CEOS

Committee on Earth Observation Satellites

Working Group on Capacity Building and Data Democracy (WGCapD) – Activities, Initiatives, & Collaboration Opportunities

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Side Meeting, Oct. 18, 2017

CEOS Plenary

South Dakota, USA

18-20 October, 2017

Agenda

Objective: Share our progress, and discuss approaches to achieve your targets of promoting your products and services to larger community.

15:00 Welcome

15:05 Tour de Table

15:10 WGCapD brief update
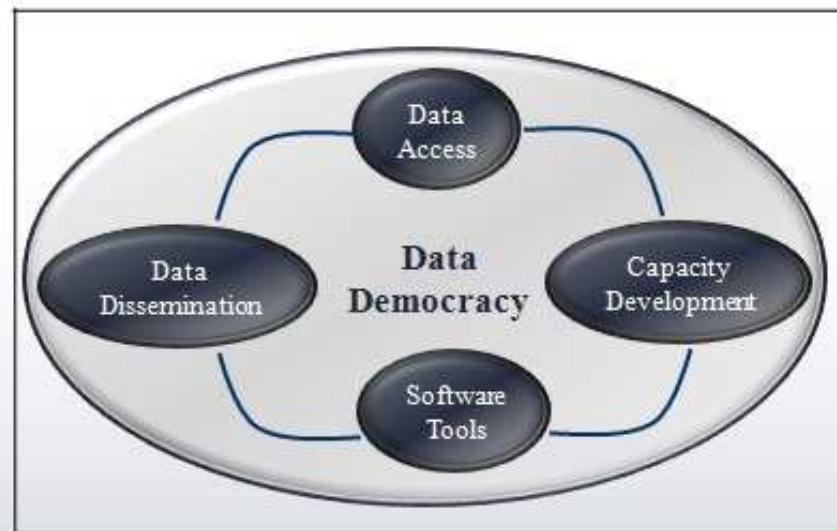
15:25 Collaborations with WGISS

15:40 Collaborations with ODC, WGCV

WGCapD, formed at the 25th CEOS Plenary in **2011,** undertakes a variety of activities based on the 4 pillars of the Data Democracy Initiative:

Effort to increase the capacity of institutions in less developed countries for:
- **Raise awareness** of the value of Earth observation data products and services
- **Help user communities** access data, products, and tools and effectively apply those data to solve real-world problems
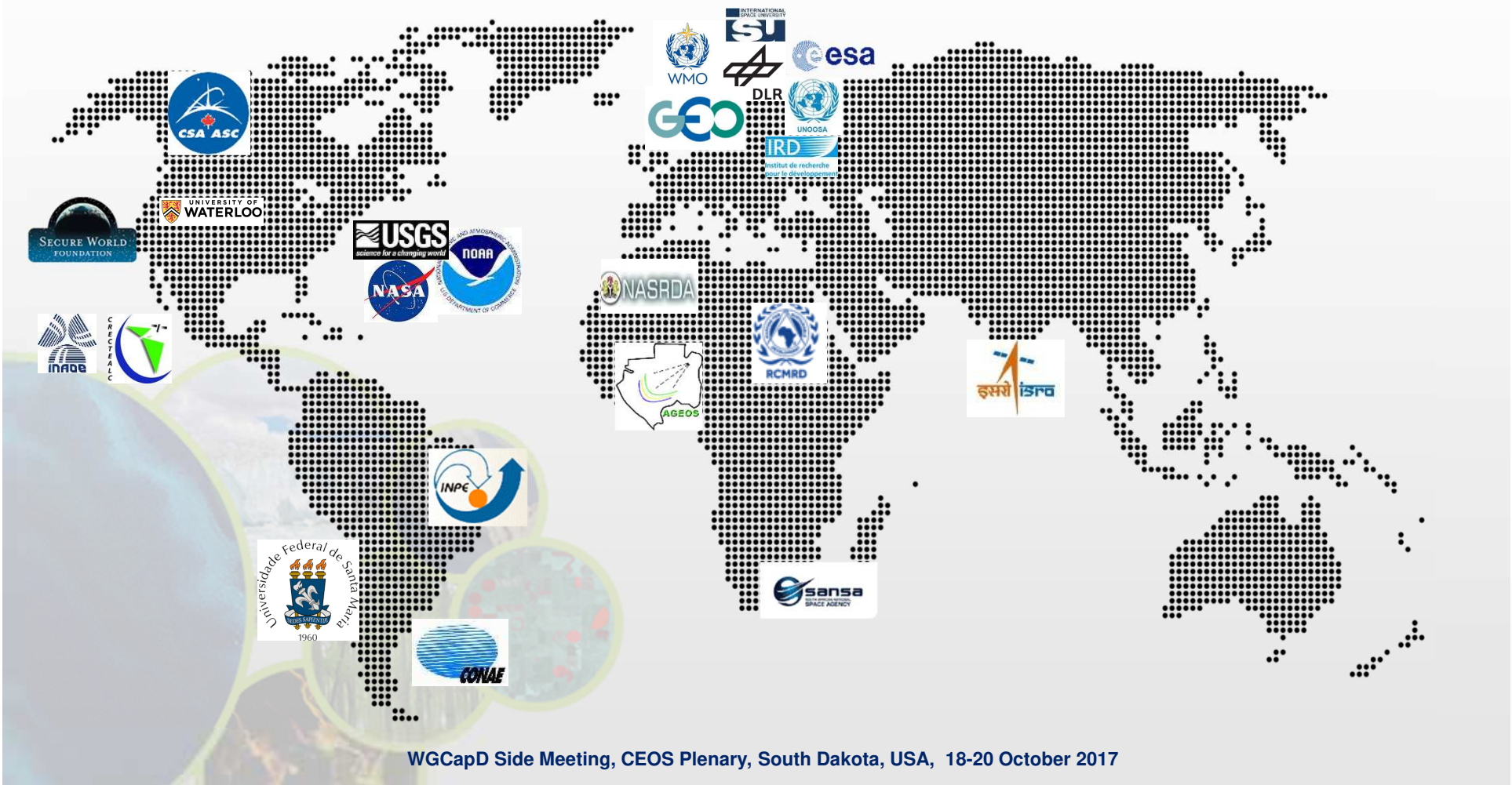
http://ceos.org/ourwork/workinggroups/wgcapd

