in Support of Earth Observation Education and Training; a CEOS Statement on the GEO Initiative to be conveyed by the CEOS Chairman to the IGOS-P-10bis meeting and subsequently to the GEO Co-Chairmen; approval of recommendations made by the three CEOS working groups; and a CEOS position and action relating to the agenda item on research and systematic observation for the December 2003 UN Framework Convention's 9th Conference of the Parties. The Plenary also approved the selection of Yoji Furuhashi of JAXA to replace outgoing SIT Chair Tillmann Mohr, with Jose Achache of ESA to serve as SIT Vice-Chair; ESA's suggestion that EUMETSAT be added to the permanent CEOS Secretariat; and permanent status and a new name for WGEdU: "Working Group on Education, Training and Capacity Building."

At the conclusion of the Plenary, Mr. Withee turned over the CEOS Chair to China's Minister of Science and Technology, Xu Guanhua, who will chair CEOS during the upcoming year. Minister Xu outlined his priorities for 2004: to continue CEOS efforts to strengthen the coordination of the global comprehensive Earth observation systems—including via GEO; Earth observation in support of global change studies; the importance of disaster management support; data utilization, education and training; and a celebration of the 20th birthday of CEOS. The 18th Plenary is scheduled to take place in Beijing, November 16-18, 2004. BNSC will chair CEOS in 2005 with CONAE set to chair CEOS in 2006. ■



17th CEOS Plenary



Results of the IGOS-P-10bis Meeting in Colorado Springs

Mr. Gregory W. Withee

NOAA (USA), Former IGOS-P Co-Chairman

At their 10th Partners Meeting in Paris on June 5, 2003, the IGOS Partners agreed to convene an IGOS-P-10bis meeting to take place at the conclusion of the CEOS Plenary, November 20, in Colorado Springs, USA. The express purpose of this ad hoc meeting was to address final reports from the Global Carbon Cycle, Global Water Cycle and GeoHazards Theme Teams, with team leaders having been charged in Paris to take Partner comments into account in finalizing their reports by November.

IGOS Partner representatives at IGOS-P-10bis approved the Carbon, Water and GeoHazards Themes, commending the Theme Teams for their outstanding efforts and charging them to proceed toward Theme implementation. Progress reports were also received from the Atmospheric Chemistry and Coastal Themes. The three newly-completed Themes, the Oceans Theme already in implementation, and the two Themes currently under development will be addressed at an upcoming meeting of the CEOS Strategic Implementation Team (SIT), set for Tokyo on February 3, 2004. Besides hosting SIT, the Japan Aerospace Exploration Agency (JAXA) is inviting IGOS Theme Team representatives to take part in an IGOS International Workshop, February 4-6.

An initial proposal for an Integrated Global Observations of the Land Theme was noted with great interest by IGOS-

P-10bis, with proponents charged to develop a full proposal for the 11th Partners Meeting. Discussion of a FAO draft paper on emerging themes was deferred to IGOS-P-11. The Colorado ad hoc meeting also approved modifications to the IGOS Implementation Task Force Report, reflecting direction received from Partners at the June meeting.

Participants also discussed IGOS linkages to the Group on Earth Observations (GEO) in advance of an invited IGOS presentation by IGOS Co-Chair Dietrich Leihner at the GEO-2 Meeting in Baveno, Italy, November 28, and a scheduled meeting there between the IGOS Co-Chairs and the four GEO Co-Chairs. It was noted that a CD containing the collection of IGOS Themes and pertinent IGOS documentation would be shared in Baveno with GEO Co-Chairs and GEO agencies as well as with the Co-Chairs of each of the five GEO Subgroups.

IGOS-P-10bis was co-chaired by Jeff Tschirley of FAO (representing IGOS Co-Chair Dietrich Leihner) and by Professor Deren Li of the National Remote Sensing Center of China (representing the newly-installed Chair of CEOS, Chinese Minister of Science and Technology Xu Guanhua). IGOS-P-11 is scheduled to take place at FAO in Rome on May 27, 2004. ■

Strategic Implementation Team

Dr. Tillmann Mohr, EUMETSAT (Germany), Outgoing SIT Chairman

SIT met twice in formal session in 2003: in February in Geneva and in October in Darmstadt. Both meetings were well attended and the level of representation satisfactorily high. It is worth recalling that SIT is intended to bring together senior staff from the space agencies willing and able to make commitments to provide contributions to the space observation requirements identified in the Theme Reports produced in the framework of the IGOS Partnership (IGOS-P). For this purpose it is essential to have senior representatives of the agencies personally involved in SIT activities.

