CGMS-50 WGII actions & recommendations

SCIR International Cooperation

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**Intersessional Meeting 14th March 2023**

Proposed agenda

1.    Review of science questions to WMO impact workshop

2.    Review the WG2 internal actions

3.    ...

**Intersessional Meeting 25th January 2023**

Proposed agenda

1.    Detailed discussion of the agenda for WG2 2023

2.    Agreeing on priorities from Agencies' perspective (to be mentioned also in the invitation letter)

3.  any logistics problem

4.     Science questions to be provided to NWP impact Workshop

5.   Dates for a series of short online meetings with the working groups in order to see their view on the priorities and the future directions of CGMS

**Intersessional Meeting 23rd November 2022**

Proposed agenda

1.    Proposing an agenda for WG2 2023 and relative discussion

2.    Proposing a template for best practices

3.    Proposing a series of short online meetings with the working groups in order to see their view on the priorities and the future directions of CGMS …

4.    GSIC - annual meeting 27th Feb week - college park maryland meeting in presence (possible limited hybrid)

Events

26th November - launch Ocean Indian satellite (ocean color, scatterometer, SST)

WMO information day for private sector (satellite providers) to discuss data policy - small/cube sat companies making them more familiar with WMO framework.

OSCAR space workshop 6-7 Feb (completely online)



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| Color coding | | | |
| High level - and recommendations to plenary should come from the green …. Will be addressed in CGMS-50 WGII | Best Practices and Periodic actions are monitored by the related WG - we need to build a Best-Practices table trying to identify intermediate categories and concerned WG Will be addressed in CGMS-50 WGII, if time available | Internal WG business Will be dealt with by the WG outside the plenary session (by e-mail etc) |  |

