

Committee on Earth Observation Satellites



Work planning for 2022-24 8-9 September 2021, Virtual Meeting



Celebrating 10 years of... WGCapD

Contents

Executive summary	2
Key take-aways	2
Next steps	3
Meeting sessions in detail	4
Session 1: State of the deliverables	4
Key points	4
Session 2: Capacity building in the UN Ocean Science Decade	5
Collaboration ideas	6
Session 3: Capacity building in disasters, climate, land surface imaging, and SDGs	6
Collaboration ideas	7
Session 4: Strengthening WGCapD infrastructure and use of CEOS infrastructure	7
Collaboration ideas	8
Session 5: Rising to meet WGCapD "grand challenges"	8
Key points	8
Session 6: Consolidating the 2022-24 work plan	10
Conclusion	10
Annex 1: Meeting agenda	1
Annex 2: Participants	4

Executive summary

The Committee on Earth Observation Satellites (CEOS) Working Group on Capacity Building and Data Democracy (WGCapD) held a virtual meeting September 8-9, 2021, to advance its 2022-24 work plan. Some 55 people representing 21 CEOS members and associate member agencies, and others participated over the course of two days.

The aims of the meeting were to plan deliverables for 2022-24 and brainstorm strategies for greater collaboration among WGCapD members and with other CEOS work teams. The meeting included presentations and discussions to assess progress and anticipate future challenges and opportunities.

A key element was exchanges between WGCapD and CEOS working groups, virtual constellations, and other work teams to explore shared

The meeting agenda, session notes, and presentations are available at: https://ceos.org/meetin gs/wgcapd-workplanningmeeting/session notes,

deliverables. A highlight of those exchanges was a first-ever discussion with ocean-focused CEOS work teams. This conversation centered on capacity building in support of the UN Decade of Ocean Science for Sustainable Development.

Key take-aways

- Based on participant contributions over the course of the meeting, the WGCapD Secretariat came away with a summary of potential deliverables for the 2022-24 work plan. The current draft of that document, reflecting these inputs, is <u>here</u>.
- The exchanges with other CEOS work groups were successful in identifying a range of possible collaboration opportunities. To keep the momentum up, participants suggested that WGCapD designate informal champions/liaisons to maintain links with counterparts in the work teams. Another idea was continued participation in future working group and virtual constellation meetings to foster dialogue and increase buy-in and engagement with capacity development activities.
- A suggestion to foster collaboration across all CEOS work teams was to create a "megadeliverable" on a specific topic. In 2020, floods were suggested as the topic of a megadeliverable. This approach might be a way to scale up impact as well as regularize cross-work team collaboration.
- Given that WGCapD accounts for nearly one-third of all CEOS deliverables, participants discussed whether this number should be reduced to maximize impact. The challenge with the volume of deliverables is that they are hard to track; the points of contact (POCs) are sometimes not responsive. Another suggestion was to add rigor to the deliverables by applying a set of criteria related to a minimum number of participating agencies and POC commitments on reporting. Participants were open to various ideas, but the question was not resolved during the meeting.
- Currently, CEOS has 61 members, but only about 20 participate in WGCapD, with about 10 of them participating very actively. Recommendations to increase participation included greater efforts to build regional leadership. For example:

September 2021 Work Planning Meeting Report

- Here, too, WGCapD champions could strategically reach out to smaller agencies, which have limited time and human resources, to engage them in a targeted way, for example, on a single deliverable (rather than overall WGCapD meetings/business).
- Outreach could include emerging space agencies, with the aim of fostering their use of EO. Suggestion: a train-the-trainers model for newer agencies, who could then train others.
- The champions could also re-engage inactive members.
- Recruitment materials, such as a 1-pager on WGCapD, would be helpful.
- The Secretariat and current members could create an informal onboarding or support process to help acclimate new participants.
- WGCapD serves a wide variety of audiences, but it may need to focus efforts to be effective. As one participant put it: "By making something for everyone, we make it for no one, so we need to target our products." One suggestion was to make WGCapD's focus more internal, for example, working with and through other CEOS groups and initiatives, or feeding into the efforts of GEO.
- Throughout all sessions, participants underscored the importance of WGCapD remaining true to its mandate for capacity building as well as data democracy, particularly helping users "make the right choices" about which tools and data sets to use, when and how.