WGCapD: Members and Collaborators

Space Agencies, Associated Members, Universities, NGOs …
Based on <u>voluntary</u> contributions …

Working Group for Capacity Building and Data Democracy (WGCapD)

- Raise awareness of the value of EO data products and services to user communities, including
  - Support to locate and access data, products, and tools
  - Targeted training workshops

- Support CEOS initiatives and help WGs and VCs undertake their own capacity building initiatives
  - E.g. guidance on best practices

- Collaborate with GEO, UNOOSA, and other UN agencies
  - Bring out the benefits of EO tools and services
  - Help to collect, coordinate, and synergize capacity building resources
  - Provide expertise to support their efforts in workshops, symposia, and conferences

Here is how we do it

Organizing and/or participating in → targeted, collaborative training opportunities, events, and workshops in partnerships with local, regionals, and international stakeholders.

ONSITE
- Workshops, Training Courses

BLENDED
- Onsite + Live Broadcast

ONLINE
- Long-Term Courses
- Webinars

After release of Shuttle Radar Topography Mission, SRTM-2 30-m data
4 Digital Elevation Model Training Workshops

- Nairobi, Kenya (May, 2013)
- Pretoria, South Africa (March, 2015)
- Puebla, Mexico (May, 2015)
- Kathmandu, Nepal (Sep, 2016)

5 Synthetic Aperture Radar (SAR) Data Training Workshops

- Lusaka, Zambia (October, 2016)
- Pretoria, South Africa (January 2017)
- Libreville, Gabon (February, 2017)
- Tshwane, South Africa (May, 2017)
- AmeriGEOSS week – San Jose, Costa Rica (August, 2017)

Disasters Training during AmeriGEOSS week 2016
(Bogota, Colombia)

Sentinel - S1/S2/S3 & GEE Applications training during AfriGEOSS Symposium 2017 (Accra, Ghana)

Estimated # of **Participants**: > 500

Languages: English, Spanish and French

Regions: Africa, Latin America and the Caribbean, South and Southeast Asia, including the Hindu Kush Himalaya (HKH) and Lower Mekong regions

Onsite + Live Broadcast Activities 2015 & 2017

- Civil Security: Understanding the Risks, Preventing Disasters, and Mitigating the Impacts with Earth Observation (EO) Applications and Services – 2015
    Quebec, Canada

- One Earth – One Health Workshop: Contributions of Earth Observations (EO) to Public Health Practices – 2017
    Montreal, Canada

Languages: English and French

Estimated # of **Participants Onsite** > 120

Estimated # of **Participants Online** > 35

Areas: Disasters and Health

Regions: Africa, Latin America and the Caribbean, South Asia and Australia

Online Activities – 2013-2017

- E-learning Course for University Lecturers in Anglophone Africa – 2013

- Webinar on Disaster Management - 2015

- Webinar on SAR - 2017

Estimated # of **Participants**: > 150

Languages: English

Regions: Africa, Latin America and the Caribbean, South and Southeast Asia, including the Hindu Kush Himalaya (HKH) and Lower Mekong regions

Access to Training Resources

Digital Knowledge Repository for record and archival of teaching material –
Free and open (Creative Commons License) at:
http://learningcenter.obt.inpe.br/

Lessons Learned & Best Practices

Lessons Learned Reports from Capacity Building Initiatives are available on the site:

http://ceos.org/ourwork/workinggroups/wgcapd/e-learning/
http://ceos.org/ourwork/workinggroups/wgcapd/training-workshops/

Document compiled and in review: → **Training: Methods & Best Practices**

1. Training activities in general, using the five phases of the ADDIE (Analysis, Design, Development, Implementation, Evaluation)
2. General Tips
3. Webinar Tips
4. Summarized Steps for Creating Training Initiatives.