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| **CGMS-50 WGII actions** | | | | | | | | |
| Actionee | AGN item | Action # | Description | Action feedback/closing document | Deadline | Status | HLPP ref | Priority level |
|  |  |  | ***Please include all CGMS-49 actions/recommendations that remained open following CGMS-50 (before the CGMS-50 actions).***  ***Please add colour coding as necessary*** |  |  |  |  |  |
| CGMS WGII members | 2 | WGIIA49.03 | Define driving applications to determine the temporal coverage and spectral coverage needed as part of a LEO constellation. (For example – what temporal, spectral, and spatial resolutions needed to monitor tropical cyclones in “all sky conditions” ?) | **2023: possible outcome a report to CGMS-51**  **2022 19 May:** NOAA is undertaking such activity, and will compile a report and share with WGII once ready. NOAA/M. Goldberg to identify a potential focal point of contact/lead.  2022 21 Mar: A lead needs to be defined for this action to take it forward, or it will be closed. The scope needs to be narrowed down (instrument oriented) 2021 10 Dec:  Action send again the request … | End 2022,  CGMS-51  (CGMS-50) | **OPEN** |  |  |
| CGMS WGII members | 2 | WGIIA49.02 | Agencies to provide case studies demonstrating the benefits of additional orbital planes, beyond use of data in NWP. | **2023**:   * something available by end of 2023 by EUMETSAT - precip and hydrology * Megatropics ISRO (high inclined orbits vs polar orbit) to submit a short report - real time precip. monitoring * Already available ESA study on MW sounding - different orbits - for NWP   **2022 19 May:** Ref. CGMS-50 NOAA-WP-19. Reminder to WGII necessary for sharing further case study demonstrations.  2021 10 Dec:  Action send again the request … collect NOAA MW and Hyperspectral workshop outcome | CGMS-51  (CGMS-50) | **OPEN** |  |  |
| CGMS members (from plenary to WGII) | 7 | WGII/A48.19 (from Plenary A47.09) | Action transferred from plenary CGMS-48 to WGII Arctic observations: Provide product priorities for Arctic observations for a special Arctic session in WG II during CGMS-49 (Members with planned Arctic observation missions are requested to include a status report in the agency report) | **2023:**   * **WMO** is reinstating the polar satellite task group (PSTG) - inviting CGMS and CEOS to propose PoCs to develop ToR of this group then presenting ToR to WG2 - additional observations on land surface - cryosphere etc (a potential good point for having a CGMS Earth System Land WG) * New missions: Russia, Canada ...   **2022 19 May:** Postponed until CGMS-51  2021 10 Dec: Proposed action for a session at plenary (ROSHYDROMET, NOAA Arctic programme, Europe, other agencies ... ) to analyse if there is a specific objective for 2022- Mitch Ken JV Paolo CGMS-49 WGII Apr 2021: CGMS-49-NASA-WP-01, CGMS-49-ECCC-WP-01 2021 11 Mar/2021 Jan: Topic on the WGII CGMS-49 agenda (and for plenary at CGMS-50). | CGMS-51  (CGMS-49) | **OPEN** |  |  |
| CGMSSEC & WMO |  | WGIIA50.01 | CGMSSEC and WMO to consider if night-time light capabilities should be covered in HLPP, the CGMS Baseline, and should be reflected in the WMO Gap Analysis | Ongoing (to organize a meeting online maybe) | CGMS-51 | **OPEN** |  | High Priority |
| CGMS WGII Chairs and Rapporteurs |  | WGIIA50.06 | CGMS WGII Chairs and Rapporteurs to propose a procedure for endorsement of new co-chair / rapporteurs for the International Science Working Groups to be presented to the CGMS Plenary for approval | To prepare a draft proposal for next intersession meeting (by November - Jan ... ) | GCMS-51 | **OPEN** |  | High Priority |
| GCMS Plenary |  | WGIIA50.09 | CGMS Plenary are requested to endorse the upcoming Third International Operational Satellite Oceanography Symposium (OSOS-3), planned for spring 2023 to be held in South Korea | Final check ! and close it | CGMS-50 | **CLOSED** |  | High Priority |
| IESWG |  | WGIIA50.14 | IESWG to prepare a draft proposal on establishing a new CGMS International Science Working Group, adding an operational context, for review/endorsement by WG II Co-chairs and rapporteurs as well as its members and for further endorsement by Plenary | Asking IESWG to present the operational context to next Intersassional Session and then finalize it | 3 June 2022 | **OPEN** |  | High Priority |
| CGMS WGII members |  | WGIIA50.02 | CGMS WGII members are invited to nominate candidates for positions of Vice-Chairs for GSICS-EP and GRWG. Please provide nominations to [cgmssec@eumetsat.int](mailto:cgmssec@eumetsat.int) and [mitch.goldberg@noaa.gov](mailto:mitch.goldberg@noaa.gov) | Request Mitch to report to CGMS WG2 by email and next session | Sept 2022 | **OPEN** |  | High Priority |
| CGMS WGII members |  | WGIIA50.03 | CGMS WGII members are invited to nominate candidates for a Subgroup within GSICS on Space Weather Cal/Val and Intercalibration, which will be focused on providing intercalibration for Space Weather. Please provide nominations to [cgmssec@eumetsat.int](mailto:cgmssec@eumetsat.int) and [mitch.goldberg@noaa.gov](mailto:mitch.goldberg@noaa.gov) | Remind during the WMO space weather meeting (October 2022 - Ken action) - done | Sept 2022 | **CLOSED** |  | High Priority |
| WG II Co-chairs and rapporteurs |  | WGIIA50.12 | WG II Co-chairs and rapporteurs to review the Terms of References of IESWG and agree on the way forward with respect to submitting a proposal to Plenary to establish IESWG as a new CGMS International Science Working Group | to be finalized after IESWG presentation on the operational context | 3 June 2022 | **CLOSED** |  | High Priority |
| IESWG |  | WGIIA50.14 | IESWG prepared a draft proposal on ToR for establishing a new CGMS International Science Working Group. Based on first outcomes, Working Group II proposes:  - to finalize Terms of reference and circulate within CGMS in order to get feedback;  - to be presented at CGMS-51 Plenary or endorsed off-line;  - to engage IESWG in discussions on future priorities for CGMS Scientific Working Groups |  | 3 Jun 2022 | **CLOSED** |  | High Level Priority |
| CGMS Space Agencies |  | WGIIR50.12 | CGMS Space agencies are encouraged to maintain space-based assets beyond the design lifetime as long as they provide value added observations on a safe and affordable basis as determined by the operating agency | Recommendation ...  At NASA we are starting the new (triennial) senior review process to inform our plans for how to move forward with mission extensions!  Similarly EUMETSAT |  |  |  | High Priority |
| CGMS Members |  | WGIIR50.04 | (IROWG) All providers of RO observations are encouraged to classify RO data as core data in the sense of the WMO Unified Data Policy (Res. 1). Therefore, free, timely and unrestricted access shall be provided to NRT RO data and free and unrestricted access shall be provided to archived raw data (including auxiliary data) | **2023**: IROWG is preparing a best-practice document  Acknowledge the new data buy approach implemented by NOAA (for Jan2023 to Jun2023) - towards free data access - continue to be IROWG recommendation - risk of loosing data for climate monitoring (data that are not freely provided) - obj to maintain a consistent record in collaboration with private sector  (23 Nov 2022) |  |  |  | High Priority |
| WMO and CGMS Members |  | WGIIR50.05 | (IROWG) WMO and CGMS are encouraged to coordinate any GNSS-RO data purchases to ensure the current 20,000 daily target identified in HLPP is met with global and full local time coverage | **2023**: IROWG continues to recommend 2000. However, ROMEX will maybe update this number.  WMO action - IROWG will send an email to WMO  Cross organizational collaboration - providers and global centers to re-evaluate this limit of 20000 through an international collaboration - NWP centers working with data providers (steering meeting in Nov-Dec 2022) (23 Nov 2022) |  |  |  | High Priority |

