

WORLD METEOROLOGICAL ORGANIZATION

IPET-SUP-2/Doc. 4
(18.II.2016)

COMMISSION FOR BASIC SYSTEMS
OPEN PROGRAMME AREA GROUP ON INTEGRATED OBSERVING SYSTEMS

INTER-PROGRAMME EXPERT TEAM ON SATELLITE UTILIZATION AND
PRODUCTS

ITEM: 4

SECOND SESSION

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ACTION REVIEW AND RELEVANT MEETINGS

(Submitted by Secretariat)

Summary and Purpose of Document

To present the status of IPET-SUP Actions, and to review results from WMO and related meetings of relevance to the session.

ACTION PROPOSED

The session is invited to note the information in this document.

Appendix: A. Status of IPET-SUP Actions (22 February 2016)

DISCUSSION

Third UN World Conference on Disaster Risk Reduction Sendai; UNFCCC COP 21 Paris

2015 was a successful year for UN-led international diplomacy in the areas of climate change and disaster risk reduction, with the adoption of the Sendai Framework for Disaster Risk Reduction 2015-2030, and the Paris Agreement on Climate Change at UNFCCC COP 21. As part of this Agreement, several priorities of WMO are addressed:

1. Maintaining and strengthening climate observations
(see below)
2. Monitoring of emissions and concentrations of greenhouse gases
(see presentation IPET-SUP-2/Doc.9.5)
3. Role of climate change scenarios
4. Climate services for adaptation and mitigation
5. Better information for disaster risk prevention
6. Using funding mechanisms also for the development and application of climate knowledge

On strengthening climate observations, the UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA):

- encouraged GCOS to consider the outcomes of COP21 when preparing the new GCOS Implementation Plan (in particular regarding observations needed for adaptation, as recognized in Article 7 of the Paris Agreement)
- invited GCOS to collaborate with relevant partners to continue enhancing access to, and understanding and interpretation of, data products and information to support decision-making on adaptation and mitigation at national, regional and global scales.
- urged Parties to work towards addressing the priorities and gaps identified in the GCOS 2015 Status Report,
- invited Parties and relevant organizations to provide inputs to, and contribute to the review of, the new GCOS implementation plan. GCOS will submit the new implementation plan to COP22.

This confirms that programmes and activities aimed at generating GCOS ECV data records, including from satellites, are recognized at the highest level by the UNFCCC, and are seen as critical for underpinning climate knowledge and climate services.

CGMS-43 (18-22 May 2015)

Key topics of relevance to IPET-SUP discussed at this session of the Coordination Group for Meteorological Satellites were:

- Initial draft of the Vision of WIGOS Space Components in 2040 (IPET-SUP-2/Doc.8)
- Adoption of a plan to secure Indian Ocean Coverage after the end-of-life of the Meteosat-7 IODC, as a collaboration among EUMETSAT, ISRO, CMA, and ROSHYDROMET
- First draft of Observation Requirements for Atmospheric Composition (IPET-SUP-2/INF.1.1)
- WMO Satellite Data Dissemination Strategy
- User preparedness for new-generation satellites (IPET-SUP/Doc.6.1, 6.5)

- New strategy for the VLab 2015-2019 adopted; Reaffirmation of support

Seventeenth World Meteorological Congress (May-June 2015)

Adopted WMO Resolution 60 (Cg-17, 2015) on the WMO Policy for the International Exchange of Climate Data and Products to Support the Implementation of the GFCS (http://library.wmo.int/pmb_ged/wmo_1157_en.pdf#557).

The Resolution states that GFCS relevant data and products developed or acquired under WMO auspices should be made accessible among Members on a free and unrestricted basis; the Annex to the Resolution specifies that such data include, among others,

- “(3) Climate relevant coastal interface data, in particular sea level, waves and storm surges;
- (4) Data on the composition of the atmosphere including aerosols;
- (5) Climate relevant satellite data and products;
- (6) Climate relevant cryospheric data, in particular snow cover, snow depth, glacial monitoring, permafrost and lake and river ice.”