The two meetings were arranged to assist Theme Teams whose reports were due to be submitted for the approval by the IGOS-P. Since SIT represents CEOS in meetings of the IGOS Partnership, it is helpful for SIT to comment on the space aspects of an advanced draft of a Theme Report. A favourable report from SIT is a major step to a favourable passage through the IGOS-P approval process.

In this way SIT was able to assist four IGOS-P Themes to win formal approval in 2003, and for them to move into the implementation phase. These approved Themes were Coral Reef sub-theme, Global Carbon Cycle, Global Water

Cycle, and Geo-hazards. SIT also commented favourably on the report of the Global Atmospheric Chemistry theme, which is expected to be presented for approval at the IGOS-P meeting at the end of May 2004.

Once approved the real work of SIT begins. For the IGOS-P partnership to succeed, space agencies will need to make firm commitments to provide the space observations defined in the approved reports. A SIT meeting expressly for this purpose is to be held in Japan in February, 2004.

Japan has been chosen as the venue for the next SIT meeting because Dr Yoji Furuhashi (JAXA), previously Vice-Chairman of SIT, took over as Chairman of SIT after the 17th CEOS Plenary in November, 2003. Dr José Achache (ESA) replaced him as Vice-Chairman, thereby maintaining the tradition that former Chairmen of CEOS continue to serve the community by ensuring top-level management of SIT. More IGOS-P Themes are in the approval pipe-line, and all the signs are that 2004 will be another busy year for SIT. ■

Capacity Building in Remote Sensing Strategy: the IOC Approach

Dr. Colin Summerhayes

IOC / UNESCO (France), GOOS Project Office

In response to the need of developing countries to make best use of the data from the satellites that over-fly their waters every day, to the wishes of IOC's Member States expressed through meetings of the IOC, and to the calls of the 2002 WSSD Implementation Plan for widespread use of remote sensing from space as a tool for sustainable development, the IOC Assembly at its June 2003 meeting formally endorsed a strategy on remote sensing.

The growing population of the world's coastal zones imposes new stresses on finite marine and coastal resources that must be managed in a sustainable and environmentally responsible manner. Management calls for information, which must come from observing the oceans, understanding them, and transferring knowledge and information about them into management tools. These tasks are demanding even for developed countries. Many developing countries lack the resources to collect the ocean data required. Such countries can derive great benefit from the ability of satellites to provide synoptic coastal information at high resolution. But, as yet, few do so, so that only a fraction of remotely sensed ocean data has been put to actual use.

The IOC encourages and facilitates the building of capacity in developing countries so that they can capitalize on the untapped wealth of ocean data that remote sensing from satellites can supply. Chief requirements are ease of access to these data at high resolution and in real time, personnel trained to use them for practical purposes, and a ready supply at low cost of developed products from exterior centres of excellence. Member States have long made their requirements known, for example in Africa through the PACSICOM Declaration of July 1998, which identified the following need common to all developing countries:

"To encourage the formation of a network of specialists trained in the use of remotely-sensed data from space satellites, and to ensure the increased access to regional satellite receiving stations in Africa, so as to ensure that coastal managers have ready access to the rapidly increasing wealth of

spatial data on the coastal environment."

For that reason, remote sensing is one of the key components of the proposal developed by African States and the IOC, for a "Regional Ocean Observing and Forecasting System for Africa" (ROOFS-AFRICA), a component of GOOS-AFRICA. This proposal is now under consideration by the New Process for African Development (NEPAD). For the same reason, remote sensing is the main component of the UNESCO Cross Cutting Project on "Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa". Both ROOFS-AFRICA and the Cross Cutting Project involve the development and application of strategies for improving access to and training in the use of remote sensing for African countries. Not surprisingly, capacity building in remote sensing is a key plank of the GOOS strategy for capacity building.

Mr. Greg Withee, the immediate past Chair of CEOS, emphasized the value of remote sensing for developing countries in the Revelle Lecture for the 35th IOC Executive Council in June 2002. The Council agreed "...that there was a need for IOC to facilitate access by developing countries to remotely sensed data, and to facilitate training in the use of such data for the development of products useful for decision and policy makers", and, further, "...that the IOC should encourage more widespread use of remotely sensed data for alerts and warnings of severe events, like hurricanes, storm surges, floods and droughts."