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| **CGMS-50 WGII internal actions** | | | | | | | | |
| Actionee | AGN item | Action # | Description | Action feedback/closing document | Deadline | Status | HLPP ref | Priority level |
| GSICS, WGClim, SCOPE-CM | WGII/8 | A47.21 | GSICS, WGClimate and SCOPE-CM to organise a workshop on calibration supporting reprocessing. | **2022 19 May:** WGII discussions (initial request coming from CMA). Delayed due to COVID.  2021 10 Dec: It will not happen before GCMS-50 - so it would be good to present at the Plenary in order to get support from agencies ang gathering involvement from other WGs 2021 27 Sep: No update, pending. CGMS-49 WGII Apr 2021: Workshop to be planned (delayed due to the pandemic). 2121 11 Mar: JWGC to discuss in March and GSICS at Annual meeting 2021 Jan: WGClimate to meet in February 2020 May CGMS-48 WGII session: Postponed due to Covid-19 situation. 2020 Mar 12 WGII IS #2: To be discussed on 17 March within GSICS community. 2020 Jan 9 WGII IS #1: - (First review to take place at GSICS meeting in March 2020, Korea - meeting cancelled). | CGMS-50 (Mar 2020, CGMS-48) | **OPEN** |  |  |
| IWWG | WGII/5 | A46.07 | IWWG to consider developing climate projects from Atmospheric Motion Vectors (AMVs) and to report to the CEOS/CGMS WGClimate with a potential pilot project. (Ref. CGMS-46-IWWG-WP-01) | **2022 19 May:** WGII noted the NOAA activities . IWWG is requested to report on progress to CGMS WGII. At CGMS-51 NOAA will provide a WP on geostationary processing.  2021 10 Dec: Ongoing. 2021 27 Sep: IWWG has joined JWGClimate. CGMS-49 WGII Apr 2021: Progress on reprocessing activities, however, further discussions needed between the IWWG and the JWGClimate. 2121 11 Mar/2020 Mar 6: IWW15 postponed until 14-18 April 2021 2020 Jan 9 WGII IS #1: To be reviewed at the IWWG meeting in April 2020. (Régis Borde, Steve Wanzong) CGMS-47: IWWG has reviewed the gaps identified by the last Essential Climate Variables (ECV) inventory. • The international status of polar and geostationary AMV reprocessing has been updated and is presented in Annexe 1 of the IWWG Working Paper. • This topic will be discussed in a specific session at the next at IWW15. WGII IS#2 2019: no update | CGMS-50 (CGMS-48/-47) | **ONGOING** | 5.1.1 |  |
| CGMS members | WGII/5 | A46.03 | AMV producers to adopt the new AMV BUFR template. | 2022 no updates - to produce a short document to be presented to IWWG and then having a best practices doc (IWWG)           2022 to be discussed by next IWWG meeting 2021 10 Dec: No progress 2021 27 Sep: Two centers ongoing (IMD, JMA and CMA), others completed, JMA postponed until March 2022. JMA is working on a thinning process because of GTS size limits. CGMS-49 WGII Apr 2021: CGMS-49-IWWG-WP-01 EUM / NWP SAF, NOAA have implemented, CMA to implement, other agencies invited to adopt template. 2021 11 Mar/Jan: IWW15 takes place mid April 2020 May CGMS-48 WGII:  to be reviewed at the next IWWG. 2020 May 22: KMA is working on the production of the new bufr data with the sequence 3.10.077 and will release in June 2020. 2020 Mar 6: IWW15 postponed until 14-18 Sept 2020 Jan 9 WGII IS #1: To be reviewed at the IWWG meeting in April 2020. (Régis Borde, Steve Wanzong) CGMS-47: The AMV sequence 3.10.067 endorsed by the WMO in November 2017 has been rejected by some users in early 2018 because it could not be used in automated framework. • The WMO corrected the sequence appropriately and endorsed the new AMV BUFR sequence 3.10.077 in November 2018. • NOAA, EUMETSAT and JMA are working on the production of the test data, planning an operational change early 2020. The NWCSAF will release a software patch later in 2019 which includes the new BUFR sequence. A new deadline to IWW15 (spring 2020) has been set to agencies to change their AMV BUFR sequence. • AMV producers to provide their users with a small test dataset (a few hours of data) encoded in the new BUFR format as soon as possible. • Nine months later, AMV producers will provide parallel dissemination of their AMV data in the new and old BUFR sequence over a 2-3 month period of time to allow the switch to take place. | By IWW15, CGMS-48 | ONGOING | 4.2.2 | to establsh as WG 1 did a WG2 Best Practices of guidelines for adopting and then needs to be monitored by the related WG |
| NWP community | WGII/5 | A46.04 | NWP community to define the best configuration to be used by the AMV producers, for use in global and regional NWP models. | 2022 no updates - to produce a short document to be presented to IWWG and then having a best practices doc (IWWG)   - 2021 10 Dec: No progress CGMS-49 WGII Apr 2021: A requirements document to be prepared, experiments ongoing expected to continue until IWWS-16 (~2023). Requirements document has been prepared for IWWG review.  2121 11 Mar/2020 Mar 6: Pending IWW15, postponed until mid April 2021, deadline may have to shift. 2020 Jan 9 WGII IS #1: To be reviewed at the IWWG meeting in April 2020. (Régis Borde, Steve Wanzong) CGMS-47: The Met Office and Met Norway is planning to test various configurations of AMVs, via the NWC SAF software, to work towards optimal configurations. • There are no updates to report at this time. • We expect more discussion at the IWW15. • No results to report yet. • This topic and results will be re-visited at IWW15.  WGII IS#1 Dec 2018: The two NWP contacts that will help with this action are:  Mary Forsythe [mary.forsythe@metoffice.gov.uk](mailto:mary.forsythe@metoffice.gov.uk) and Roger Randriamampianina [rogerr@met.no](mailto:rogerr@met.no)  (Steve Wanzong, Co-Chair, IWWG) | CGMS-51 (By IWW15, CGMS-48) | ONGOING | 4.2.2 | to establsh as WG 1 did a WG2 Best Practices of guidelines for adopting and then needs to be monitored by the related WG - WG2 Best Practices |
