

## 53<sup>rd</sup> Meeting of the CEOS Working Group on Calibration & Validation (WGCV)

### DECISIONS

<b>Decision 01</b>	<p>It was agreed that the tentative nomination from Medhavy Thankappan of Geoscience Australia for the position of next WGCV Vice Chair (and subsequently WGCV Chair), will be deferred until formal organisational approval is granted. A formal confirmation of the nomination and presentation at a WGCV team teleconference, subject to agency approval from Geoscience Australia, is to follow as soon as possible. WGCV endorsement of the nomination will take place at the WGCV-54 meeting in Sioux Falls. The formal voting process, outlined in the WGCV Terms of Reference, will be dropped if there is only one nomination.</p>
<b>Decision 02</b>	<p>WGCV agreed to endorse an identified subset of test-sites as a minimal set to request relevant satellite operators (particularly New Space) to make regular acquisitions and provide data (imagery and radiometry) to CEOS WGCV as a means of evidencing their capability in a consistent manner. The proposal will be summarised in a short (1 page) proposal and circulated for review and endorsement via email.</p>
<b>Decision 03</b>	<p>LPV and IVOS Chairs will coordinate a review of the SRIX4Veg Good Practice Protocol with feedback to be returned by June. Feedback will be used to update the document by September, ahead of the next IVOS meeting, where final changes will be reviewed ahead of submission of the document for endorsement at WGCV-54 in October.</p>

### ACTIONS

<b>WGCV-53-ACT-01</b>	<p>In support of the SITSat Task Team’s communication strategy, WGCV members are asked to help gather examples/case studies regarding ‘real world’ impacts of the reduction in uncertainties that are facilitated by SITSats.</p> <p>We seek to show the unique value of these types of missions and highlight differences between usual calibration practices and those provided by SITSats. Examples should be accompanied by clear, transparent metrics (financial, improved decision-making, etc.).</p>	<b>June 2024</b>
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	<p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• <i>The paper from Bruce Wielicki of NASA was cited as a good example.</i></li> <li>• <i>LPV Chair noted ongoing assessments related to soil moisture, cost-value estimates that might be applicable.</i></li> <li>• <i>ACSG Chair noted two potential examples: (i) improving the accuracy of XCO<sub>2</sub> and XCH<sub>4</sub>, e.g., to be able to resolve natural CO<sub>2</sub> fluxes varying by about 0.2 ppm/100 km and ocean fluxes varying by less than 0.1 ppm/100 km while the current XCO<sub>2</sub> accuracy remains 0.8 ppm (John Worden), and (ii) reach the aerosols/PM<sub>2.5</sub> accuracy needed to monitor environmental policies (Shobha Kondragunta). Ref.: discussions in AC-VC-19/ACSG Joint Meeting 2023.</i></li> </ul>	
<p><b>WGCV-53-ACT-02</b></p>	<p>CEOS SEO to explore with the SITSat Task Team the application of the CEOS Visualization Environment (COVE) tool for visualisation of SITSat orbits and acquisition plans.</p>	<p><b>IN PROGRESS</b></p> <p><i>Dave following up with Nigel to set up an initial call</i></p>
<p><b>WGCV-53-ACT-03</b></p>	<p>WGCV Chair to coordinate the drafting of a letter to send to NASA leadership regarding the importance of SITSats and the CLARREO Pathfinder mission, and encouraging an early as possible launch of the CLARREO Pathfinder mission.</p> <p><u>Note:</u> <i>Yolanda Shea can provide the name of the ideal addressee at NASA.</i></p>	<p><b>June 2024</b></p>
<p><b>WGCV-53-ACT-04</b></p>	<p>TMSG Chair, Dirk Geudtner, and WGCV Chair to coordinate an input for the 2024 CEOS Plenary regarding the importance of CEOS Agencies funding missions like TanDEM-X for the provision of Digital Elevation Models (DEMs). Recommendations from this group in view of TanDEM-X mission will eventually cease operations, in view of securing future DEM updates and also DEMs for bare surface in particular (another frequency band in addition to X)</p>	<p><b>WGCV-54</b></p>
<p><b>WGCV-53-ACT-05</b></p>	<p>WGCV Chair and TMSG Chair to raise the idea of creating / testing a global coastal elevation dataset / method with</p>	<p><b>June 2024</b></p>

