

WGISS Joint Proposed Efforts

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I.~II. are from WGCV presentation, to re-fresh
your memory!

I. QA4EO Showcase Update (1/2)



1. Forest Carbon Tracking (FCT)

- Working with FCT/GFOI team to define key accomplishments and data support and integrated
- In the context of FCT resources have now been identified in the UK to support the development of a QA4EO related case study covering optical and SAR sensors in support of a GFOI national demonstrator. This project kicked-off on Sep 5 and hopes to have a good analysis and case study by March/April 2013. **It will require access to long times series data sets of some example sensors** over a selected site in Indonesia. In particular, Landsat and Meris and ideally TerraSar.

I. QA4EO Showcase Update (2/2)



2. Atmospheric Composition (AC)

- AC: Ozone as an example for AC is now well captured in various projects within Europe covering especially also the quality aspects; i.e. the ESA CCI project for ozone and some development projects for the coming Sentinels. The European teams within CCI and the Sentinel development are similar; work plan and project approach – especially for Sentinel 5 Precursor will allow carrying out some quality verifications. The latter is under guidance of several space agencies including ESA, DLR, and BIRA as well.

3. Global Elevation – Global ASTER DEM completed; additional efforts being considered

II. Ideas from WGCV



1. WGCV teams should also suggest ideas of **quality data metadata fields** for the key sensors and products.
2. **Data access of CEOS Test Site information** starting with:
 - a. CEOS IVOS sites (also test first one prior to meeting for Libya 4 site)
 - b. LPV sites
 - c. SAR
 - d. DEM and others. Recommend starting with some key examples. SG support needed.
3. **Metadata requirements** for quality, need to tap each WGCV working group for sensor information. Have WGISS find out what is available. Get NASA ESIP feed back on this and others.
4. **Quality indicators**: get WGCV SG support and ideas and ideas from WGISS.
5. It would be good to have input from an ECV quality perspective (Climate).
6. **Identifying key partners** and how they benefit the working group and they benefit from WG
 - a. working sharing experiences and lessons learned in engaging additional partners
7. Updated and develop new **showcases**

III. WGISS Proposals

1. Metadata and Quality
2. Data Access to CEOS Test Sites
3. Identifying Key Partners
4. Showcases
5. New Proposal



1. Metadata & Quality



The 1st step:

- A survey for existing quality metadata within WGISS members products
 - (1) Led by Tech Expo IG
 - (2) The 1st report will be at the WGISS-35 (May-2013).

The next steps:

- Discussion at WGISS-35
- Discussion with WGCV, based on the WGISS-35 results (feed-back from user side is necessary)

2. Data Access for CEOS Test sites



- i. CEOS WGISS Integrated Catalog (CWIC) will support for this.
 - Details of CWIC will follow this presentation.
- ii. Data access to **one test site** will become available **before the 2012 CEOS Plenary**.

3. Identifying Key Partners

- Use “Wish lists” from all the Virtual Constellations (VC) as the 1st step
 - At the last SIT WS, each VC prepared a Wish list



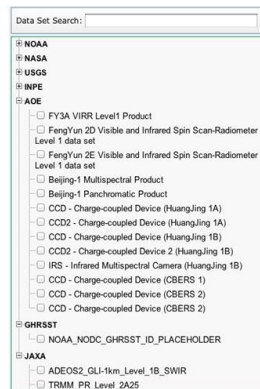
Atmospheric Composition



- **Participation from China and Russia desirable**
 - Chinese researchers at CMA identified and contacted
 - Spoke with Fuxiang Huang (NSMC/CMA) at Quadrennial Ozone Symposium (Toronto, August 2012) and he will try to attend next ACC meeting
 - Need assistance with Russian atmospheric composition community

Land Surface Imaging

- Support from all agencies that provide land-based data & ECVs
- Continued linkages to SDCG and GFOI/FCT and JECAM/GEOGLAM
- Seek additional terrestrial space data provider connections through HMA and CWIC to be visible in LSI interface.



Ocean Color Radiometry

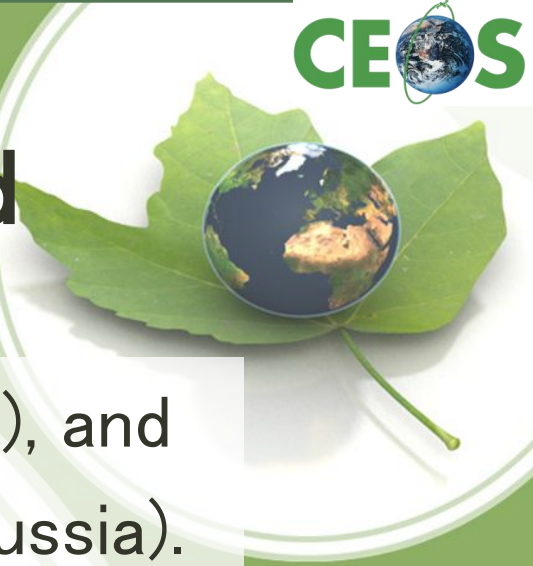


- Not aware of any Russian ocean color satellites on orbit or planned
- China would be a nice addition to the OCR-VC, data access seems to be a major issue