Next steps

Based on the summary of potential deliverables, the Secretariat developed a work plan collaboration tool. WGCapD members are asked to take leadership of deliverables and arrange partnerships, ensuring that at least two CEOS agencies are engaged in each deliverable. The complete CEOS work plan, including WGCapD's section, will be approved at the SIT in March.

Maximizing online collaboration

To facilitate engagement across time zones, the Secretariat created a shared online document to capture collaboration ideas. This Jamboard was circulated before the meeting and linked in the agenda and session chats so that participants had a place to contribute ideas whenever they had time. It was used most effectively during the work team exchanges. The notes were integrated into the draft deliverables list.



Meeting sessions in detail

The meeting was opened by NASA's Nancy Searby, the WGCapD chair, and VNSC's Pham Thi Mai Thy, the WGCapD vice chair. Marie-Claire Greening, the CEOS Executive Officer, provided an overview of the CEOS work planning process and how WGCapD's deliverables contribute to the overall work plan.

Session 1: State of the deliverables

This panel and discussion session looked at WGCapD's current portfolio of deliverables to assess what works well, what doesn't work well, and what can be done to improve the quality, follow-through, and uniqueness of deliverables. Three presenters with substantial CEOS and/or WGCapD experience provided their perspectives on strengths, opportunities, and ideas for improvement.

- Moderator: Yasha Moz, NASA and WGCapD Secretariat
- Contributors:
 - Marie-Claire Greening, CEOS
 - o Prakash Chauhan, ISRO
 - o Lauren Childs-Gleason, NASA and WGCapD Secretariat

Key points

Strengths

- Good mix of global, regional, and national projects.
- Good number and execution of deliverables, with many different target groups, including indigenous groups.
- In-person training was a large contribution (though curtailed now by COVID).
- Important new initiatives with other CEOS working groups and groups outside CEOS. (Example: EOTEC DevNet).
- Content is high quality, especially on the cutting edge of satellite technologies, such as SAR, hyperspectral, etc.
- All deliverables have multiple CEOS agencies, which brings out the best of the experts. Strength of the group is connecting experts across the world.
- WGCapD contributes many deliverables to the CEOS work plan and represents broad collaboration. WGCapD deliverables engage current and potential EO users, which is unique in CEOS.

Challenges

- Most of our deliverables are training, MOOCS, etc. The mandate also includes data sharing, open-source science, and knowledge transfers to end-users. More deliverables are needed around this aspect.
- Most data are open-source, but some data sets (especially near real-time data) are proprietary. Can we bring people together to promote more data sharing there?

September 2021 Work Planning Meeting Report

- We have 61 members in CEOS, but 21 members actively participate. Maybe 7-10 are VERY active while others are less active. WGCapD work is voluntary. It can be difficult to commit based on resources or an individual's position within the agency. Need to develop regional leadership so more people can contribute.
- Need to engage even more with other WGs, especially Climate. Could do more with SDGs and Polar Science, too.
- We should connect with the private sector more to get high-quality, fine resolution data, especially for disaster response.
- Many products and services already exist, but potential end users are not aware of these services. Need to bridge this gap between scientists, users, and policy makers.
- Could do more to coordinate resources across agencies.
- With WGCapD accounting for one-third of CEOS' deliverables, the volume makes it challenging to track and coordinate deliverables. Reporting and point of contact (POC) communication are insufficient; there should be greater effort to report consistently.
- The actual development process for deliverables is often last minute and chaotic. Sometimes collaborators are notional and not actually engaged. Lots of missed opportunities to engage with regional GEOs.