Congress also resolved on a Resolution on “Preparation for New Satellite Systems” (Cg-17/Resolution 37) that recommends “to all concerned Members to set up user preparation projects in advance of the launches of new satellite systems, in accordance with the CBS Guidelines for ensuring user readiness for new generation satellites” and “urges the satellite operators to provide regular and timely updates on their new systems through appropriate means and in particular through inputs to SATURN and OSCAR.” (see IPET-SUP-2/Doc.6.5).

First meeting of the CCI Task Team on the Use of Remote Sensing Data for Climate Monitoring (10-12 Jun 2016)

The Team reviewed the status of the use of remote sensing data (ground-based, satellite-based) for climate monitoring and agreed on activities and a work plan for the CCI intersessional period 2014-2018 (see IPET-SUP-2/Doc. 9.1 for details).

Ad-hoc Workshop on WIGOS Metadata for Space-based Observations (29 Sep – 1 Oct 2015)

This workshop had participation from the WIGOS task team responsible for the development of the WIGOS Metadata Standard (chair: Jörg Klausen, MeteoSwiss), and experts nominated by IPET-SUP (Guillaume Aubert, EUMETSAT; Leon Majewski, BOM). The aim was to check whether the Standard adopted by WMO Congress-17 was capable of sufficiently describing satellite observations, and to suggest amendments to the Standards where necessary. In the workshop, the Standard was applied to three examples of satellite datasets, and a set of modifications to the Standard was suggested (see IPET-SUP-2/Doc. 10.2 for details).

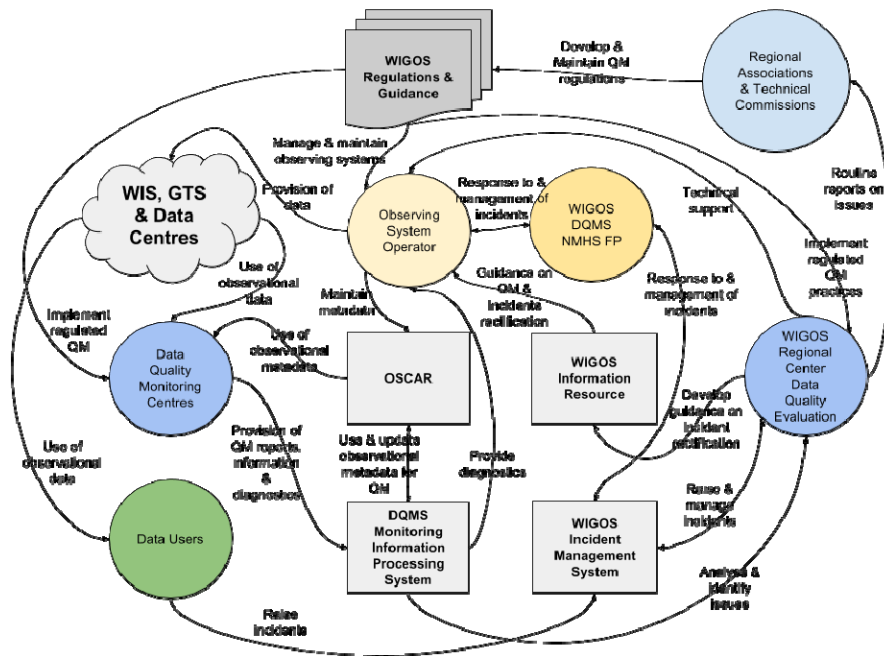
2nd WIGOS Workshop on Quality Monitoring and Incident Management (15-17 Dec 2015)

The second WIGOS Workshop on Quality Monitoring (QM) and Incident Management (IM) was held at the WMO Headquarters in Geneva, Switzerland, from 15 to 17 December 2015. The workshop was aimed at discussing and refining the development of the Quality Monitoring and Incident Management pilot projects, and at preparing detailed plans and recommendations for the GOS implementation of the WIGOS Data Quality Monitoring System (WDQMS), one of the five priorities for the Pre-operational Phase of WIGOS (2016-19).

The Workshop reviewed and took note of the current monitoring capabilities by the lead centres in various WMO Regions, as reported by Kenya, Japan, USA, Indonesia, Germany, Canada and Tanzania, as well as Numerical Weather Prediction based monitoring capabilities reported by ECMWF, NCEP (USA) and EUMETNET. The meeting was also informed about monitoring efforts and systems from other WIGOS observing component observing systems as reported by GCOS, JCOMMOPS, GAW, the WMO Space Programme and AMDAR.

