

# **WORLD METEOROLOGICAL ORGANIZATION**

## **REGIONAL ASSOCIATION II (ASIA)**

**THE THIRD MEETING OF THE COORDINATING GROUP OF THE WMO REGIONAL ASSOCIATION II (RA II) WIGOS PROJECT TO DEVELOP SUPPORT FOR NATIONAL METEOROLOGICAL AND HYDROLOGICAL SERVICES (NMHSs) IN SATELLITE DATA, PRODUCTS AND TRAINING**

**TOKYO, JAPAN, 14 NOVEMBER 2015**



**FINAL REPORT**



### **Participants in the third meeting of the Coordinating Group**

*(Back row) FANG Xiang, VALIEV Klimentiy, Leonard Bale, Hitomi Miyamoto, Phuntsho Namgyal, N Wim van Dijk, Sinthaly CHANTHANA, WONG Wing-tak, Moleni Tu'uholoaki, Anthony Kalai, Sosten Sos, Nguyen Manh Linh, Richard Gokrun*

*(Middle row) Khaled Sayed Husain Yaseen, Muhammad Arif Hossain, Ana Oktavia Setiowati, Ali SHAREEF, Asankhodhaev Ryskeldi, So Im Monichoth, Mahmood Rashid Al-Khayari, Humeira Hafeez, Chaw Su Hlaing, Linda Tonawane, Siri Ranjith Jayasekera, Archevarahuprok Boonlert, Vicente P. Palcon Jr., Terencio T. T. Fernandes Moniz*

*(Front row) Sugeng Indarto, Mahani Binti Abllah, Agnes LANE, Dohyeong Kim, Anthony Rea, Kenji Akaeda, Takeshi Otomo, Toshiyuki Kurino*

## GENERAL SUMMARY

### 1. OPENING

The Third Meeting of the Coordinating Group of the WMO Regional Association II (Asia) WIGOS Project to Develop Support for National Meteorological and Hydrological Services (NMHSs) in Satellite Data, Products and Training was held at the headquarters of the Japan Meteorological Agency (JMA) in Tokyo, Japan, on 14 November 2015. The list of the participants is given in Annex I.

#### 1.1 Welcome address

Mr Kenji Akaeda, Director-General, Observation Department of JMA welcomed all the participants to the meeting, not only RA II Members but also a number of observers from RA V Members. He noted that this WIGOS Project was originally established as the pilot project at the 14<sup>th</sup> session of RA II (Tashkent, Uzbekistan, December 2008). After the successful implementation of the pilot project for four years, the project was recognized as one of the seven RA II WIGOS projects at the 15<sup>th</sup> session of RA II (Doha, Qatar, December 2012). Mr Akaeda highlighted that the various activities of the project had assisted RA II Members to make better use of satellite-related information. He also mentioned that this project could be more active in order to secure a good user-readiness for the new-generation satellites. He concluded by wishing them a fruitful meeting.

#### 1.2 Opening address

Representing the World Meteorological Organization at this meeting, Dr Anthony Rea from Australia kindly read the opening address on behalf of Dr Stephan Bojinski, WMO. He welcomed all participants in the third meeting and expressed his appreciation to JMA for hosting the meeting in Tokyo and to both JMA and KMA, co-coordinators of the project, for organizing this meeting. He expressed special thanks to JMA for hosting the 6<sup>th</sup> Asia/Oceania Meteorological Satellite Users' Conference and the associated training events held prior to the meeting from 9 to 13 November in Tokyo. He appreciated that collocating meetings is an efficient way of fostering the dialogue among satellite data users and satellite operators. He mentioned that the project and its Coordinating Group are very important to identify and document the requirements of satellite data users in the Region, and to present these to the satellite operators in a consistent, traceable form, and this is particularly important given the new capabilities available from the new generation of meteorological satellites, of which Himawari-8 is the first successful example. He emphasized that the Group is a key to identify issues that users may have in incorporating the new data streams into their operations, and related training needs that should be addressed by the regional VLab Centres of Excellence (hosted by KMA and CMA). The issues regarding satellite data access and exchange should also be subject of the Group's discussion. He noted that the meeting should briefly recall actions defined at its last session in 2012, discuss lessons learned, and critically review its work plan, and successful activities, such as support to the Severe Weather Forecasting Demonstration Project (SWFDP) in RA II, should be continued and enhanced. The Group should take into account the perspectives of users, and then discuss a realistic, focused two-year work plan. The next meeting of the Group is to be held in conjunction with AOMSUC-7 in the Republic of Korea next year, and two teleconferences should be held in the inter-sessional period to monitor progress. The Group's activities are in line with a WMO EC resolution to establish standing Region-based satellite user mechanisms in all Regions, and Congress Resolution 37 (Cg-17) on preparing for the new generation of satellites. WMO concluded this addresses wishing a fruitful discussion and successful meeting.

#### 1.3 Adoption of the agenda

The meeting adopted the agenda and the work programme as given in Annex II.

The participants agreed its hours of work and other practical arrangements for the meeting. All documents and presentations submitted for the meeting will be posted on the project website at: [http://www.jma.go.jp/jma/jma-eng/satellite/ra2wigosproject/ra2wigosproject-intro\\_en\\_jma.html](http://www.jma.go.jp/jma/jma-eng/satellite/ra2wigosproject/ra2wigosproject-intro_en_jma.html).