	<p>the leads of the CEOS Coastal Observations Applications Services and Tools (COAST) Ad Hoc Team (likely soon to be Virtual Constellation) and also assess interest from other CEOS members (e.g., GA / Digital Earth Australia/Africa Coastlines is highly applicable).</p> <p><i>Notes: If there is sufficient interest, consider forming a small working group to further explore and develop this proposal.</i></p>	
<b>WGCV-53-ACT-06</b>	WGCV Chair to send another call for nominations for the role of TMSG Co-chair, which remains open.	<b>April 2024</b>
<b>WGCV-53-ACT-07</b>	Dave Borges (CEOS SEO) and Santhi Sree (ISRO) explore the inclusion of ResourceSat-2 and RISAT-1A data in the CEOS Analytics Lab (CAL), with particular reference to the interoperability study. Dave will also share the details of the Planet data available in the CEOS Analytics Lab.	<b>May 2024</b>
<b>WGCV-53-ACT-08</b>	WGCV Chair to inform MSSG Chair of new ESA representatives to the MSSG.	<b>May 2024</b>
<b>WGCV-53-ACT-09</b>	MSSG Chair and WGCV Chair to coordinate a discussion in MSSG on the relevance of the FRM concept and explore the potential for a contribution to the Assessment Framework activities.	<b>May 2024</b>
<b>WGCV-53-ACT-10</b>	Santhi Sree and WGCV Chair to follow up with Steffen Dransfeld and Aimé Meygret regarding the potential for a TIRCalNet site in India. The first action is to join the Working Group.	<b>May 2024</b>
<b>WGCV-53-ACT-11</b>	<p>Paolo Castracane to add the MDPI Open Access publication on “Choice of Solar Spectral Irradiance Model for Current and Future Remote Sensing Satellite Missions” to the Cal / Val portal, as an example to support IVOS communications regarding the change to the reference solar spectrum.</p> <p>Link: <a href="https://www.mdpi.com/2072-4292/15/13/3391">https://www.mdpi.com/2072-4292/15/13/3391</a></p>	<b>April 2024</b>

<p><b>WGCV-53-ACT-12</b></p>	<p>Dave Borges to connect the CEOS Communications Team with Nigel Fox to investigate opportunities and develop strategies for better promotion and communication of IVOS achievements, recommendations (e.g., solar spectrum), news, events, etc.</p> <p>The CEOS Communications Team could also discuss support for WGCV more broadly, noting the general need for clearer, non-scientific distillations of WGCV outputs and more effective online promotion.</p>	<p><b>May 2024</b></p>
<p><b>WGCV-53-ACT-13</b></p>	<p>Paolo and Nigel to make updates to the FRM Assessment Framework documentation to:</p> <ul style="list-style-type: none"> <li>● Make clear that the assessment is relative to the intended purpose of the site.</li> <li>● Remove subjectivity in parameters by incorporating clarifications present in the accompanying documentation, but which have to date been left out of the Matrix description.</li> <li>● Clarify that verification should be undertaken by independent people from CEOS, not the person filling in the template (i.e., self-assessment followed by independent review).</li> <li>● Make the Validation column a different colour.</li> <li>● Consider inclusion of additional links to reference materials, mechanisms to allow assessors to provide feedback, etc.</li> </ul> <p>Aim to have an updated Version 2.0 by the May timeframe. This will align well with the next NDACC Steering Committee meeting.</p>	<p><b>May 2024</b></p>
<p><b>WGCV-53-ACT-14</b></p>	<p>Paolo, Nigel and Kuze-san, to work with Jean-Christopher Lambert on the issues with the FRM Assessment Framework specifically for the atmospheric domain.</p> <p><u>Notes:</u> May need some clarifications in the accompanying documentation regarding the situation / approach for Level 2 atmospheric data.</p>	<p><b>End April 2024</b></p>
<p><b>WGCV-53-ACT-15</b></p>	<p>WGCV Chair and SAR Subgroup Chair to explore whether altimetry might be a good addition to representation of the SAR subgroup (or WGCV generally).</p>	<p><b>June 2024</b></p>