The Workshop further developed the WDQMS concept including the description of the functions of the three main WDQMS components. It agreed to propose the development of a Demonstration Project in RA I and prepared a draft plan for it.

WIGOS Data Quality Monitoring System Process Map



Draft Structure and Process Diagram of WIGOS Data Quality Monitoring System

Inter-Comission Coordination Group on WIGOS, 5th session (January 2016)

The session discussed, inter alia, the draft (version 19 Jan 2016) of the Vision of the WIGOS Space-Based component systems in 2040. It also discussed the [roadmap for the WIGOS pre-operational phase 2016-2019](#) and related changes to WMO regulatory material (for example the transition from the current Manual on the GOS to a Manual on WIGOS).

Consultative Meetings on High-Level Policy on Satellite Matters (28-29 Jan 2016)

The role of the Consultative Meetings on High-level Policy on Satellite Matters (CM) is to support a high-level dialogue between the environmental satellite community and WMO representatives (including the President, Vice-Presidents, Presidents of Technical Commissions and Regional Associations, Secretary-General and Directors).

The 13th session focussed on three topics:

- (i) Development of a Vision for the WIGOS Space-based Component Systems in 2040. The 2040 Vision of the WIGOS space-based component systems is intended to provide a shared, high-level goal to guide the efforts of WMO Member states in the evolution of satellite-based observing systems supporting all WMO application areas. Development of the Vision started in 2015; a first draft will be submitted to CBS-16 (2016), for ultimate endorsement by Cg-18 (2019).

Participants largely supported the draft Vision; it was noted that the Vision should distinguish between the desired architecture in space by 2040, and data exploitation. Some participants commented that data policy issues should not be part of the Vision, and the notion of a resilient architecture should be introduced. The potential role of Region-based satellite programmes should also be recognized.

- (ii) Data exchange policies
This topic is receiving increasing attention in light of the potential prospect of basic meteorological space-based (and other) observing systems operated for commercial purposes. While WMO Resolution 40 remains in force, Cg-17 adopted Resolution 60 on the WMO policy for the international exchange of climate data and products to support implementation of the GFCS. Practices of data exchange and sharing in the USA and Europe were shared and discussed.

The session discussed whether WMO Resolution 40 was adequate to support the public good interests in the weather and climate domains and to provide a more predictable environment for the private sector. He suggested a strong policy statement from WMO on the global public good could provide leverage for Members in dealings with policymakers and commercial suppliers.

- (iii) Architecture for Climate Monitoring from Space.
This topic is of particular importance in the context of the Global Framework for Climate Services (GFCS), noting the increasing role of space-based observation in climate monitoring, and the need to ensure the sustained generation of satellite-based climate data records within the Architecture for Climate Monitoring from Space. The status of GFCS and GCOS requirements, and the new work plan of the CEOS-CGMS Working Group on Climate will be presented.

The session discussed to what extent users, including from GFCS priority sectors, were represented in developing the Architecture. Participants confirmed that gap analyses will be very important to define the path towards an operational space-based climate monitoring system. There was also recognition that WMO needs to better organize the identification of climate requirements, and to this end clarify its organizational structure in the climate area. The complexity of climate information underpinning a range of societal sectors was recognized.