Ideas for improvement

- Focus on assessing needs, designing, and implementing solutions with more hands-on opportunities.
- Member agencies should bring more representatives into the group (especially the leadership).
- Important to understand needs of national/regional stakeholders better.
- Number of deliverables should be curtailed for improved focus.
- To remedy the rushed process, start the process of deliverable production earlier, perhaps with an "idea marketplace" where members could pitch to potential collaborators, gain feedback, and allow ideas to mature before submission in the work plan.
- Should consider a balanced portfolio of deliverables, not as ad hoc; for example, consider breadth of activity types, including data democracy piece, thematic areas, geographic ties, etc.
- Consider timing the ideas to a 3-year plan; the vast majority should be completed within 1-year, with fewer reaching into the future, since those usually get lost.
- Streamline deliverables reporting/status updates on monthly calls (use a quarterly Google Form, for example).
- Consider how to pull in new members.
- Require criteria for adding a deliverable to the work plan. For example: 2+ members, discrete item not part of the agency work plan, willingness of POC to keep up reporting.

Session 2: Capacity building in the UN Ocean Science Decade

With 2021-30 designated the UN Decade of Ocean Science for Sustainable Development, CEOS work teams focused on oceans highlighted ongoing and planned capacity building activities and ideas for possible collaboration with WGCapD. Participants represented the Ocean Colour Radiometry Virtual Constellation (OCR-VC), Coastal Observations Applications Services and Tools Ad Hoc Team (COAST-AHT)

September 2021 Work Planning Meeting Report

and Sea Surface Temperature Virtual Constellation (SST-VC). After sharing their own high-level priorities, each group shared collaboration ideas.

- Moderator: Antonios Mouratidis and Craig Donlan, ESA
- Contributors:
 - OCR-VC: Ewa Kwiatkowska, EUMETSAT
 - COAST AHT: Merrie Beth Neely, NOAA
 - SST-VC: Ed Armstrong, NASA

Collaboration ideas

OCR VC-WGCapD

- Possible collaboration on online training courses for users of remote sensing (including OCR) to reach a wider audience.
- Support in working towards open science principles: ongoing push for data, tools, and the accompanying instructions for processing data (publications, manuals, etc.) to be open (accessible, reproducible, open for contribution).
- Areas of future development:
 - Capacity building initiatives around water quality (HAB assessments, etc.).
 - Support for development of programming tools for training and sharing scientific workflows (e.g. Jupyter notebooks) and support for the respective community of practice.

COAST AHT-WGCapD

- Collaboration on regional user co-design/co-development workshops.
- Expanding the use of the CEOS Earth Analytics Interoperability Lab (EAIL).
- Matching target audiences with outreach efforts.
- Best practices in engaging audiences, especially leveraging new technology to engage younger audiences.

SST VC-WGCapD

- Collaboration on analysis-ready data (ARD) activity and products including possible work with LSI-VC, covering Landsat 2 data for ocean-specific variables.
- Developing a new framework for CARD4L (now just CARD).
- Training on coastal ocean bathymetry and ocean color (optical), with a follow-on SAR specific training program, and a comparison of the two? NOAA, ISRO, WGs, and VCs could collaborate. (Prakash Chauhan idea).
- Training on coastline changes with simple georeferencing tool (Raj Kumar idea).

Session 3: Capacity building in disasters, climate, land surface imaging, and SDGs

Given the existing integration and significant possibilities for future cooperation, representatives from CEOS working groups on Disasters and Climate; the Land Surface Imaging virtual constellation (LSI-VC); and Sustainable Development Goals Ad Hoc Team (SDG-AHT) shared ideas on synergies with WGCapD

September 2021 Work Planning Meeting Report

activities. After sharing their own high-level priorities, each group shared ideas on potential deliverables with WGCapD.

Collaboration ideas

WGDisasters-WGCapD

- Capacity development in most thematic Pilot/Demonstrators (seismic hazards, volcanoes, landslides, flood pilot, wildfire).
- Strengthen ties to GEO Working Groups, especially Capacity Development and Disaster Risk Reduction.
- Emerging GEO-DARMA projects (Americas).

WGClimate-WGCapD

- Support for capacity building for decisions on use of the 2023 Global Stocktake. Current thinking is a curriculum on the products and their use.
- Could also use support in defining best practices, methodologies, and discoverability of datasets such as the Inventory (<u>https://climatemonitoring.info/ecvinventory/</u>), which contains more than 1500 climate data records and covers almost all ECV products listed in the GCOS-200.
- A use case on "Developing a top-down carbon dioxide and methane inventory to aid the global stocktake" could be helpful for capacity building.