Ocean Surface Topography



- CNSA/China
 - Agreement with SOA (State Oceanic Administration) of China approved by EUMETSAT Council in June
 - The aim is to have a mechanism in place for access by SOA of EUMETSAT data and products and by EUMETSAT of SOA Data and Products including those generated by the HY-2A satellite.
- Agencies that fly “complimentary missions” that are not presently formal members.



Ocean Surface Vector Wind

- Engagement with SOA and CMA (China), and ROSHYDROMET and ROSKOSMOS (Russia).
 - EUMETSAT recently signed a cooperation agreement with the China State Oceanographic Administration
 - See,
<http://www.eumetsat.int/Home/Main/News/CorporateNews/821844?l=en>
 - “a first step on a long journey”

Precipitation

- Engagement with CMA (China) and ROSHYDROMET (Russia).



- 3-year outcomes defined in course of the CSS – no updates/revisions
 - PC Data Portal and links to CEOS Water Portal
 - Construction of First Phase – “link only” interface
 - Planning/study for Second Phase – “query/results/order based” interface
 - Precipitation ECV support – Response to GCOS Action A-8 - Ensure continuity of satellite precipitation products
 - Deployment of GPM phase constellation satellites and maintaining continuity with TRMM
 - Advocacy of post-GPM phase PC
 - Potential Microwave Imager (MI) shortfall in post-GPM era
 - Light and solid precipitation measurements at high latitudes

[Not from wish list, but reported by PC]

Sea Surface Temperature

- Participation needed from ISRO, KARI, SOA and CMA, CONAE, and ROSKOSMOS.

[Not from wish list, but reported by SST]



Deliverable: VC Portal & IDN/CWIC
SIT Technical Workshop
Reston, Virginia, USA
Sept 11-12, 2012



SST-VC Portal “version 1” action complete

At GHRSSST: <https://www.ghrsst.org/users-partners/ceos-sst-vc/>

At CEOS: <http://www.ceos.org/sst>

BONUS TASK: SST-VC in WGISS Systems

- Currently sixty-one L2, L3, and L4 SST “collections” and over 2.3 million data granules in GHRSSST
- First collections were published to CEOS Integrated Data Network in August, with corresponding granule inventories in CEOS WGISS Integrated Catalog (CWIC). Remaining collections/granules are underway.



3. Identifying Key Partners



- Demands on data access to China and Russian satellites seems to be very popular.
- Before going further, more detailed user needs information is needed.

 The 1st Step : Contact to each VC on their needs

4. Showcases



- The situations changed so much since the previous meeting (in 2010) .
 - FCT/GFOI are working
 - SDCG
 - GDEM released, etc...
- We may need to re-consider the purposes/objectives for these showcases.

5. New Proposal



DEM Quality Information System (DEMqis)

- to record DEM validation data
- (in support of exploitation of ASTER GDEM)
- Work on Joint WGISS/WGCV Project to create DEM Showcase for the use of QA4EO (delayed due to funding problems).
- Activity could be contribution to the GEO Core Dataset DEM activity.
- Activities delayed due to lack of funding.

BACK UP SLIDES

WHAT IS QA4EO?



- The Quality Assurance framework for Earth Observation (QA4EO) principles:
 - It is critical that data and derived products are easily accessible in an open manner and have associated with them an indicator of their quality traceable to reference standards (preferably SI) to enable users to assess its suitability for their application i.e. its “fitness for purpose”.
 - This Quality Indicator needs to be unequivocal in its interpretation and derivation , yet sufficiently flexible, to be implemented across the full range of EO activities which are coordinated through GEO.

Why so much attention to Data Quality now?



- In the past, it was difficult to access satellite data.
- Now, within minutes, a user can find and access multiple datasets from various remotely located archives via web services and perform a quick analysis.
- This is the so-called Data Intensive Science.
- The new challenge is to quickly figure out which of those multiple and easily accessible data are more appropriate for a particular use.
- However, our remote sensing data are not ready for this challenge – there is no consistent approach for characterizing quality of our data.
- This is why data quality is hot now.

Why so difficult?



- Quality is perceived differently by data providers and data recipients.
- Many different qualitative and quantitative aspects of quality.
- No comprehensive framework for remote sensing Level 2 and higher data quality
- No preferred methodologies for solving many data quality issues
- Data quality aspect had lower priority than building an instrument, launching a rocket, collecting/processing data, and publishing a paper using these data.
- Each science team handled quality differently.