Action	Deadline	Status	Last Update
Action 1.1: WMO Secretariat to write a letter to PRs in RA I, informing them about RAIDEG and inviting them to nominate focal points that would liaise with the sub-regional representatives on the Group.	30-Jun-15	DONE; Letter distributed on 9 Nov 2015	14-Jan-16
Action 1.2: Co-chairs of the RA II WIGOS Project to Develop Support for NMHSs in Satellite Data, Products and Training to contact the Chair of IPET-SUP (A. Rea) and the Secretariat in formulating the agenda of the next meeting; specific focus should be placed on establishing user data requirements based on the existing template, preparation of new generation of satellites, and related training	10-Apr-15	DONE; First contact made, agenda of 3rd WIGOS Project Coordination Group meeting on 14 Nov 2015 after AOMSUC-6 puts emphasis on these issues	23-Sep-15
Action 1.3: WMO, with consent of RA II WIGOS Project to Develop Support for NMHSs in Satellite Data, Products and Training co-chairs, to invite countries benefiting from new receiving equipment in 2015 that are currently not members of the Coordination Group to become members, in view of the upcoming 3rd meeting of the Group.	31-Jul-15	DONE; Lao PDR, Bangladesh, Thailand, Myanmar, Cambodia invited	23-Sep-15
Action 1.4: Coordination Group on Satellite Data Requirements in RA III/IV to review the existing template table, based on Recommendation 1.3.	31-Jul-15	DONE; Modifications suggested in telecon on 23 Jun; to be shared with IPET-SUP	12-Oct-15
Action 1.5: WMO to request clarification of the continuity of GOES-13 through CGMS WG III and, as appropriate, the RAIII/IV-SDR group meeting in Apr 2015.	31-May-15	DONE. Continuity depends on the health of the overall GOES constellation; GOES-15 (West) has lost two out of its three star trackers	
Action 1.6: IPET-SUP to request APSDEU-NAEDEX to jointly develop a consolidated requirements baseline with the DBNet Implementation Group	31-Oct-15	DONE. Discussion held at APSDEU-NAEDEX mtg in Montreal in October 2015. Group decided to include hyperspectral sounding, scatterometry, and MW imagery requirements in the APSDEU-NAEDEX baseline, as per draft DBNet guide and service specifications; putting DBNet data provided by NOAA on the GTS was discussed, and NOAA accepted an Action to follow up; an APSDEU-NAEDEX Working Group was created (Chair Agnes Lane) to (re)define the requirements gathering process (template etc) by end 2015 and use experience with WMO Regional Requirements template; GODEX-NWP ("Global Data EXchange for NWP") adopted as new name of group	12-Oct-15
Action 1.7: IPET-SUP to review the Draft Guideline to DBNet when available in June 2015.	31/10/2015	OPEN; to be revisited at IPET-SUP-2; draft sent to IPET-SUP on 14-Oct-2015, for comments by 23 Nov 2015. Review schedule includes TT-GISC, CGMS WG I, IPET-SUP-2, ICT-IOS and -ISS, CGMS, CBS	14-Jan-16
Action 1.8: IPET-SUP Task Team (Stephen English, Sally Wannop, Luiz Machado, Anthony Rea) to develop a position paper on essential satellite data.	31-Dec-15	OPEN; First teleconference of task team on 5 Aug 2015; Secretariat distributed first draft on 21 Oct 2015; comments received by team; Secretariat circulated updated draft in January 2016	14-Jan-16
Action 1.9: Secretariat to explore options for a user feedback mechanism in SATURN	30-Jun-15	OPEN; possible in principle, but comment function needs refining	14-Jan-16
Action 1.10: To maximize the utilization of R&D data, Secretariat with assistance from IPET-SUP (S. English, A. Rea) to draft a letter to satellite operators through CGMS and possibly CEOS to confirm commitment of R&D agencies to contribute to the WMO GOS, and to highlight the importance of effective pre-launch preparation and default provision of near real-time data as soon as possible after launch for research (pathfinder, demonstrator) missions.	30-Sep-15	No progress as yet; CSIRO to chair CEOS in 2015-2016; NASA interest in sharing GPM data in NRT; (Stephen English.) NASA are more than "interested in sharing NRT GPM". ECMWF is already operationally assimilating GPM data. NASA have been fantastic, we had NRT GMI data very quickly after launch and all went smoothly to a quick implementation. A perfect example of great collaboration between research and operational communities for a research satellite mission. JAXA interested in getting feedback to their AMSR-2 on GCOM-W and letter will help; check 2016 Survey in this regard	28-Sep-15
Action 1.11: S. English to discuss with representatives from the soil moisture community the development of a proposal for the establishment of an international soil moisture scientific working group.	01-Sep-15	DONE; Activity underway; (S English) Discussions have begun with a few to forming a group in 2016 that can then later (2017 timescale) propose itself to CGMS. Discussions have suggested the co-chair should not be a remote sensing specialist, because of the hostility of people from the passive and active surface remote sensing communities towards each other. It is better to take a land surface modeller who takes an even handed attitude towards satellite products. (S English) Action 1.11: Some interested parties have discussed a proposal that Gianpaolo Balsamo leads this, and this received wide support. Activities are expected to spin up early in 2016. The group will self-form first, and if it becomes successful and is making meaningful recommendations it will self-nominate to CGMS.	14-Jan-16
Action 1.12: A. Rea to consolidate comments from IPET-SUP on the draft workshop concept note, and contribute to preparation of the planned WIGOS Space 2040 workshop (tentatively 18-20 Nov 2015, WMO HQ).	30-Mar-15	DONE. Comments provided by R Eckman and A Rea's participation in the teleconference in April	18-Apr-15
Action 1.13: The demonstrator developed in SCOPE-Nowcasting PP3 should add a fact sheet to the website, explaining the product and providing references to ATBDs and scientific publications. Ideally such a sheet should be available in English, Spanish and French.	30-Jun-15	DONE. Information added to site	17-Jun-15
Action 1.14: WMO to seek community feedback on the demonstrator developed in SCOPE-Nowcasting PP3, with a view to operationalize it as a service. This should be part of a WMO letter to Members on SCOPE-Nowcasting.	30-Sep-15	No progress yet. WMO to send letter to this effect.	24-Sep-15