LSI VC–WGCapD

- Collaboration possible around support for CEOS ARD, especially related to user engagement, pilot activities, foster connections to expand the uptake, CEOS ARD webinars.
- Possible to have WGCapD representation on the upcoming CEOS ARD Oversight Group?
- WGCapD contributions welcome on capacity building in the CEOS ARD Strategy 2021 (<u>ARD</u> <u>strategy document</u>).

SDG AHT-WGCapD

- Potential cooperation on a MOOC on EO for SDG.
- Capacity development around the Urban Toolkit on Sustainable Cities (eotoolkit.unhabitat.org).
- Engagement with the land degradation sub-team on capacity building around their indicators.
- Collaborating on the existing SDG webinar deliverable, likely taking place in Q1 2022. May coordinate with ARSET.

Session 4: Strengthening WGCapD infrastructure and use of CEOS infrastructure

CEOS colleagues from the Working Group on Information Systems & Services (WGISS) and the NASA Systems Engineering Office (SEO) joined to discuss future priorities related to WGCapD's "backbone," including improvements to the calendar, approaches for promoting new products, metadata standards, disseminating resources, etc. After sharing their own high-level priorities, they shared collaboration ideas.

Collaboration ideas

SEO-WGCapD

- AmeriGEO contribution.
- Virtual EO educators/trainers conference.
- Capacity building for flooding (ODC Sandbox tool available for this).
- SAR training for Forest & Rice monitoring (SEO has a Google Colab tool for this).

WGISS-WGCapD

- Relevancy Ranking of Data Search Results.
- Data Cubes for Large Scale Data Analytics.
- The Burgeoning Role of Python for EO Data Analysis.
- Webinar 4: The Open Geospatial Consortium (OGC) Coverage Standards Suite: Introduction & Overview.
- Webinar 5: Agile Development and the Scaled Agile Framework.

Joint SEO-WGISS-WGCapD

- Webinar 6: Future Data Access & Analysis Architecture Initiative Webinar (Joint WGISS/WGCapD Activity).
- Webinar 7: Jupyter Notebooks Initiative Webinar (Joint WGISS/WGCapD/SEO Activity).

Session 5: Rising to meet WGCapD "grand challenges"

In the second of two sessions reflecting on ways to strengthen WGCapD's work, participants met in small groups to analyze three current challenges and brainstorm new approaches to them.

Facilitators:

- Group 1: Jorge Del Rio Vera, UNOOSA
- Group 2: Dan Matsapola, SANSA, and Linda Tomasini, CNES (these two groups merged)

Key points

Topic 1: Catalyzing greater member participation and representation

WGCapD has more than 60 members and associate members, but a small subset attends meetings and collaborates on deliverables. What can be done to encourage greater participation and leverage the resources of the global network? Responses:

- Build member recruiting materials: a 1-pager on WGCapD with the value/benefits of participation (i.e., greater visibility, access to community of experts), time/resource requirements, etc.
- WGCapD champions could recruit individuals to participate in a targeted way.
- Be strategic in recruiting target specific organization in regions where we lack participation.
- Find ways to re-engage with members who have been inactive.
- Invest in onboarding people when they join and help them pass the torch when they leave organizations.

September 2021 Work Planning Meeting Report

- Highlight both capacity building and data democracy to attract interest.
- Encourage personal outreach to each agency's network connections to bring in new members.
- Ask current members to bring in others from their agencies to support deeper engagement.
- Personalize and target engagement with new members rather than inviting them to monthly meetings right away, which may be less relevant to them at the beginning.