The IOC has long recognised its responsibilities in remote sensing, having joined CEOS as an Associate Member in 1991. Over the years, IOC has worked increasingly closely with the space community, first through CEOS, then through IGOS Partnership, and more recently through the Coordinating Group for Meteorological Satellites, to develop approaches to capacity building to meet the needs of Member States. Several training courses in the interpretation of remotely sensed ocean data have taken place in a number of regions since November 1997. The IOC is now part of the CEOS Working Group on Education, Training

and Capacity Building, which has developed a strategy for education and training for all CEOS Members and Associates. In Stellenbosch in October 2003 IOC assisted the CEOS to develop a set of Capacity Building Principles that were adopted by the 17th CEOS Plenary meeting.

Despite these efforts, the IOC's achievements in capacity building in remote sensing have not met the demand, partly because of the small size of the IOC Secretariat, the commitment of its staff to ongoing programmes, and the lack of financial resources to start new work. This situation changed with the decision of the 22nd IOC Assembly (June 2003) to adopt a strategy on remote sensing, to allocate at least US\$40,000 per year to it, and to make remote sensing part of the duties of a newly hired senior member of staff. This seed corn funding should provide leverage for attracting additional funds to support the IOC programme. We hope that individual space agencies will step forward to work with IOC in developing and delivering capacity building programmes.

The IOC Secretariat is now designing an IOC programme in training in remote sensing for developing countries, starting with Africa. The programme aims to improve access to remotely sensed data and products, and to train specialists in the use of remotely sensed data in the production of scientifically validated products needed by policy makers and environmental managers, and in the execution of research. The programme will capitalise on existing training programmes, including for instance the ocean colour training programme of the International Ocean Colour Coordinating Group (IOCCG) IOC will capitalise on the UNESCO-developed and recently upgraded Bilko Project to provide the appropriate learning skills. ■



WSSD Follow-up Programme Update

Mr. Michael Hales

NOAA (USA), CEOS Ad-hoc WSSD Follow-up Team Leader

The CEOS WSSD Follow-up Programme had much to report at the CEOS Plenary in November 2003 in Colorado Springs. Both Module-1 (Education, Training and Capacity Building) led by NOAA and Module-2 (Water Resource Management) led by ESA and JAXA were very busy working with African and Asian stakeholders to implement their sustainable development strategies, gain commitments, and hold workshops during the first year of the CEOS WSSD Programme's implementation efforts.

CEOS Agencies endorsed two specific Module-1 outputs at the CEOS Plenary that were developed at the Module-1 Capacity Building Workshop in Stellenbosch, South Africa, 2-3 October 2003. These developments included a set of 8 Capacity Building Principles to be used to guide current and future efforts of the CEOS WSSD Follow-up Programme. The other was the development of a CEOS African Advisory Group (AAG) consisting of African stakeholders from academia, government, and NGOs. This group, currently led by Conrad Sebege of CSIR, was formed to provide advice, input, and feedback on CEOS' sustainable development activities. CEOS also agreed to work with the AAG to represent, and help raise, the importance of space-based technologies to African leaders.

The core activities of Module-2 this year included the ESA TIGER initiative, and JAXA's continued support of IFNet, GPM and CEOP activities. Agencies that also contributed to ESA's TIGER effort included CSA, UNESCO, CSIR, UNOOSA, among others.

One goal of the Module-2 TIGER Initiative is to be a concrete step towards the implementation of the WSSD Plan of Implementation, especially in areas focusing on *space, water and Africa*. Priority areas for Module-2 TIGER include wetland monitoring, ground water resource management, and food security, and other priorities may follow in the years to come. Module-2 TIGER introduced a number of project partnership opportunities at a widely attended African workshop in Rabat, Morocco, 5-6 October 2003.

While Modules 1 and 2 were well established in 2003, the emphasis in 2004 will shift towards the launching of Modules 3-5. Specifically, these Modules include areas of disaster management and conflicts; climate change; and global mapping, land-use monitoring and GIS. Module leaders and team members are currently developing and modifying their implementation strategies based on the outcomes of the CEOS Plenary.