Action 1.15: Taking into account recommendations from IPET-SUP-1, the pilot project leads (CMA, JMA, KMA) to develop a two-year plan to further advance SCOPE-Nowcasting Pilot Project 4.	31-Oct-15	UNDERWAY; X. Fang: We have drawn up a preliminary plan about dust monitoring and product verification for the next two years, focus on the Dust AOD product's intercomparison and data sharing between Himawari-8 and FY-4A. Recently, we will send this plan to the relevant experts of JMA and KMA for modification.	22-Jun-15
Action 1.16: Secretariat to share results from the surveys on (i) Indian Ocean satellite data needs, and (ii) RSMC-TC requirements with the Team.	30-Jun-15	DONE. (X. Fang: FY-2E will drift to 86.5E instead of FY- 2D before the end of June 2015, it can provide data and products for the neighboring countries in the Indian Ocean.)	22-Jun-15
Action 1.17: T. Mostek to find answers to the following questions raised by the Team: 1) Whether syntheses of alerts (daily, weekly, monthly) were available? 2) Whether there was an automated user notification service? 3) Whether the ICVS had a facility for user feedback? 4) On the criteria for which instruments are monitored? 5) What quality assurance for SDRs and EDRs means?	15-Aug-15	DONE. Answers: 1) Yes. Four time scale series are provided for each trending parameter in ICVS. They are daily (for every sampling value), monthly, yearly, and life time. For the latter three time series, each point represents the calculated orbital mean value for that parameter. 2) Yes. STAR ICVS sends out warning notification automatically to designated recipients when preset criteria is satisfied. For example, when orbital mean NEDT reaches out-of-spec values or some specific data quality flag is triggered, a notification email will be sent out automatically. 3) STAR ICVS doesn't provide online feedback input box or any online input function besides the search box due to NOAA IT security requirements. But users can always send developers email provided in the website. ICVS group welcomes all users feedback or recommendation. 4) NOAA operational polar and geostationary satellites and aboard instruments are the ones STAR ICVS monitors in near real time, including Suomi-NPP ATMS CrIS, VIIRS, OMP, NOAA-19/Metop-A/Metop-B/NOAA-18 AMSU-A, MHS, AVHRR, HIRS, NOAA-15 AMSU-A, AVHRR, GOES-13/GOES-15 sounder and imager. 5) The quality assurance means SDR/EDR data product quality. Both SDR and EDR data biases are characterized and compared to documented data accuracy requirements to ensure the specifications have been met.	22-Feb-16
Action 1.18: Secretariat to distribute the ecCodes URL to IPET-SUP, with an invitation to Team members and their home institutions to gather interest in community development of ecCodes.	01-Jul-15	DONE.	17-Jun-15
Action 1.19: The Team, including through delegation, to review the proposed discovery metadata model and provide comments to the WMO-CGMS Task Force on Metadata Implementation (G. Aubert, M. Rattenborg).	15-Jul-15	OPEN; Reminder to review sent	14-Jan-16
Action 1.20: COSPAR representative to provide details on the three proposals for planned capacity building events (two of which are on space weather) to Secretariat, for circulation and comments with IPET-SUP and the ICTSW regarding WMO involvement in these events.	1-Apr-15 (receipt of proposals) 30 Jun 15 (comments received)	DONE. Proposals circulated within IPET-SUP and ICTSW	12-Oct-15
Action 1.21: IPET-SUP task team on the WIGOS metadata standard to comment on the standard from a satellite user perspective.	01-Oct-15	DONE. V0.2 To be distributed with announcement of workshop 29 Sep - 1 Oct 2015	24-Sep-15
Action 1.22: A. Rea to draft a high-level communication strategy for IPET-SUP.	31-Aug-15	OPEN; IPET-SUP-2 item 14	14-Jan-16
Action 1.23: PAG management task team, together with Secretariat, to develop a process to ensure the PAG remains up to date and its content improve	30-Jun-15	DONE. Process discussed and shared with IPET-SUP on 12 Oct 2015	12-Oct-15
Action 1.24: Secretariat and IPET-SUP members (S. Wannop, S. Uspensky, T. Mostek, R. Eckman, S. Keogh) to develop revised questionnaire and circulate it to Team, for discussion in IPET-SUP inter-session teleconference.	15-Jul-15	DONE; Task team finalized questionnaire and handed over to Secretariat for distribution	14-Jan-16
Action 1.25: IPET-SUP member to investigate whether resources can be identified to support survey preparation and analysis. Deadline: 15 Jul 2015.	15-Jul-15	DONE; BOM can provide support (Amy Nielsen)	14-Jan-16
Action 1.26: Secretariat to circulate revised User Readiness project to IPET-SUP.	20-Jun-15	DONE. Reminder sent to IPET-SUP to provide comments by Sep 2015	23-Jul-15
Action 1.27: Secretariat to circulate revised VLab Strategy document with VLab co-chairs	25-Mar-15	DONE.	
Action 8.12: NOAA NESDIS to consider using the WMO RGB standards (http://www.wmo.int/pages/prog/sat/documents/RGB-WS-2012_FinalReport.pdf) in the GOES-R product suite, and to report on progress at the next session of the Team.	01-Mar-15	DONE. The implementation of RGB is still being debated by the NWS. A much bigger issue is how to deal with color challenged individuals - there are many in NWS operations.	22-Feb-16
Action 8.15: Secretariat to communicate SATURN to all potential users, including at WMO Executive Council, through all Regional Requirements groups, to all WMO Members via a letter, and through appropriate publications.	01-Nov-14	PARTLY DONE: Members informed through side events at EC and Cg-17; Regional groups not yet systematically informed; Draft letter to WMO Members ready; flyer not yet ready	14-Jan-16
Action 8.22: A. Rea to facilitate a region-based user survey in RA V through the TT-SUR (and its possible successor). The survey should reference the recent regional survey done in RA III/IV and should specifically target data distribution and visualization issues.	30-Jun-15	OPEN; RA-III/IV Survey and Requirements Table shared with RA V Task Team leads	14-Jan-16
Action 8.26: Develop and document 10-12 case studies studies showing the relevance of satellites for climate services	draft by mid-Nov 2014, final version by Jul 2015	DONE; Report "Satellites for Climate Services: Case Studies for Establishing an Architecture for Climate Monitoring from Space" published 23 Sep 2015	24-Sep-15