Best Practices Document

Some Highlights

- Pre-training survey - students own skills levels, before training starts. Self-assessment afterwards.

- User Needs → Alumni feedback – post training to learn effectiveness of training undertaken – and future course recommendations

- Institutional networking for Interactive distance learning

- Internet based e-learning courses for different time zone participation

- Online and Blended Trainings usually have higher rates of students' dropout. Engaging students from the beginning is the best strategy.

- Be aware that for free trainings, always get more people registered than actually attend. Therefore, always accept at least 30% more students than you plan to have to the course. That is about the dropout rate we usually have specially for free initiatives.

Our Mandate

Collaborate with WGs, VCs, AHTs to support CEOS initiatives in undertaking their own CB activities

- Bring out the benefits of EO tools and services
- Help to collect, coordinate, and synergize capacity building resources
- Provide expertise to support their efforts in workshops, symposia, and conferences

Collaborations with WGISS

- WGCapD assist WGISS in sharing training best practices and in building awareness of WGISS planned webinars
    - Using WGCapD distribution list to those previously trained to announce WGISS training
    - Pointing to WGISS recorded webinars from WGCapD website page
- WGISS and WGCapD collaborate on a study to improve standardization and interoperability of data system supporting documentation
    - Discussed, awaiting further WGISS definition

- Collaborate on **CB-21:** Explore future options for providing portal-based access to capacity building and training resources. Conduct a study of existing and potential new approaches to collect, coordinate, and synergize available capacity building and training resources related to satellite Earth observations.
  - WGCapD and WGISS working to define our current practices for:
    - o Hosting on demand recorded webinars – make discoverable, common metadata
    - o Hosting capacity building resources - make discoverable, common metadata
    - o Planning calendar into future – plan, and post as 2 separate steps

Example of CB-21 work in progress

- What does each Agency in CapD do now?
    - NASA ARSET: Post resources and recordings on website
    - DLR
        - Trainings identified on project websites
        - SAREDU has a centralized portal for SAR Training material
    - ISRO: Working towards a knowledge portal open to the public
    - INPE: Training materials and recordings posted on INPE wiki
    - SANSA: Working towards publishing training suite on line
    - USGS: Trainings identified on project websites
    - ESA: Webpage where announce training has materials afterwards
    - GEOGLAM: drop box for participants
    - CapD: some agencies post on GEOCAB; took action to post CapD training materials to INPE Wiki

Example of CB-21 work in progress

- NASA ARSET training program
  - Hosting on demand, recorded webinars:
    - o Recordings of past ARSET live webinars available at arset.gsfc.nasa.gov (GoToWebinar software)
    - o On-Demand training will also be available in the later part of 2018 (Articulate 360 software)
    - o Hosting capacity building resources
  - Hosting capacity building Training materials
    - o Available at arset.gsfc.nasa.gov by societal benefit area, and tool-based
  - Planning Calendar into the future
    - o Plan for the next 12 months of trainings completed by September of each year, by societal benefit are
    - o Trainings posted on the ARSET website 2-3 months prior

Example of CB-21 work in progress

- NASA DEVELOP program
    - GitHub - https://github.com/NASA-DEVELOP (hosts tools/scripts created and approved through NASA's software release process)

    - YouTube - https://www.youtube.com/user/NASADEVELOP (repository of all of our project videos 2011 summer to present)

    - DEVELOP Website - https://develop.larc.nasa.gov/ (repository of all projects 2014 spring to present)

    - DEVELOP Impact Mapper - https://develop.larc.nasa.gov/about.php (hosts info on geographic extent of projects and has links to project pages)

Collaborations with WGISS & Data Cube

- 3-way collaboration between CEOS System Engineering Office, WGISS, and WGCapD to support data cube efforts, e.g. pilot installations, promoting awareness

Collaborations with WGCV

Thank You!

Uniqueness

What makes WGCapD´s Capacity Building Activities Unique?

✓ Are always provided **free of charge**

✓ Provide **access to expertise** from space agencies and universities around the world

✓ Link participants to a **global network** of experts and policymakers

✓ **Create awareness** about international coordination bodies, such as CEOS, GEO, UNOOSA, International Charter for Space and Major Disasters among others

✓ Provide **access to datasets and useful tools** available from CEOS Agencies

✓ Help attendees **developing skills** to aid in many different areas of application