Vol. 5 No. 2, August 2014

RA II WIGOS Project Newsletter

DEVELOPING SUPPORT FOR NATIONAL METEOROLOGICAL AND HYDROLOGICAL SERVICES IN SATELLITE DATA, PRODUCTS AND TRAINING

Contents of this issue

The 42nd meeting of the Coordination Group for Meteorological Satellites (CGMS-42), in Guangzhou, China, 19-23 May 2014

Background

The 42nd CGMS was held on 19-23 May 2014 in Guangzhou, China. The meeting was hosted by China through the China Meteorological Administration (CMA) and the China National Space Administration (CNSA).

The meeting was co-chaired by Dr. Jun Yang, Director-General of the NMSC of CMA, Mr. Wenjian Zhang, Director of Space Programme, WMO, and Mr. Alain Ratier, EUMETSAT Director-General and Head of the CGMS Secretariat.

The Plenary session in the period 22-23 May 2014 was preceded by the four CGMS Working Groups (WGI Global issues on satellite systems and telecommunication coordination, WGII Satellite data and products, WGIII Operational continuity and contingency planning, and WGIV Global data dissemination) as well as an ad-hoc meeting on space weather in the period 19-21 May 2014.

Objectives of CGMS

The main objectives of CGMS are:

- To have a clear focus on coordination of long-term and sustainable satellite systems relevant to weather and climate to which both operational and R&D agencies contribute;
- To give a *technical* focus to the discussions handled by the group; and
- Through a close interaction with WMO, to respond as far as possible to requirements

from WMO and related programmes (e.g. WIGOS, IOC, GCOS).

Working Groups

The EUMETSAT holds the CGMS Secretariat since it joined the group in 1987. The CGMS Secretariat is responsible for organising the annual CGMS Plenary meeting with the support of a local host, which is a CGMS Member designated on a rotating basis. During the Plenary meeting, the CGMS plenary Working Groups also come together.

Working Group I (Telecommunications)

The WGI provided a report on the outcome related to the area of Direct Broadcast and Direct Readout Services including reference to the previous presentation made on the specific aspects of the RARS systems/services evolution.

ESA highlighted the situation regarding the active remote sensing band 5350-5470 MHz used for SARs, scatterometers and altimeters and asked all CGMS members to closely and regularly liaise with their national frequency management and regulation authorities on the importance of the frequency bands assigned and associated to CGMS systems and the need to protect and preserve them. The action was raised as a result: WGI Chair to draft a letter from CGMS to WMO for addressing the importance of the frequency bands assigned/associated to CGMS systems and the need to protect/preserve them. And the letter was drafted and endorsed during plenary. The CGMS Secretariat to send the letter to WMO following CGMS-42.

Working Group II (Satellite Products)

WGII considered more than 50 working papers from member organisations, including reports from all four CGMS International Science Working Groups. WGII recommended the formation of a fifth CGMS International Science Working Group - the International Clouds Working Group (ICWG) - which was endorsed by the plenary. The plenary noted the actions associated with NOAA's use of a day-night band on its Suomi-NPP mission, and in the area of calibration and validation and expressed its appreciation for the work of the outgoing Chair of GSICS Executive Panel, Mitch Goldberg, and welcomed the new Chair, Peng Zhang of CMA. The plenary took note of the demonstrated qualitative benefits of an early morning orbit in the area of regional precipitation forecasts from NOAA and the ongoing work of KMA on the impact of soil moisture observations on NWP. An action inviting JAXA to explore possibilities to adjust the GCOM-C1 orbit in order to optimise the mission with Sentinel-3 was also noted. The plenary noted that the current Sentinel-3 schedule precluded consideration of changes to its orbit.

Working Group III (Contingency Planning)

The main topics discussed in WG III were related to continuity issues and risk analysis related to geostationary and polar orbiting missions (GEO: Indian Ocean coverage, GOES-R user transition in South America; and LEO: early morning orbit, SNPP-JPSS transition, radio-occultation, ocean surface topography, Scatterometry, Earth Radiation Budget); the CGMS baseline and climate architecture; the progress report by the Tiger Team on socio-economic benefits of space missions; the transition of R&D missions into operational status; the proposed update of the HLPP; and the identification of issues to be monitored at inter-sessional meetings.