| IWWG | WGII/5 | A46.06 | IWWG to look at improving quality indicators for high resolution wind derivation for mesoscale and regional applications. (Ref. CGMS-46-IWWG-WP-01) | 2022 no updates - to produce a short document to be presented to IWWG and then having a best practices doc (IWWG)  2021 27 Sep: Ongoing, preliminary results provided by UKMO and CIMSS. 2021 May 16: CGMS-49-IWWG-WP-02 CGMS-49 WGII Apr 2021 2121 11 Mar/2020 Mar 6: IWW15 postponed until 14-18 Sept 2020 Jan 9 WGII IS #1: To be reviewed at the IWWG meeting in April 2020. (Régis Borde, Steve Wanzong) CGMS-47: Research activities continue that aim to identify additional quality information from the AMV derivation that could be used to filter out poor quality AMVs and/or set observation errors for the AMV height assignment. • Quality measure associated with the correlation surface (addresses feature tracking) • Optimal estimation cost associated with cloud top temperature retrieval (addresses AMV height assignment) • Cloud top pressure error estimates (addresses AMV height assignment) • No results to report at this time. • We expect that some useful information relevant to this action may be extracted from work associated with A46.04. • This topic will be re-visited at IWW15.  WGII IS#2 2019: no update | CGMS-49 (CGMS-48/-47) | ONGOING | 4.2.2 | to establsh as WG 1 did a WG2 Best Practices of guidelines for adopting and then needs to be monitored by the related WG |
| CMA, EUM, NOAA (Space agencies) | WGII/3 | WGII/A48.02 | Data providers to document data processing QC processes (including a month of QC statistics, e.g. rejection percentage at each QC step) and space sampling information and provide to IROWG. | 2022 - prepare a short doc as best practices, from IROWG   -  updates         2022 - final report of the workshop will provide best practices input 2021 10 Dec: No progress. 2021 27 Sep. No progress to date. Action on NOAA and EUMETSAT to request information on QC information on procured data and report back. Further discussions foreseen for IROWG September 2022, Addressed in CGMS-49 WGII Apr 2021. For further discussion. 2021 11 Mar: Waiting for IROWG meeting. 2021 Jan: CMA, EUM, NOAA to consider and implement as far as is possible. IROWG noted that RO data from KOMPSAT-5 are also of interested. 2020 Dec from IROWG: Reference is made to previous WGII action A46.08: IROWG to develop process and principles for RO data quality control to ease intercomparison of data from different providers.  ○ IROWG acknowledges there are about 10-30% observations rejected during the data processing and retrieval procedures for current missions. However, the quality control (QC) procedures are not consistent among different data providers and processing centers. They are very likely to differ between the current and future missions as well. Providers should document their QC procedures (e.g., QC pertains to orbits, space sampling/ inhomogeneity, neutral atmosphere or space weather products, etc.) and share with IROWG.  ○ IROWG recommends an action to data providers to document data processing QC processes (including a month of QC statistics, e.g. rejection percentage at each QC step) and space sampling information and provide to IROWG. | Apr-21 | ONGOING Action on Co-chairs for Best Practices repository | 1.1.5 | WG 1 established Best Practices of guidelines for adopting and then needs to be monitored by the related WG |
| CGMS members | WGII/8 | WGII/A48.15 | CGMS Members shall make available their validated instrument SRFs together with uncertainty information through their instrument calibration landing pages. In addition, a document summarising the currently available SRFs and their status (accurate/inaccurate) as well as identifying any missing information shall be provided through the landing pages. | 2022 Request WMO to report the status - so we can have an update at WG2 -   2021 10 Dec: ?to be part of OSCAR 2022 - SRF ongoing 2021 27 Sep: Ongoing. CGMS-49 WGII Apr 2021: ISRO & IMD have held a coordination meeting and implementation is ongoing. 2021 Feb:  Some space-agencies may already provide SRFs on separate websites, but do not link this webpage to their landing pages. In order to complete the action would, thus, be to add links to your SRF subpages on your space agency instrument landing pages. 2021 Jan: EUM, JMA, have included such information. A reminder will be sent (by Rob Roebling, EUMETSAT) CMA information is included on the GSICS web page. <http://gsics.nsmc.org.cn/portal/en/fycv/srf.html> | CGMS-49 | ONGOING | 4.1.2 | Best Practices … monitored by the related WG - to be merged with above … ? WMO action OR TO BE PART OF THE OSCAR REPORT TO WG2 |
| WMO | 2 | WGII/A49.12 | WMO conduct a survey on baseline Level-2 product requirements for LEO satellites. | **2022 19 May:** Open. No progress.  2022 21 Mar: WMO to report to WGII CGMS-50 2021 10 Dec: ? | CGMS-50 | **OPEN** | 4.2 |  |
| WMO | 2 | WGII/A49.09 | SST – review specification involving key users | 2021 10 Dec: CEOS plenary there was a proposal to support oceanography  - SST GEO baseline, what time and spatial coverage = WG2 to contact Virtual Constellation Initiative | Dec-21 | WMO to provide baseline (GHRSST to review it) |  | Best Practices … monitored by the related WG and brought to the attention of WG4 |
| WMO | 2 | WGII/A49.10 | Review the baseline dissemination strategy for volcanic ash product | 2021 10 Dec: Need for WGII and WGIV to set up a dedicated meeting? | Dec-21 | WMO to provide baseline | 4.2.4 | Best Practices … monitored by the related WG and brought to the attention of WG4 |
| WG II | 2 | WGII/A49.11 | The dissemination strategy for the baseline products presented in CGMS-49-WMO-WP-14, including SST, should be presented to and discussed with CGMS WG IV. | 2022 ensuring it is under WGIV - 2021 10 Dec: Need for WGII and WGIV to set up a dedicated meeting? | CGMS-50 | OPEN |  | Best Practices … monitored by the related WG and brought to the attention of WG4 |