Recommendation		Status	Last Update
Recommendation 1.1: To organize a joint session with ET-SAT in 2016, with the primary focus to work on the Vision for the WIGOS component systems for 2040.		ET-SAT-10 to be held on 17 Nov 2015	24-Sep-15
Recommendation 1.2: EUMETSAT to investigate with RA VI management on whether the regional needs for satellite data and identification of requirements are sufficiently covered in the Region			
Recommendation 1.3: In Regional satellite data requirements tables, a distinction should be made between products needed for routine operations, and those needed in emergency situations. Where possible, users should be associated with requirements in the table.			
Recommendation 1.4: NOAA to continue delivering on GNC-A basic imagery in GeoTIFF format from GOES-R.		<p>Commitment by NOAA through statement at NSC-2015 .Re Paul Seymour 16 Feb 2016: For GOES N-P, we send Full Disk every 3 hours and Northern and Southern Hemispheres every half hour. When there is a full disk, the order changes a little. This is in full resolution.</p> <p>We also send a full disk, all channels, full resolution of MSG that is full and open every 3 hours.</p> <p>For GOES-R, we will send at least 3 channels of at least 4 km resolution of full disk images probably every half hour. We may get better resolution. I am working on this problem as we speak.</p>	
Recommendation 1.5: The WMO Satellite User Groups in RA II and RA V should coordinate matters of common interest.		Joint Pilot Activity on DRR in Maritime Continent area using satellite data agreed at workshop in Indonesia in 2015	14-Jan-16
Recommendation 1.6: RA V TT-SU to consider assigning a leading role to BMKG Indonesia in the Team, for example through designation of a vice-chair.			
Recommendation 1.7: The DBNet Implementation Group should assess the feasibility of including Meteor-M in the DBNet system, in collaboration with ROSHYDROMET.			
Recommendation 1.8: JMA and NOAA to consider the provision of all-sky radiance products in response to the baseline established by APSDEU-NAEDEX.		(S English) Being raised through many channels and I would be very interested to hear what progress is being made at NOAA and JMA in considering the request. Although at the moment ECMWF is world-leading in using ASRs it is unimaginable that during the lifetime of the AHI/ABI lifetime on Himawari and GOES most centres will not be using ASRs in some form. So its good to establish this now. (A Mostek, 19 Feb 2016): If not already being done, this is on the list of primary imagery and products utilization at NOAA/National Weather Service (see the IPET-SUP-2 NOAA_UserFeedbackOn Himawari report) BUFR-Format radiances – 16 spectral channels (Level 1b)	
Recommendation 1.9: The satellite soil moisture community should be encouraged to develop a proposal for becoming a recognized, coordinated international community, with a view to eventually form a CGMS scientific working group.			
Recommendation 1.10: To investigate with the institutions hosting the SDS-WAS (Asia node) how satellite-based nowcasting products could contribute to the SDS-WAS.		Secretariat to investigate with colleagues in WMO	22-Jun-15
Recommendation 1.11: IPET-SUP to be briefed on international coordination of space weather activities at its next session.			