Continued support for the Programme's Modules was pledged at Plenary by the new CEOS Chair from China, with a special emphasis towards disaster management, and education and training. ■

CEOS ad hoc Team on Utilization

Prof. John Townshend

University of Maryland (USA), Utilization Team Leader

At the 16th CEOS Plenary in Frascati in November, 2002, Mr Greg Withee, then-incoming Chairman of CEOS, announced that during his term of office he would give priority to encouraging and facilitating the increased use of space data, products and services. To this end he appointed a small ad hoc team charged with developing recommendations for consideration at the 17th CEOS Plenary in November, 2003.

The Report has now been completed and can be found at the following location (<http://www.ceos.org/utilization/index.html>). The main emphasis of the study has been on situations where the desired outcome is a sustained capability rather than increasing the number of one-off users. 25 case studies were compiled by the team.

Examination of the successful case studies indicates that more of the factors favouring adoption of remote sensing products by users are within the province of the users themselves, rather than with the space agencies, but successful adoption always involves balanced cooperation between space agencies and users.

In this co-operation space agencies can and should do more to ensure the greater uptake of their data and services. Critical factors from the space agency point of view are provision of user-specific products; making resources available speedily and with a minimum of bureaucracy; willingness to listen over an extended period to user needs and practical

(to be continued on next page.)

Working Group on Education, Training and Capacity Building

Dr. Sergio Camacho, UNOOSA (Austria), Chair, WGEdu

Ms. Christine Hutton, CCRS (Canada), Vice-Chair

Dr. Maurizio Fea, ESA / ESRIN (Italy), Vice-Chair

The WGEdu had a very challenging and successful year, culminating in its transformation from an *ad hoc* to a permanent CEOS working group. The official name of the group was changed to "CEOS Working Group on Education, Training and Capacity Building" (WGEdu) to reflect our current and expected new partnerships. A highlight among our year's accomplishments was the adoption by CEOS of the "Principles of Satellite Data Provision in Support of Earth Observation Training and Education". With the adoption of these Principles, comes the need for a short, medium and long-term mechanism to facilitate data provision for future requests.

WGEdu participated in the CEOS World Summit on Sustainable Development (WSSD), Module 1 Workshop in Stellenbosch, South Africa where in addition to the development of a set of Capacity Building Principles, an African Advisory Group was established to coordinate user inputs to CEOS through the WGEdu.

In 2002-2003, the WGEdu focused on establishing the education and training materials web site. The prototype of this web site will be released shortly and the WGEdu will actively be looking for agency (CEOS and other) contributions to the site. The plan is to eventually transform this into a self-sustaining module where educational parties may list and highlight their contributions directly.

Partnerships are a primary focus for the WGEdu. There are several capacity building initiatives, now including the new Group on Earth Observations (GEO) Capacity Building Sub-group that resulted from the Earth Observation Summit. There is a need for

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difficulties and to accommodate them to the maximum extent practicable.

From the user standpoint, success appears to be very dependent on a) the user having an understanding, and preferably first hand-experience, of the use of remote sensing data and products, and its integration into geospatial information systems, b) a willingness to make appropriate staff available before and during the project to work with the space agency, c) the user having a core need, such as a statutory need, for the information, d) an ability to define rather precisely what the needs are and e) the user being willing and able to help develop a realistic financial scenario for an operational system. On both sides, the case studies indicate the need for innovation and flexibility in response to new opportunities for data products.

The report contains several principles whose adoption will

coordination, cooperation and linkages between the various initiatives. The WGEdu is an appropriate forum through which to contribute to this effort. We have to date made linkages and partnerships with the WSSD process in cooperation with CEOS Module 1 activities. Partnerships have also been developed with the IGOS-P and with many specialized agencies of the United Nations System.

WGEdu priorities will continue to be: (a) provide for the timely integration and refresh of Earth observation data, information and techniques into education and training programmes; (b) promote a growing cadre of specialists in Earth observation who can address the environmental issues and develop expanded practical applications of Earth observation data and information; and (c) underscore the relevance of Earth observation for policy and decision-making. The work to be carried out will contribute to CEOS priorities indicated in its Five Year Plan.

In the coming months, the WGEdu will evaluate its strategy and action plan for continued appropriateness, scope and linkages. To date the WGEdu has functioned with a very small core group of people. In addition to updating our action plan and priority list, this year we will be making a concerted effort to expand the Working Group's membership list with dedicated agencies and individuals that can assist with the requirements for the next few years. ■

encourage the use of remote sensing and concludes with a series of recommendations to CEOS and its members.

