Report Back on Land Data Products Breakout

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Agenda (1.5 hrs)

• **Satellite Land Data Products (30 mins)**
  - Summary Presentation on MODIS, VIIRS, LTDR, HLS, MuSLI, SMAP, ICESat2, ECOSTRESS, GEDI, NISAR data products – Chris Justice
  - Summary of CEOS Land Product Validation Working Group – Jaime Nickeson

• **Brief summary of use and needs presentations from TE Program Elements (30 mins)**
  - CMS – Megan Mcgroddy
  - ABoVE – Scott Goetz

• **Open Group Discussion on Future Data Product Needs (30 mins)**
  - Group Suggestions
Topics

• Data Products from TE relevant Missions Inc. ISS short-lived Missions (Ecostress/GEDI)

• Coarse resolution product continuity MODIS>JPSS VIIRS

• NASA moderate resolution global products (HLS, MUSLI)

• Product Generation and Commitment for Reprocessing (inc. post mission)

• Product Validation Funding – Accuracy Assessment
  • Contributing to international standards (CEOS LPV)

• Land Product Stewardship and Curation
Issues Raised

• Continuing NASA’s global reputation on science quality global data products
• The EOS Era is ending > MODIS has moved to Senior Review > NASA SNPP VIIRS next > operational data continuity starting with NOAA 20
• NASA Land Data Product Activities more fragmented and relatively underfunded
• Product Validation receiving less funding than needed
• NASA encouraging use of international Land Data Products (ESA/JAXA) – more missions, different approach and different standards re. data products
• CEOS Land Product Validation Sub-group – international forum for setting validation standards
  • NASA much less engaged in CEOS LPV than previously
  • International Validation Standards and Protocols more important than previously
• NASA Data Processing exploring Cloud Computing options (e.g. AWS)
  • Major issues of data quality and curation
• GCOS ECV’s now being expanded with new ExV’s  Biodiversity and Ag (GEO/CEOS)
• Community input to NASA on the future of Land Products would be helpful
Observations and Recommendations from the Discussion

• More attention and funding needed for new Mission Data product Lifecycle
• Funded Product Generation activities (Collections/Reprocessing) need to be extended beyond instrument life - for short-lived missions e.g. GEDI, Ecostress
• The EOS and SMAP model of including validation funding as integral part of the Mission Budget - should be generally adopted for future missions
  • As a result, the Soil Moisture Community relatively well organized
• ICESat2 Land Product Validation needs more attention
• More follow-up needed on TE-funded PI proposals that involve data generation and data management plans
• Data curation plans needed for Cloud-generated products - QA metadata, Collections, Validation
  • Tools and guidance needed for Cloud-based processing
• Increased NASA-funded Participation in CEOS LPV needed
  • Biomass Community relatively well coordinated as NASA was involved from the outset
  • Other product Suites relevant to TE - less so

• CEOS Carbon Action directly relevant to TE Program
  • Recommend that sub-elements within NASA’s TE Program (e.g., CMS, ABoVE, TERRA,) and the respective missions PIs and relevant parts of instrument teams (MODIS/VIIRS/ECOSTRESS/GEDI/IceSAT2/SMAP/OCO-3) contribute to and provide recurring updates to NASA’s TE program leads: http://ceos.org/home-2/the-ceos-carbon-strategy-space-satellites/.

• Contributions can include:
  • An updated list of Fiducial Reference measurements collected by TE investigators and NASA field campaigns
  • Participation in inter-comparison exercises (e.g., CEOS-WGCV ACIX II - CMIX: https://earth.esa.int/web/sppa/meetings-workshops/hosted-and-co-sponsored-meetings/acix-ii-cmix)
  • Inclusion of new data products into the CEOS-LPV database (contact Jaime Nickeson for more info: Jaime.Nickeson@nasa.gov)

• Continued NASA Citizen Science initiative needs to augment data collection