Topic 2: Ensuring WGCapD activities reach target audiences

Is the working group serving the populations it intends to serve? How can we steer our deliverables to better meet the needs of our target communities? Responses:

- Target audience = humans (Anyone and everyone!).
- Follow the demand. Target audience depends on products being developed, where you are working, etc.
- WGCapD serves a broad set of audiences: students, scientists, decision makers, policy makers, the rest of CEOS, Earth science/EO educators, etc.
- Should our focus be more internal, i.e., supporting the many capacity building needs of other CEOS groups/initiatives? Should we feed into another demand-driven effort, e.g., GEO or other CEOS groups?
- By making something for everyone, we make it for no one, so we need to target our products, even if we cover many audiences over time.
- Target audiences should align with key performance indicators

Topic 3: Fostering deeper collaboration within CEOS, particularly among member agencies

WGCapD deliverables tend to be supported by just two member agencies. What more can be done to engage more agencies and partners in key deliverables, ultimately streamlining efforts, broadening their impact and reaching more audiences? Responses:

- Increase recognition of new members contributing to deliverables.
- Build off shared interests and priorities.
- Highlight how members can contribute to efforts that align with their own priorities and through collaboration on something larger than they would have not been able to accomplish alone.
- Increase coordination and specialization: if everyone tries to do everything we don't get as far as if we coordinate and build off each other's work. We have some of that with MOOCs but we could do more.
- Do outreach to CEOS entities that have few deliverables to collaborate. Started today, what next?
- Foster collaboration on a mega-deliverable on a specific topic. Was discussed last year. Floods was one idea.
- Find champions who can do work across WGs and VCs.
- Get time on other WGs and VCs agendas to work engagement and increase buy-in.
- Get folks on both sides to maintain the relationships (ex. Kent/Esther for WGISS, Brian for SEO, etc.)
- Use Canada's regional challenge model to reach across sectors and collaborate more deeply on global issues.

September 2021 Work Planning Meeting Report

Session 6: Consolidating the 2022-24 work plan

Based on conversations over the first two days, as well as contributions to the Jamboard, participants reviewed ideas and shared a few priorities for work plan deliverables. These ideas were captured in the meeting notes and integrated into the work plan collaboration tool linked above.

Conclusion

This work plan session was the last meeting for Nancy Searby in her role as Chair of WGCapD and Pham Thi Mai Thy in her role as Vice Chair. In his closing, Jorge Del Rio Vera thanked them very sincerely for their service. Other WGCapD members also recognized and expressed appreciation for their excellent leadership. Nancy and Mai Thy assured the group that they will continue to be deeply involved.

A few notable quotes from the two days

"[WGCapD is] small but mighty. We can serve as a catalyst to affect change for CEOS, reaching out to new members and partners. Capacity building is the natural first touch – the "business card" that CEOS can use to invite new members in."

"Our challenge is not a shortage of opportunities, as there is a lot of interest...Let's pull together a short list of priorities and figure out how to work together on them."

"We need to make sure we have a thriving community of young people excited about ocean science, who will build careers throughout this decade. We can provide training and generate excitement about oceans."

Annex 1: Meeting agenda

Working Group on Capacity Building and Data Democracy (WGCapD) Mid-Year Meeting

Work plan 2022-24: Enhancing Our Strategy 8-9 September 2021

VIRTUAL MEETING: https://www.gotomeet.me/WGCapD/work-planning-meeting

DIAL-IN INFORMATION ON LAST PAGE TIMES US EASTERN DAYLIGHT TIME (GMT-4) (AND UTC)

Agenda

Day 1: Wednesday, September 8 Generating new ideas for the 2022-24 workplan		
Opening 08:00-08:20 (12:00-12:20 UTC)	 Meeting kick-off Welcome and introductions Meeting strategy and adoption of agenda Highlights of the CEOS work planning process 	 Facilitator: Erin Martin Nancy Searby, NASA Pham Thi Mai Thy, VNSC All participants Marie-Claire Greening, CEOS
Session 1 08:20-09:20 (12:20-13:20 UTC)	State of the deliverablesLooking at WGCapD's current portfolio, what works?What doesn't work? How can the quality, follow-through and uniqueness of deliverables improve? Should there be some criteria for adding deliverables to the work plan?Three CEOS colleagues address these questions as they provide their opinions on opportunities and gaps in the current work plan and its alignment with WGCapD priorities.Moderator: Yasha Moz, NASA and WGCapD Secretariat Contributors:• Marie-Claire Greening, CEOS • Prakash Chauhan, ISRO • Lauren Childs-Gleason, NASA and WGCapD Secretariat	 Facilitator: Erin Presentations (5-7 min each) Discussion/Q+A (30 min) Online collaboration: In preparation for the work plan discussion in Session 6, participants may propose new 2022-2024 deliverables via this Jamboard. They may contribute before and during the sessions, and on their own time between September 8 and 9. Use this space to indicate interest in collaborating on others' deliverables. This document will be reviewed and refined on the last day of the meeting. (Note: These ideas should reflect consideration of the key points and consensus ideas raised in Session 1.)
09:20-09:50 (13:20-13:50 UTC)	LEG STRETCH/SOCIALIZING (in Wonder) Click <u>here</u> to join. Tips on Wonder <u>here</u> .	
Session 2 09:50-10:50	Capacity building in the UN Ocean Science Decade With 2021-30 designated the UN Decade of Ocean Science for Sustainable Development, CEOS work teams focused on oceans will highlight ongoing and planned capacity building activities and ideas for possible	 Facilitator: Erin Short presentations from each contributor followed by discussion using the <u>Jamboard (slide 5)</u>