The results of the Utilization Team's work were presented at a special event preceding the CEOS Plenary at Colorado Springs on the 18th November by Stephen Briggs (ESA), Deren Li (NRSCC) Yukio Haruyama (JAXA) and the chair of the Team. The report was presented to the CEOS Plenary on the 19th November. ■

Utilization Brochure, "Improving Utilization of Earth Observation Satellite Data" was produced in December 2003 to pursue the decisions of the 17th CEOS Plenary on Satellite Data Utilization by NOAA.

Further information can be found at the following web site.

<http://www.ceos.org/utilization/>





The Working Group on Calibration and Validation

Dr. Stephen G. Ungar, NASA / GSFC (USA), Chair, WGCV

Mr. Yves-Louis Desnos, ESA / ESRIN (Italy), Chair 2003, WGCV

Following the nomination and approval of Dr Stephen Ungar as WGCV chair, it is a real pleasure to report jointly from the WGCV. This combined message, from incoming and outgoing chairs, also outlines the continuity of the objectives and tasks carried out by our active CEOS working group, and provides some insight into the directions for the future.



The 21st WGCV plenary (WGCV-21) was held from 15 – 17 October 2003 in Beijing, P.R. China. The meeting was held in the Friendship Hotel, Beijing, and was hosted by the Center for Space Science and

Applied Research (CSSAR) and the Chinese Academy of Sciences (CAS). As well as reports from the subgroups and taskforces, which form the basis for the effective working of the WGCV, the meeting included very informative presentations from the host nation and visits to the National Satellite Meteorological Center and the Center for Space Science and Applied Research in Beijing. At WGCV-21, a series of recommendations were approved for submission to CEOS plenary.

The 17th CEOS plenary (CEOS-17) approved the WGCV's work plan for 2003 – 2006. The appointment of a new chair of the LPV subgroup, Dr Jeff Morisette (NASA), was also endorsed. More specific recommendations put forward by the WGCV were approved at CEOS-17:

1. WGCV recommends for consistency, to converge to the recently refined solar reference spectrum by G. Thuillier and encourages its use at the highest possible spectral resolution.
2. WGCV further recommends that instrument teams should post the exo-atmospheric solar irradiances they use, together with processing/resampling information, in a band-integrated form on the www (single spectrum recommended).
3. WGCV recommends to further support the in-depth study of the behaviour of satellite onboard calibration diffusers and their stability in the space environment,
4. The WGCV recommend that CEOS strongly encourages that full use of high latitude ground stations be maintained or restored to full operation.
5. The WGCV recommends that the Amazon rainforest area be used as one of the calibration transfer standards. The Amazon rainforest must be regularly measured to maintain its traceability to the internationally agreed standards.
6. WGCV recommends use of newly available spaceborne

DEMs, where available and suitably validated, to replace existing coarse data-sets for processing land and atmospheric data-sets at the earliest opportunity.

At CEOS-17, a joint presentation was given by the WGISS and the WGCV. This highlighted the results of phase 1 of the joint test facility and asked plenary to endorse plans for phase 2. Phase 2 plans include the joint use of the test facility for the cal/val objectives of various WGCV subgroups (SAR, TM and IVOS) and progressive access to other datasets to be provided by CEOS member agencies.

A Joint WGCV/ISPRS Task Force convened an International Workshop on Radiometric and Geometric Calibration at Gulfport Mississippi during the first week in December. Jeff Privette, founding member of the WGCV Land Validation Subgroup, presented opening remarks on behalf of the WGCV chair.

The EROS Data Center (EDC) has offered to host the 22nd WGCV Plenary in Sioux Falls, South Dakota, USA, in June 2004. They have also offered to assist in locating sites for those interested in an international cal/val field measurements campaign immediately prior, or subsequent, to the meeting. Looking further ahead, CONAE has offered to host overlapping meetings of the WGCV and the WGISS, featuring a joint WGCV/WGISS session, in February 2005.

The new WGCV website is now online and operational, and the WGCV newsletter (issue 10) was published and distributed at CEOS-17.

The outgoing chair, Yves-Louis Desnos, would like to take this final opportunity to thank all WGCV and subgroup members for their excellent teamwork throughout his tenure. Their achievements will benefit all users of calibrated and validated EO products for science, applications and / or services development for many years to come.