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| **CGMS-50 WGII second level internal actions** | | | | | | | | |
| Actionee | AGN item | Action # | Description | Action feedback/closing document | Deadline | Status | HLPP ref | Priority level |
| SCOPE-CM | WGII/4 | A47.08 | SCOPE-CM to report back on the conclusion of the 9 pilot projects | 2022 Oct: updated only one use case (from EUMETSAT) the rest was outdated. Partly addressed.  2021 10 Dec: WMO to finalise -no need for WGII to review as an outcome of a presentation so already assessed 2021 27 Sep: Report to be published CGMS-49 WGII Apr 2021: WMO Secretariat to publish the related report. 2121 11 Mar: Still open, WMO to finalize 2021 Jan: Draft report under preparation. 2020 May CGMS-48 WGII: SCOPE-CM leads have been contacted by WMO on 22 May 2020 to provide feedback on outcome of projects before 30 June 2020. Plan to publish results in WMO Bulletin. New deadline.  2020 Mar 12 WGII IS #2: WMO to report in May 2020 2020 Mar 6: Changes with SCOPE-CM ongoing? Chair stepping down? 2020 Jan 9 WGII IS #1: No further information available | Dec 2021 (CGMS-48) | ONGOING | 5.1.5 | What is the relationship between SCOPE CM and Joint WG on Climate. What the real outcome here??? WMO publication |
| ITWG | WGII/3 | WGII/A48.03 | ITWG to send a report demonstrating the value of temperature sounding of the upper stratosphere and mesosphere (as for the SSMIS UAS channels). | 2022:requesting a report on  2021 10 Dec: No clear way forward. To be addressed at the next WGII intersessional meeting. 2021 27 Sep. Work completed, report to be provided to WG II for review, CGMS-49 WGII Apr 2021: To be addressed at the upcoming ITWG meeting in June 2021. 2021 11 Mar/2021 Jan: ITWG meeting to be held in June 2021. Mitch to provide progress information. Some reports expected at ITWG. | CGMS-50 (CGMS-48) | OPEN |  | Does it go to gap analysis ???????? |
| GSICS, OSVW | WGII/4 | WGII/A48.10 | OSVW to present at next GSICS meeting the potential and potential benefits and issues of crosscalibration of scatterometer data (at the GSICS annual meeting). | 2022 Oct:  2021 10 Dec:  No progress - Depending on GSICS outcome it could find a solution or to be discussed and be considered as a green category (colour scheme) 2021 27 Sep: No progress 2021 11 Mar: OSVW have been invited? 2021 Jan: OSVW group to be invited to the next GSICS meeting. | Mar 2021 | OPEN | 1.2.5 | Coordination problem across different WGs … GSICS to report to WG2 … that s it … It could become a Best Practive if we add scatterometer to GSICS … |
| IWWG | 3 | WGII/A49.13 | To clarify approach for 3D wind profile measuring constellation in recommendation | 2022: EUMETSAT 3D wind profiling. other than EUMETSAT at the moment not much going on  2021 27 Sep: IWWG to follow up at their next meeting | Mid-May 2021 | OPEN | 4.2.3 | IWWG to report back to WG2 |
| WGClimate, GCOS | 5 | WGII/A49.19 | GCOS and JWGClimate to develop a proposal for a formal approach for the translation of GCOS technology free requirements to requirements for space-based observations. | 2022: Ken checking with GCOSsec  2022 21 Mar: Who is taking the lead to move this activity forward? | CGMS-50 | OPEN | 5.1.3 | should it be orange??????? |
| JWGClimate | 6 | WGII/A49.23 | JWGClimate GHG task team to provide a report on the progress of the evolution of ground-based/in-situ GHG observations to CGMS. | 2022: Ken asking to GHG team meeting  2021 10 Dec: No progress reported. 2021 27 Sep: Work is ongoing. GHG TT, and others, preparing a synthesis report on requirements for observations, including ground-based/insitu observations. | CGMS-50 | OPEN | 5.1.4 | should it be orange??????? … WG2 will ask its members |
| IWWG (& WGII) | 4.1 |  | Report on status of the IWWG OSW Task Group | 2022: an update after next IWWG meeting (May 2023)  Addressed in CGMS-49 plenary for WGII to follow/prepare feedback to CGMS-51 plenary) | CGMS-51 | ONGOING | 5.1.2 |  |