September 2021 Work Planning Meeting Report

(13:50-14:50 UTC)	 collaboration with WGCapD. Discussion topics might include: Shared interests in capacity building and data democracy Approaches to needs assessment 	
	 Ideas for cooperation and collaboration, both short-term and long-term, including potential shared deliverables Identification of gaps 	
	Moderator: Antonios Mouratidis, ESA <u>Contributors</u> : • OCR-VC: Ewa Kwiatkowska, EUMETSAT • Craig Donlon, ESA • COAST AHT: Merrie Beth Neely, NOAA • SST-VC: Ed Armstrong, NASA	
Session 3 10:50-11:50 (14:50-15:50 UTC)	 Capacity building in disasters, climate and SDGs Given the existing integration and significant possibilities for future cooperation, representatives from CEOS working groups on Disasters and Climate; the Land Surface Imaging virtual constellation; and Sustainable Development Goals Ad Hoc Team will highlight synergies with WGCapD activities. Each group will be asked to share a few points on their current work, upcoming work plan and future vision as a catalyst for brainstorming on possible shared deliverables or other collaboration. Moderator: Chris Barnes, USGS Contributors: WGDisasters: Pierric Ferrier, CNES; Andrew Eddy, Dave Borges, NASA WGClimate: Dave Crisp, NASA LSI-VC: Matt Steventon, LSI-VC Secretariat SDG AHT: Argyro Kavvada, NASA 	 Facilitator: Erin Format: 3-minute lightning talks, followed by discussion using the <u>Jamboard</u> (slide 7)
CONCLUSION OF DAY 1		

Day 2: Thursday, September 9

08:00-08:05	Welcome and overview of the day	
	Strengthening WGCapD infrastructure and use of	
	CEOS infrastructure	
Session 4	CEOS colleagues from the Working Group on Information	
08:05-08:45	Systems & Services and the Systems Engineering Office	
	join in to discuss future priorities related to WGCapD's	
(12:05-12:45	"backbone," including improvements to the calendar,	
UTC)	approaches for promoting new products, metadata	
,	standards, disseminating resources, etc.	

Strengthening WGCapD operations

- Moderator: Erin Martin
- Facilitator: Erin
- Format: 3-minute lightning talks, followed by discussion using the <u>Jamboard</u> (slide 8)