The new chair, Stephen Ungar would like to express his personal thanks to the outgoing chair for his considerable efforts in effecting a transition enabling uninterrupted continuation of important WGCV activities instituted during his tenure. All WGCV and subgroup members join the new chair in thanking Yves-Louis-Desnos for his dedication to and stewardship of the WGCV during the last three years. We look forward to his continued participation in the group. ■

The Working Group on Information Systems and Services

Mr. John Faundeen
USGS (USA), Chair, WGISS

Geo-Informatics and Space Technology Development Agency (GISTDA) and Japan Aerospace Exploration Agency (JAXA) in Chiang Mai, Thailand 15-19 September 2003, hosted WGISS-16. Dr. Suvit Vibulsresth and Osamu Ochiai along with Chanchai Peanvijarnpong and Dr. Pakorn Apaphant and their staff are to be commended for the great manner in which they supported the WGISS Plenary and Sub-Group sessions. GISTDA also facilitated the Workshop on Application of Space Technology for flood Management on 18 September. Both events were well attended with over 45 participants for WGISS plus an additional 50 registrants for the Workshop.



Chiang Mai Temple Staircase

At Chiang Mai meeting WGISS closed its CD-ROM Task Team, but noted that CNES will continue to maintain the associate website at <http://ceos.cnes.fr> for this effort that involved many CEOS participants. The CEOS Information Infrastructure Task Team was also formerly closed. JAXA will continue to support the main CEOS web site, however. The closures represent the completion of efforts that do not require further WGISS reporting.

WGISS also reviewed its position of User Vice Chair. Updated Terms of Reference (TOR) were approved and nominations from CEOS participants requested. The TOR for this position state:

1. Interact with science and environmental organizations to understand their EO requirements and once those needs are understood, encourage the take up of relevant WGISS systems and services to improve EO capabilities.
2. Engage less active Agencies to take up relevant WGISS systems and services and to participate more directly within WGISS forums.
3. Coordinate with WGISS non-space organizations and Associates to ensure that their EO requirements are understood and develop strategies allowing those needs to be met.
4. Actively pursue CEOS Agencies to offer better, wider, and more open access to data, information, and software products they hold, to the benefit of the EO user community.

It is hoped to have this position filled by May of 2004.

During the 17th CEOS Plenary, WGISS reported the following three-year accomplishments:

- Alignment with Plenary Goals and the 5-Year Plan.
- Integration with EO infrastructures such as Open GIS Consortium standards.
- Successful application demonstrations at two CEOS Plenary sessions and the World Summit on Sustainable Development.
- Streamlined organization and meeting schedule.
- Close working relationship with the WGCV.
- Substantial increase in usage of the CEOS International Directory Network.

A unique presentation led by chairs of both the WGCV and WGISS, demonstrated the operational status of the WGISS Test facility for CEOS Core Test Sites at Plenary 17.

The WGISS web site has been updated to improve communications between WGISS participants as well as to improve on the external promotion of our work. The site is now maintained by NASA to facilitate smoother transitions between WGISS chairs.

The Norwegian Space Centre will host WGISS-17, 10-14 May 2004, at Tromso, Norway. WGISS-18 will be hosted by the National Remote Sensing Center of China September of 2004 in Beijing. All Members and Associates are encouraged to send representatives to these meetings.

Further information on WGISS can be found at the CEOS web site <http://www.ceos.org/> under the Subsidiary Groups button or directly from <http://wgiiss.ceos.org/>.



New WGISS Web Site

From the CEOS New Chair

(Speech by Mr. Xu Guanhua at the 17th CEOS Plenary 20 November 2003)

On behalf of the Ministry of Science and Technology of the People's Republic of China, and the National Remote Sensing Center of China (NRSCC), I thank all the members for the trust accorded to China and the host country for its warm hospitality. Thanks also to those who have supported CEOS over the years.

As Chairman in 2004, I will do my utmost and propose the following priorities for CEOS over the following year.

I. Joint efforts to strengthen coordination for the comprehensive global Earth observation system

In establishing a comprehensive, coordinated and sustained Earth observation system - as advocated by the Declaration of the 2003 Earth Observation Summit - I believe:

1. CEOS should play an active role.
2. The guiding principles should be voluntarism and equality - giving top priority to coordination for global environmental protection, disaster relief and prevention and improving peoples' lives;
3. We should strengthen the role of countries, international organizations and agencies engaged in Earth observation.
4. Developed countries should offer comprehensive aid to developing countries for

Earth observation.

II. Priority areas in 2004

1. Strengthening observation of major global change processes:

We plan to carry this out in three steps:

- a. hold three symposia in 2004;
- b. form a task team;
- c. implement the program.