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| **CGMS-50 WGII CLOSED ACTIONS** | | | | | | | | |
| Actionee | AGN item | Action # | Description | Action feedback/closing document | Deadline | Status | HLPP ref | Priority level |
| CGMS Members | WGII/8.1 | WGII/A48.20 | CGMS Members to provide Points of Contacts for collaboration with WMO on drought monitoring activities. | 2021 20 Dec:CGMSSEC e-mail reminder sent 20 Dec 2022  JAXA: Dr. Takuji Kubota (Kubota.takuji@[jaxa.jp](http://jaxa.jp)) KMA: Eun Ha SOHN  (soneh0431@[korea.kr](http://korea.kr)) NASA: [Bradley.doorn@nasa.gov](mailto:Bradley.doorn@nasa.gov) NOAA: [Richard.heim@noaa.gov](mailto:Richard.heim@noaa.gov) ROSH: Andrey Filei (andreyvm-61@[mail.ru](http://mail.ru)) ECCC: N/A  CGMS-49 WGII Apr 2021: No progress 2021 Jan/Mar: WMO to remind relevant CGMS members | CGMS-49 | CLOSED |  | Does it make sense here ????  WGII co-chair/WMO 22 Dec 2021: From a WG II perspective we see this as an important activity, and WMO has recently started a project with CIMSS/Straka addressing the outreach and coordination activity. So for the time being it would be to engage with NOAA, CMA (I think they had provided a PoC for flood), KMA and WMO to define a workplan for how to promote and advance this. In parallel Mitch has raised this also in CEOS, so he may be able to give additional guidance. My suggestion would be to organise a teleconf in Q1…. |
| WMO, CGMS space agencies | WGII/8.1 | WGII/A48.17 | CGMS members to provide Points of Contacts for collaboration with WMO on flood monitoring activities | 2022 Oct: no additional point of contact  2021 20 Dec:CGMSSEC e-mail reminder sent 20 Dec 2022  CGMS-49 WGII Apr 2021: Further points of contact to be nominated. WMO to follow-up on this activity. 2021 Jan/Mar: WMO to remind relevant CGMS members NOAA: [william.straka@ssec.wisc.edu](mailto:william.straka@ssec.wisc.edu) ROSHYDROMET: Andrey Filei (andreyvm-61@[mail.ru](http://mail.ru)) ECCC: N/A | CGMS-49 | CLOSED | 4.5.3 | WMO proposed to take the lead. Action also open since CGMS-48 and maybe closure here is justified. |
| WMO | 2 | WGII/A49.08 | Precipitation – review specification involving key users | 2021 10 Dec:  WGII requests IPWG to make a proposal - who will action IPWG to do so (this action being on WMO)? | Dec-21 | CLOSED |  | Best Practices … monitored by the related WG and brought to the attention of WG4 |
| NOAA | 7 | WGII/A49.25 | To provide specific suggestions to CGMSSEC for updated language in HLPP with respect to Oceans. | 2021 10 Dec: WGII rapporteurs to follow up (Paolo/Mitch) 2021 27 Sep:  Ongoing pending discussions between NOAA and EUMETSAT. Also related to the OSOS sponsorship. | CGMS-50 | CLOSED |  | Best Practices … monitored by the related WG |
| CGMSSEC | 7 | WGII/A49.26 | CGMS SEC to suggest updates on HLPP on oceans to CGMS WG I-IV Chairs | 2021 10 Dec: No progress reported. 2022 27 Sep:  Ongoing pending discussions between NOAA and EUMETSAT. Also related to the OSOS sponsorship. | CGMS-50 | CLOSED |  | Best Practices … monitored by the related WG to be merged with above |