Working Group IV (Global data dissemination)

The WGIV provided a report on the discussion and distribution of information on satellite data dissemination including data exchange and retransmission, including necessary tools to facilitate data exchange. Further progress has been made on the deployment of DVB-based dissemination services:

- Through various projects, NOAA is planning enhancements of the GEONETCast Americas System by providing more services, in order to better support the user community's requirements;

- JMA is implementing HimawariCast, a DVB-S2 based data dissemination using a commercial telecommunication satellite to support the transition between current and the

next generation Himawari-8 and-9 satellites in 2015, and to serve user communities in regions with poor internet access like the Pacific. In addition to images there will also be products disseminated on this system.

Space Weather

The Ad-hoc Meeting on Space Weather had focussed on actions resulting from CGMS-41 which had all been completed. The overarching goal of CGMS Space Weather activities is to support the continuity and integration of space-based observing capabilities for operational Space Weather products and services.

EDUCATION AND TRAINING

EUMETSAT described the current status and future plans for training in satellite meteorology provided by EUMETSAT in partnership with the Centres of Excellence (CoE) in Africa, the Middle East and Europe (in the WMO RA I, RA II and RA VI regions).

A joint JMA-KMA presentation was made outlining the background and mission of the WIGOS Project to Develop Support for RA II NMHSs in Satellite Data, Products and Training, and also detailed recent related accomplishments.

(1) Issuance of newsletters to RA II Members

Vol. 4/No. 3, November 2013

Vol. 4/No. 4, December 2013

Vol. 5/No. 1, March 2014

(2) 4th Asia/Oceania Meteorological Satellite Users' Conference

And the future plans:

(1) Support activities to prepare satellite data users for the new generation of geostationary meteorological satellites

(2) 5th Asia/Oceania Meteorological Satellite Users' Conference

(3) 3rd Meeting of the Coordinating Group of the RA II WIGOS Project

Emergency satellite support to Disaster Risk Reduction (DRR)

The use of data and products from meteorological satellites of CGMS Members has a direct societal impact in terms of protection of life and property in disaster situations. It is also an opportunity for CGMS satellite operators to give a visible demonstration of the relevance of satellite programmes and their benefit to society. WMO pointed out that effort should be made to ensure that National Meteorological or Hydrological Services (NMHSs) can make the best possible use of meteorological satellite capabilities in case of disaster emergencies, including but not limited to, severe weather events such as tropical cyclones.

The International Charter Space and Major Disasters, which organises acquisition of Earth Observation data in emergency mode for disaster management authorities, is typically suited to the provision of high-resolution imagery products. The utilisation scenario of meteorological satellites is notably different since NMHSs are generally using satellite data and products in routine operations, and most meteorological satellite data or products are systematically generated and disseminated. For some disaster types such as tropical cyclones, or volcanic ash clouds, roles and responsibilities are organised at the international level, with well identified regional centres and alert procedures. It is important to maintain an active dialogue between these regional centres and the satellite community to ensure that advantage is taken of the latest satellite capabilities. For other disaster types for which no organisation is formalised at the international level, best practices should be defined to ensure that key satellite data and products are available when needed in critical situations.

The following recommendation was raised: CGMS Members are encouraged to

- Support a review of meteorological satellite data use by RSMCs and other NMHSs in DRR: DRR and Tropical Cyclone Programmes
- Explore possibility to provide on-demand additional data/products in certain emergency situations : Procedures to be specified, identified points of contacts

Closing of the meeting

The Chairperson, Dr Jun Yang, thanked all participants for their hard work and active participation in CGMS-42. He thanked the representatives of all Members and Observers for their dedication ensuring that the meeting had been a success. And all agenda items had been handled with encouraging results. He said the discussions on the proposal and updates of the High level Priority Plan (HLPP) will guide CGMS on the way forward over the next five years.

NOAA will host the 43rd plenary session of CGMS on 18-22 May 2015, in Boulder, Colorado, USA.