2. Disaster management:

I propose that the CEOS Secretariat work with countries and UN agencies to promote regional cooperation with the aim of real-time spatial information exchange, the co-ordination of data products and services within the CEOS framework, and support for services for disaster management agencies, especially those of developing countries.

3. Data utilization and education & training:

We should continue the efforts of the CEOS Ad-hoc Team on Utilization. We plan to build on the current work, draw on supporting efforts of COPUOS and ESCAP, and strengthen the overall activity.

4. The 20th anniversary of CEOS in 2004

This major event is an important opportunity for CEOS to comprehensively review its achievements. Activities planned for the 18th Plenary in Beijing include:

Mr. Xu Guanhua
MOST / NRSCC (China)
CEOS Chairman



- Inviting important guests to attend the Plenary;
- Reviewing the history and major achievements of CEOS;
- Conducting an exhibition of CEOS's achievements.

III. Progressing the routine work of all CEOS Working Groups and IGOS Themes

The Working Group efforts represent the core of the day-to-day progress on practical issues within CEOS. Our priorities for the coming year are as follows:

1. Support successful working group meetings and activities;
2. Host secretariat meetings and telephone conferences with the expert support of the existing Chairs and secretariats;
3. Encourage all secretariats and working groups to assist in supporting IGOS activities and Plenary meetings and be actively involved in related deliberations.

IV. The 18th Plenary

The 18th CEOS Plenary, to be held in Beijing in November 2004, with Chinese government leaders being invited to the opening ceremony, will include large-scale symposia and exhibitions.

I wish to extend my warm invitation to all of you to come to Beijing for the 18th CEOS Plenary and the 20th anniversary celebrations. ■

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@jaxa.jp, or misawa@restec.or.jp http://jaxa.ceos.org/ceosnews_menu_e.html

Meeting Calendar

As of Jan. 2004

Activities	January	February	March	April	May	June	July	August	September	October	November	December
CEOS Plenary Utilisation Team						▲ 5-7, CEOS Workshop, Wuhan, China					▲ 16-18 ▲, 18th Plenary NRSCC, Beijing, China	
CEOS SIT		▲ 3, SIT-13 JAXA/EORC, Tokyo										
CEOS WGISS Subgroups/Task Team						▲ 10-14, WGISS-17 NSC, Tromso, Norway						
CEOS WGCV Subgroups						▲ WGCV-22, NASA/EDC Sioux Falls, South Dakota, USA			▲ 6-10, WGISS-18 & SGs Meetings NRSCC, Beijing, China			
CEOS WGEdu						▲ 24-26, WGEdu / WSSD Follow-up Programme Rome						
IGOS Partners Themes: Implementation Workshop		▲ 2-5, IGOS Workshop JAXA, Odaiba, Tokyo				▲ 27, IGOS-P11 Rome						
Others			▲ 25-27, GEO-3 Cape Town		▲ 25, EO Summit-2, Tokyo	▲ 22-23, GEO-4, Tokyo				▲ 4-8, IAF Vancouver		▲ EO Summit Europe (TBD)

▲ : determined △ : to be determined (Date, Host organization/Location) CEOS-related meetings are open only to designated participants.

Published by
Japan Aerospace Exploration Agency (JAXA)
Earth Observation Research and Application Center (EORC)
Harumi Island Triton Square Office Tower X 23F
1-8-10, Harumi, Chuo-ku, Tokyo
104-6023 JAPAN
For inquiry:
Ms. K. Misawa, RESTEC
misawa@restec.or.jp

For further information contact in each area allocated:

[Asia, Pacific]
Mr. C. Ishida
JAXA
TEL:+81-3 6221 9139
FAX:+81-3 6221 9180
ishida.chu@jaxa.jp

[North & South America]
Ms. D. Carroll
NASA
TEL:+1-202 358 0793
FAX:+1-202 358 2798
devon.carroll@nasa.gov

Dr. B. Smith
NOAA
TEL:+1-301 713 2024
FAX:+1-301 713 2032
brent.smith@noaa.gov

[Europe, Africa]
Dr. J. Aschbacher
ESA
TEL:+33-1 5369 7707
FAX:+33-1 5369 7226
Josef.Aschbacher@esa.int

Dr. David Williams
EUMETSAT
TEL:+49-6151 80 7603
FAX:+49-6151 80 7830
dwilliams@eumetsat.de