September 2021 Work Planning Meeting Report

	Moderator: Konton Rosa, NACA	
	Moderator: Kenton Ross, NASA	
	 <u>Contributors</u>: SEO: Brian Killough and Kim Holloway, NASA 	
	 WGISS: Makoto Natsuisaka, JAXA 	
	Rising to meet WGCapD "grand challenges"	
Session 5 08:45-09:45 (12:45-15:45 UTC)	 Rising to meet WGCapD "grand challenges" Participants are asked to put their hearts and minds to work to find new ideas and innovative approaches to dynamics that could greatly strengthen the working group's impact. The three topics: Catalyzing greater member participation and representation: WGCapD has more than 60 members and associate members, but a small subset attend meetings and collaborate on deliverables. What can be done to encourage greater participation and leverage the resources of the global network? WGCapD target audiences: Is the working group serving the populations it intends to serve? How can we steer our deliverables to better meet the needs of our target communities? Fostering deeper collaboration: WGCapD deliverables tend to be supported by just two member agencies. What more can be done to engage more agencies and partners in key deliverables, ultimately streamlining efforts, broadening their impact and reaching more audiences? Scene-setter presentation: Nancy Searby, NASA Breakout moderators: Group 1: Jorge Del Rio Vera, UNOOSA Group 3: Linda Tomasini, CNES 	 Breakouts will be held in Wonder: Click here to join. Scene setter presentation (5-7 minutes) followed by moderated breakout groups with guiding questions (35 minutes)Participants will be assigned to a group during the meeting.
00.45.40.45		
09:45-10:15 (13:45- 14:15 UTC)	LEG STRETCH/SOCIALIZING (in Wonder) Click <u>here</u> to join. Tips on using Wonder <u>here</u> .	
Session 6 10:15-11:15 (14:15-15:15 UTC)	Consolidating the 2022-24 work plan Building on contributions made to the shared collaboration document on new work plan deliverables, participants will "roll up their sleeves" to review ideas, identify areas of possible cooperation and collaboration, and agree on next steps for finalizing the work plan. The session will kick off with a synthesis of Session 5 breakout groups and a review of the shared collaboration document.	 Facilitator: Erin Moderator: Sydney Neugebauer, NASA and WGCapD Secretariat All participants
11:15-11:30 (15:15-15:30	WRAP-UP AND CLOSING	Nancy, NASAMai Thy, VNSCJorge, UNOOSA

September 2021 Work Planning Meeting Report

UTC)

Annex 2: Participants

Koji Akiyama, JAXA	Dan Irwin, NASA/SERVIR
Ed Armstrong, NASA/SST-VC	Argie Kavvada, NASA
Guy Aube, Canadian Space Agency	Brian Killough, NASA/SEO
Christopher Barnes, USGS/KBR	Tony Kim, NASA/SERVIR
Brock Blevins, NASA ARSET	Pavel Kiparisov, UNOOSA
Michael Bock, DLR AR-AO	Ewa Kwiatkowska, EUMETSAT/OCR-VC
Dave Borges, NASA/WGDisasters	Raj Kumar, ISRO
Stephen Briggs, ESA	Erin Martin, Facilitator
Sergio Camacho, Instituto Natl. Astrofísica, Óptica, Electrónica	Daniel Matsapola, South African National Space Agency
Amalia Castro Gomez, RSAC c/o ESA/ESRIN	Sean McCartney, NASA
Prakash Chauhan, ISRO	Antonios Mouratidis, Aristotle University of Thessaloniki
Emil Cherrington, NASA/SERVIR	Yasha Moz, NASA
Lauren Childs-Gleason, NASA	Makoto Natsuisaka, JAXA
Marina Compagnucci, CONAE	Sydney Neugebauer, NASA
Esther Conway, RAL Space/WGISS	Merrie Neely, NOAA - CEOS COAST
David Crisp, NASA/WGClimate	Kent Ross, NASA/DEVELOP Program
Albert DeGarmo, NOAA	Francesco Sarti, ESA
Jorge Del Rio Vera, UNOOSA	Kerry Sawyer, NASA
Paul DiGiacomo, NOAA	Nancy D. Searby, NASA HQ Earth Science Division
Craig Donlon, ESA	Tushar Shukla, ISRO
Robert Eckardt, EO College	Matt Steventon, LSI-VC Secretariat
Andrew Eddy, WGDisasters	Wenying Su, NASA/WGClimate
Pierric Ferrier, CNES/WGDisasters	Pham Thi Mai Thy, VNSC
Marie-Claire Greening, CEOS Executive Officer	Linda Tomasini, CNES
Betzy Hernandez, NASA/SERVIR	Juan Carlos Villagran de Leon, UNOOSA / UN-SPIDER
Kim Holloway, NASA / CEOS SEO	Robert Woodcock, WGISS
Ken Holmlund, WMO	Wenbin Zhang, UNOOSA
	Svetlana Zolotikova, UKSA GEO-CEOS Office