<b>WGCV-53-ACT-16</b>	Dave Borges (CEOS SEO) to follow up with SAR subgroup lead regarding potential support of the CEOS Analytics Lab to SARCALNET (e.g., for X/L band interoperability studies).	<b>June 2024</b>
<b>WGCV-53-ACT-17</b>	Albrecht von Bargaen to ensure that the WGCV Chair/Vice Chair are invited to the WGClimate meeting at the end of March to discuss WGCV inputs to the Space Agency Response to the GCOS Implementation Plan.	<b>Complete</b>
<b>WGCV-53-ACT-18</b>	Paolo Castracane to draft a page for the Cal/Val Portal where WGCV's contributions to climate / GCOS IP can be collated.	<b>May 2024</b>
<b>WGCV-53-ACT-19</b>	Albrecht von Bargaen to make a connection between the WGCV Chair and GSRN Task Team Chair, Tilman Holfelder (DWD), to discuss coordination of the CEOS and GSRN FRM efforts.	<b>June 2024</b>
<b>WGCV-53-ACT-20</b>	WGCV Secretariat to set up a teleconference between the WGCV Chair and WGClimate leadership (Jeff Privette, Wenying Su) and Albrecht von Bargaen to discuss an initial WGCV response to the GCOS IP.	<b>April 2024</b>
<b>WGCV-53-ACT-21</b>	Cody Anderson and Nigel Fox to summarise the proposed endorsement (ref: Decision 02) regarding a subset of test-sites as a minimal set to request relevant satellite operators (particularly New Space) to make regular acquisitions and provide data (imagery and radiometry) to CEOS WGCV as a means of evidencing their capability in a consistent manner. That is, the match-up database. The communication will include details of the location where this data should be sent/stored. The proposal will be summarised in a short (1 page) proposal and circulated for review and endorsement via email (e.g., one week turnaround for comments).	<b>June 2024</b>
<b>WGCV-53-ACT-22</b>	Valentina Boccia to distribute the draft SRX4Veg Good Practice Protocol for LPV and IVOS review.	<b>End of April 2024</b>

<p><b>WGCV-53-ACT-23</b></p>	<p>LPV and IVOS Chairs to coordinate a review of the SRIX4Veg Good Practice Protocol with their subgroups and provide feedback to Valentina Boccia so an update can be prepared for the September IVOS meeting and then a subsequent final version for endorsement at WGCV-54 (October).</p>	<p><b>June 2024</b></p>
<p><b>WGCV-53-ACT-24</b></p>	<p>Medhavy Thankappan to share the table from the 'CEOS-ARD Surface Reflectance Products: Quality, Consistency and Equivalence' paper with Matt Steventon for reflection on the CEOS-ARD table on ceos.org/ard. The intention is to capture more information about exactly what is included in each of the CEOS-ARD datasets (i.e., whether they include BRDF, terrain illumination, etc.).</p>	<p><b>COMPLETE</b> <i>Medhavy has shared the table. It will be implemented on the <a href="https://ceos.org/ard">ceos.org/ard</a> website soon.</i></p>
<p><b>WGCV-53-ACT-25</b></p>	<p>Marc Thibeault to share SAOCOM data provisioning information with Dave Borges for CEOS Analytics Lab.</p>	<p><b>May 2024</b></p>
<p><b>WGCV-53-ACT-26</b></p>	<p>WGCV members to consider participation in the WMO 1st CIPM STG-CENV, 16-18 September. Also seeking co-chairs for the cryosphere and energy balance sessions from CEOS. Please send expressions of interest to Philippe and Emma.</p>	<p><b>24 March 2024</b> <b>Closed</b></p>
<p><b>WGCV-53-ACT-27</b></p>	<p>Emma Woolliams to organise a follow on conversation with Philippe regarding CEOS representation at the 1st CIPM STG-CENV meeting.</p>	<p><b>July 2024</b></p>
<p><b>WGCV-53-ACT-28</b></p>	<p>Matt Steventon to add RADARSAT-2 ARD pilot / test case paragraph to the CEOS-ARD Strategy 2024.</p>	<p><b>June 2024</b></p>
<p><b>WGCV-53-ACT-29</b></p>	<p>WGCV Chair to coordinate a follow up discussion with subgroup chairs regarding biodiversity activities and potential collaborations. Particularly LPV, SAR subgroup, and also the Ecosystem Extent Task Team Demonstrators.</p>	<p><b>Mid-May 2024</b></p>
<p><b>WGCV-53-ACT-30</b></p>	<p>Nigel Fox to provide Paolo Castracane with a list of current SITSat Task Team members in order to set up a group on the cal/val portal.</p>	<p><b>Complete</b></p>

<b>WGCV-53-ACT-31</b>	<p>WGCV Secretariat to set up the next WGCV team call after SIT-39, in mid-May 2024.</p> <p>The WGCV Secretariat will also set up a coordination meeting regarding the plans for the joint WGCV-WGISS session in October 2024 with Tom Sohre, Nitant Dube, Philippe Goryl, and Cody Anderson.</p>	<b>In Progress</b>
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