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# Best Practices

# to maintain high standard & quality

# to be adopted in the design and implementation

Please find here an example

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| WG2 Best Practices | | | | | | |
| **Title** | **N** | **Actionee (TBS)** | **Description** | **Periodic action** | **Expected Action at CGMS member level** | **Impact on CGMS members** |
| SST – review specification involving key users | WG2.1 | WMO | SST GEO baseline, what time and spatial coverage, what timeliness ... | to provide baseline to ??? using GHRSST as the main stakeholder group | Uptake of the SST specification for future missions and products | Coherent climate data sets for climate monitoring, ocean prediction |
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# DRAFT AGENDA - WG II: Satellite Data and Products

Date: 24-25 April 2023

Co-chairs: J. V. Thomas ISRO / K. Holmlund, WMO      
Rapporteurs: P. Ruti, EUMETSAT / M. Goldberg, NOAA

Day 1: Monday 24 April 2022, UTC XXXXX (Max Available 420')

1    Opening, objectives and expected outcomes [30']

* Short report on high level strategic CGMS way forward (Mikael ... ) - to be discussed during HLPP session (if report available we can move it to HLPP item 9)

2    CGMS agency reports on highlights and issues in dataset and product generation [120' incl. discussion - 5'/presentation, 1 page exec summary, 3 slides for presentation, 1 slide conclusions/recs, plus detailed backup slides]

* How many agencies (NOAA, EUM, CMA, JMA, ISRO, Rosydromet, KMA, NASA, WMO  ... 10 presentations)
* Could be also pre-recorded presentation - (online participation pre-recorded??? ...)
* WMO data policy and satellite data (core data) - additional slot

3    CGMS International Science Working Groups [120' incl. discussions, HLPP link, 1 page exec summary, 2 slides on key 2022 achievements, 3 slides on key topics, 1 slide conclusions/recs]

* Any specific topic WGs want to discuss here ?
* WG: 6 + 1
* **Experimental design on key topics (ex. RO but not only) ... ROMEX ...**

4    High Level Topics - New Horizons [90' incl. discussions, 3 high level talks]

We need to take a decision on 3 priorities! and who will give the presentations?

* Future ocean requirements
* New architectures and miniaturized instruments how will they shape the future LEO system
* Operational Value of satellite observations for land-surface interactions ...  (i.e. cryosphere, hydrology, GHG ...)
* **Satellite early warning for disaster reduction - New WMO priority for disaster reduction - tools ???? .... one of the authors of the report**
* **Wind specific topic on Aeolus and complementary measurements**

 5    Review of WGII list of actions  [80' incl. discussions]

* Status on Chairs and rapporteurs
* WG2 ToR
* Proposal to WG chairs (selection)

Day 2: Tuesday 25 April 2022, UTC XXXXX

6    Working papers on climate and greenhouse gas, including CEOS-Climate report (mitigation, adaptation, long-term monitoring) [120' incl. discussions, ' per paper]

* WG climate report
* GHG observation strategy - how we should address the WMO initiative - Who? (Lars Peter ....)
* ... CEOS GHG task team ..

7    Selected topics of high priority to members (WPs will be pre-selected) [90' incl. discussions]

8    Preparing for the Plenary Session [60']

9    Review and updating of the HLPP [60']

* considering the discussion on future CGMS

10    Future CGMS WGII meetings [10']

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OLD  INFO TO BE DELETED

**ACTIONS RESULTING FROM CGMS-50 PLENARY DISCUSSIONS TO BE MONITORED AND MANAGED BY WGII:**

|  |  |  |  |  |  |  |
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| CGMS-50 actions for the working groups- raised in the plenary session | | | | | | |
| **Actionee** | **AGN item** | **Action** | **Description** | **Action feedback/closing event** | **Deadline** | **Priority level** |
| IESWG co-chairs | 4.5 | IESWG/(P)A50.01 | The IESWG to finalise its draft Terms of Reference, and provide them to the WGII lead |  | Dec 2022 |  |
| WGII lead | 4.5 | WGII/(P)A50.02 | WGII to review and discuss the ToRs and once finalised, circulate to CGMS members for consideration and comments. WGII leads will then interface with the IESWG lead to complete the ToRs.  WGII will then bring the Terms of Reference to CGMS-51 Plenary for endorsement. |  | Q1 2023,  CGMS-51 WGII,  CGMS-51 |  |
| WGII lead | 4.5 | WGII/(P)A50.03 | WGII will engage with IESWG in discussions on future priorities for CGMS Science Working Groups |  | Q1 2023 |  |
| CGMS members | 4.5 | WGII/(P)A50.04 | CGMS WGII members are invited to nominate candidates for positions of Vice-Chairs for GSICS-EP and GRWG.  Please provide nominations to [cgmssec@eumetsat.int](mailto:cgmssec@eumetsat.int) and  [mitch.goldberg@noaa.gov](mailto:mitch.goldberg@noaa.gov) |  | Dec 2022 |  |
| CGMS members (WGII and SWCG) | 4.5 | WGII+SWCG/ (P)A50.05 | CGMS WGII and SWCG members are invited to nominate candidates for a subgroup within GSICS on Space Weather Cal/Val and Intercalibration, which will be focused on providing intercalibration for Space Weather.  Please provide nominations to [cgmssec@eumetsat.int](mailto:cgmssec@eumetsat.int) and [mitch.goldberg@noaa.gov](mailto:mitch.goldberg@noaa.gov) |  | Dec 2022 |  |
| GHG TT (JWG-Climate, WGII) | 8.1 | To be monitored by WGII  WGII/(P)A50.06 | Once the new GHG TT chairperson is in place, the GHG TT to invite CGMS WG I-IV points of contact for a dedicated discussion on specific CGMS WG contributions |  |  |  |