Recommendation 1.12: The session noted the value of the event database hosted by ECMWF, and encouraged its public availability.		(S English) Access to the events database has been given to Anthony Rea and Stephan Bojinski so they can assess its value and provide feedback to ECMWF. (SB: Failed to register today). This could lead to others being given access, but its unlikely totally open access will be given. One option to explore is providing access to registered users so ECMWF knows who is using it, and can communicate with users when needed. But the next step is for Stephan and Anthony to assess and provide feedback, on behalf of IPETSUP. By 31 July	17-Jun
Recommendation 1.13: Satellite operators and users to exchange information on satellite instrument anomalies, and broadly communicate such anomalies.		(S English) How will this R be communicated? CGMS	12-Jun
Recommendations 1.14: IPET-SUP members and institutions are invited to become beta testers of ecCodes.		DONE.	
Recommendation 1.15: Since the product attributes required for inclusion of product collections in the PAG are very similar to the data model proposed by the Task Force, CGMS operators should be encouraged to provide product documentation complying with PAG requirements online, and thus help populate the PAG.			
Recommendation 1.16: The Team recommended the continued development of training material on basic remote sensing, drawing upon information in OSCAR/Space (such as instrument types, classes, derived variables).			
Recommendation 1.17: To foster user readiness and application development based on the new generation of satellites, training material exploiting commonalities among instruments (e.g., AHI on Himawari-8, ABI on GOES-R) on the new generation of GEO should be developed, building on existing resources such as from COMET/MetEd.			
Recommendation 1.18: The Team urged the WMO Secretariat to maintain a sufficient level of support to OSCAR/Space to ensure its continued relevance, given the high impact of OSCAR/Space in the community			
Recommendation 1.19: The Team suggested that maintenance of WMO Space Programme online resources, in particular OSCAR/Space, be subject to discussion of a joint session with ET-SAT in 2016 (see Recommendation 1.1).			
Recommendation 1.20: The Team encouraged the rapid establishment of a permanent structure to support the AOMSUC as expressed by the Conference co-sponsors in the Shanghai statement.		To be discussed at AOMSUC-6 in Tokyo in Nov 2015	