(Dohyeong Kim, NMSC/KMA)

The Fifth Asia/Oceania Meteorological Satellite Users' Conference

First Announcement

Following on the successful first round conferences in China, Japan, Korea and Australia, we are pleased to announce that the fifth Asia/Oceania Meteorological Satellite Users' Conference will be hosted by the China Meteorological Administration (CMA) in Shanghai, **19-21 November 2014**, preceded by a two-day V-Lab training event from 17 to 18 November 2014.

Organizer

China Meteorological Administration (CMA)

Co-Sponsors

World Meteorological Organization (WMO)
Group on Earth Observations (GEO)
Japan Meteorological Agency (JMA)
Korea Meteorological Administration (KMA)
Australian Bureau of Meteorology (BOM)

Conference Themes

- Facilitation of data access and utilization, user preparation
- Application of satellite data to weather analysis, numerical weather prediction and nowcasting
- Application of satellite data to long term dataset for climate analysis, reanalyses and climate process studies
- Application of satellite data to environmental and disaster monitoring, disaster risk reduction
- Atmospheric parameters, land surface and ocean parameters derived from satellite observations
- Global Spaced-based Inter-Calibration System (GSICS)

How to submit your paper

To submit a paper or show interest to the conference, please contact Ms. Xu Hanlie by writing to: xuhanlie@cma.gov.cn

Please do indicate the theme, under which your paper will be presented. Abstracts should be submitted in English and no longer than one page (A4). In the case where there are several authors, we kindly ask for one coordinated response. Please note that the person who submits the abstract will automatically be identified as the presenter and point of contact for future correspondence.

Venue

The conference will be held in the Shanghai Meteorological Bureau compound in the Shanghai central business district.

Second Announcement

The second announcement will be available in the upcoming weeks regarding accommodation details and travel information. More details about the conference will be provided in the conference webpage: **http://www.nsmc.cma.gov.cn/aomsuc5**

For further information, please contact Dr WU Xuebao at wuxuebao@cma.gov.cn

Week at a glance

Date	Event
Nov. 17, 2014 (Mon)	V-Lab Training
Nov. 18, 2014 (Tue)	V-Lab Training
Nov. 19, 2014 (Wed)	Opening
	Keynote Speeches
	Roundtable Discussion
Nov. 20, 2014 (Thu)	Session Presentation (Part I)
	Technical Visit (TBD)
Nov. 21, 2014 (Fri)	Session Presentation (Part II)
	Panel Discussion

Important Dates

- 31 August 2014
  Deadline for Abstract Submission
- 30 September 2014
  Paper Acceptance Notification and Invitation Letter
- 15 October 2014
  Deadline for Hotel Reservation

(CMA)

JMA's Himawari-8 scheduled for launch on 7 October 2014

The Japan Meteorological Agency (JMA) has announced its plans to launch Himawari-8 on 7 October 2014 as a follow-on satellite to MTSAT-2 (a.k.a. Himawari-7).

Himawari-8 will be the world's first next-generation geostationary meteorological satellite, and will feature a new imager with 16 bands as opposed to the 5 bands of the current MTSAT series. Three of these will be visible bands corresponding to red, green and blue to enable the creation of true-color images. Full-disk imagery will be obtained every 10 minutes, and rapid scanning at 2.5-minute intervals will be conducted over several regions. The unit's horizontal resolution will also be double that of the MTSAT series. These significant

improvements will bring unprecedented levels of performance in monitoring for tropical cyclones, rapidly developing cumulonimbus clouds and volcanic ash clouds.

For further information, please see JMA's Himawari-8 web pages at
http://www.jma.go.jp/jma/jma-eng/satellite/
and
http://mscweb.kishou.go.jp/himawari89/

(Yukihiro Kumagai, JMA)

Himawari-8 in the factory
Mitsubishi Electric Corporation

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From the Co-editors

The co-editors invite contributions to the newsletter. Although it is assumed that the major contributors for the time being will be satellite operators, we also welcome articles (short contributions of less than a page are fine) from all RA II Members, regardless of whether they are registered with the WMO Secretariat as members of the WIGOS Project Coordinating Group. We look forward to receiving your contributions to the newsletter.
(*Dohyeong KIM, KMA, and Tomoo OHNO, JMA*)

RA II WIGOS Project Home Page

http://www.wmo.int/pages/prog/sat/ra2wigosproject-intro_en.php

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