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| CGMS-50 recommendations – WGII | | | |
| **Actionee** | **Rec** | **Description** | **Colour coding** |
| IMD | WGIIR50.01 | IMD to make the Calibration and Validation report available for all interested users of INSAT-3D/3DR on the IMD website as soon as the document is finalized | Internal WG business |
| CGMS Members | WGIIR50.02 | CGMS Members are encouraged to use “TSIS-1 HSRS” as the Solar Reference Dataset | Best Practices and Periodic actions |
| CGMS Members | WGIIR50.03 | CGMS members are encouraged to ensure that intercomparison studies are part of their baseline science activities to ensure there is sufficient funding available | Internal WG business |
| CGMS Members | WGIIR50.04 | (IROWG) All providers of RO observations are encouraged to classify RO data as core data in the sense of the WMO Unified Data Policy (Res. 1). Therefore, free, timely and unrestricted access shall be provided to NRT RO data and free and unrestricted access shall be provided to archived raw data (including auxiliary data) | High Level Priority |
| WMO and CGMS Members | WGIIR50.05 | (IROWG) WMO and CGMS are encouraged to coordinate any GNSS-RO data purchases to ensure the current 20,000 daily target identified in HLPP is met with global and full local time coverage | High Level Priority |
| CGMS Members | WGIIR50.06 | (IROWG) CGMS are recommended to encourage technology and retrieval developments for improving planetary boundary layer profiling from GNSS-RO and their utilization in NWP data assimilation – and the further exploration of RO-derived water vapor as a climate variable | Best Practices and Periodic actions |
| CGMS Members | WGIIR50.07 | (IROWG) Purchasers of RO data for NWP is encouraged to document their access to raw data, so that such purchased data can be used reliably in climate applications, where traceability of the measurements to fundamental units (e.g. definition of the second) is essential. For climate, appropriate documentation and meta-data need to be available with the provision of raw data | Best Practices and Periodic actions |
| CGMS Members | WGIIR50.08 | (IROWG) CGMS Members are encouraged to acquire information on the developments of GNSS radio jammers and monitor their impacts to the observing system. The reason for this recommendation is that the RO community has begun to document the resulting degradation on RO measurements from radio frequency interference caused by the use of these development in recent ongoing world events and conflicts | Internal WG business |
| CGMS Members | WGIIR50.09 | (ITWG) In terms of international issues CGMS Members are encouraged:  1) to support the further development of Essential Climate Variables (ECVs) and Greenhouse Gas CDRs to enrich the ECV inventory for climate change monitoring;  2) to explicitly consider instrument capabilities, data quality, and data provision in future updates of the CGMS baseline, particularly for the 3-orbit backbone system of LEO passive sounders which plays an important role as a reference-style system (*to be forwarded to WG III*);  3) the overlap period where one satellite resource is replacing another should be chosen after consultation with the user community and should follow WMO guidelines;  4) if a mission expects engagement from application areas with an NRT data requirement, budget should be allocated from the start to provide the required technical infrastructure;  5) to note that the benefits of Satellite Missions to the ITWG community are increased when early evaluation is undertaken by many independent centres (NWP centres in particular). | Best Practices and Periodic actions |
| CGMS Members | WGIIR50.10 | (ITWG) In terms of Data Dissemination CGMS Members are encouraged:  1) Climate Data Records (CDRs) should be citable by Digital Object Identifier (DOI) reference and all data records should be accompanied by metadata that follows WIGOS standards (*to be forwarded to WG IV);*  2) CDR development and stewardship should follow guidance similar to NOAA National Centers for Environmental Information (NCEI) data stewardship maturity matrix or the Copernicus Climate Change (C3S) convention (including recommendations for metadata) (*should be considered jointly with WG IV*);  3) when designing new or modified BUFR formats, circulate drafts to the NWP community via the NWP Working Group for feedback prior to submission to WMO (*to be forwarded to WG I*);  4) to develop and maintain public instrument status monitoring web pages similar to the Integrated Calibration and Validation System (ICVS) from NOAA/NESDIS (*to be forwarded to WG IV*); | Best Practices and Periodic actions |
| CGMS Members | WGIIR50.11 | (ITWG) In terms of Evolution of the Observing Systems CGMS Members are encouraged:  1) to create intercalibration time series from overlapping satellites to allow a continuation of climate time series (including trend analysis) when transitioning from older to newer satellites;  2) to consider climate requirements in terms of stability and length of life cycle when designing small satellite sensors;  3) following the success of the Megha-Tropiques SAPHIR instrument, future microwave sensors operating in a similar low inclination orbit are recommended;  4) to continue to employ the traditional longwave infrared spectral radiance measurement band on all future hyperspectral infrared satellite sensors;  5) providers of data from constellations of smaller satellites should work towards standardization of data downlink frequencies and protocols to ease provision of near real-time (NRT) data. | Best Practices and Periodic actions |
| CGMS Space Agencies | WGIIR50.12 | CGMS Space agencies are encouraged to maintain space-based assets beyond the design lifetime as long as they provide value added observations on a safe and affordable basis as determined by the operating agency | High Level Priority |