## 2. STATUS OF PROJECT

### 2.1 Accomplishments, current status and work plan of the Project

Mr Toshiyuki Kurino (JMA), one of the co-chairs in this meeting, introduced the accomplishments in the first to fourth phases of RA II Pilot Project (Sep. 2009 – Aug. 2013);

1. Quarterly newsletters for RA II Members
2. Establishment of the RA II Pilot Project Webpage on the WMO Space Programme (WMOSP) website (hosted by WMOSP)
3. Establishment of the Portal Site for accessing satellite imagery, data and products as well as training on the Webpage
4. RA II Pilot Project questionnaire survey conducted to understand the needs of satellite data users in RA II with the newly introduced web-based questionnaire system
5. Operating on-site “Training Program” of satellite data processing, utilization and application as part of VLab

He also highlighted the progress of the RA II WIGOS Project (Sep. 2013 –) as follows:

1. Establishment of the new webpage of the RA II WIGOS Project (hosted by JMA)
2. Quarterly newsletters for RA II Members
3. Convening the series of Asia/Oceania Meteorological Satellite Users’ Conference
  - 4th conference, held in Melbourne, Australia in October 2013
  - 5th conference, held in Shanghai, China in October 2014
  - 6th conference, held in Tokyo, Japan in November 2015
4. Conducting the prototype questionnaire on the utilization of new generation of geostationary meteorological satellites

Dr Dohyeong Kim, from the Korea Meteorological Administration (KMA), one of the co-coordinators of this project, commented that contributions to the newsletters from RA II Members are very important and valuable for the project.

### 2.2 Information on relevant activities

Ms. Agnes Lane from the Australian Bureau of Meteorology (AuBoM), detailed the activities of the RA V Task Team on Satellite Utilization, including a plan for the distribution of a questionnaire to identify user requirements in relation to satellite data.

### 2.3 WMO Space Programme update

Dr Anthony Rea delivered a presentation on the continued activities of WMO Members within the WMO Space Programme, including work performed under the RA II WIGOS Project, as major current challenges and highlights. The WMO Space Programme activities are to provide a framework for dialogue, develop a shared vision, foster interoperability, share best practices and resources of both satellite operators and users, and divided into four categories; observing systems, access to data and products, product and applications, and information and capacity building. WMO Space Programme 2015 Highlights are;

- Initial discussions on a Vision of WIGOS/Space in 2040
- OSCAR updates (<http://oscar.wmo.int>)
- GSICS in progress (now 10 years)
- Preparation for new satellite generations: SATURN
- Updated Satellite Data Dissemination Strategy
- Global Framework for Climate Services (GFCS)
- Other applications such as Volcanic ash detection algorithm inter-comparison, Nowcasting pilot projects, Climate monitoring products (SCOPE CM) and Cryosphere monitoring
- Regional groups for satellite data requirements

- Space weather

Also, it was mentioned that WMO Strategic Priorities 2015-2018 (Cg-17) are;

- DRR (improved impact-based forecasts and early warnings)
- Global Framework for Climate Services
- Implementation of observation/information systems (WIGOS/WIS)
- Aviation meteorological services
- Services in polar and high-mountain regions
- Capacity development
- Review of WMO governance

#### 2.4 Review of AOMSUC-6 result

As all participants in this meeting had joined the AOMSUC-6, this item was skipped.

### 3. USER AND PROVIDER PERSPECTIVES

#### 3.1 User requirements for satellite data utilization

The new generation of geostationary meteorological satellites scheduled to become operational from 2015 to 2019 are expected to provide WMO Members with unprecedented opportunities and challenges in key areas of application such as severe weather monitoring, nowcasting and short-range forecasting. WMO's SATURN (SATellite User Readiness Navigator) online portal for these satellites provides up-to-date information supporting user-readiness work for Himawari-8, Electro-L, FY-4, GEO-KOMPSAT-2A, GOES-R, INSAT-3DR and MTG (<http://www.wmo-sat.info/satellite-user-readiness/>). On the basis of these backgrounds, Mr Toshiyuki Kurino presented the results of a questionnaire on the utilization of data from the new generation of geostationary meteorological satellites. The questionnaire was designed to poll WMO RA II/V Members on requirements, expectations and challenges with regard to Himawari-8 and other such satellites. Based on the results presented, the attendees agreed that a more comprehensive questionnaire should be developed under the project to more accurately assess user needs.

#### 3.2 Requirements for SCOPE-Nowcasting and Severe Weather Forecasting (SWFDP)

Dr Anthony Rea delivered a presentation on SCOPE-Nowcasting covering its background, rationale and requirements, and also outlined a project plan. The SCOPE-Nowcasting effort was sparked by the success of the SCOPE for Climate Monitoring (SCOPE-CM) initiative, which has demonstrated the value of various cooperation models among satellite operators in the generation of satellite climate datasets through theme-driven pilot projects. Attendees at the first meeting of the SCOPE-Nowcasting Team in November 2013 established four pilot projects covering the areas of: 1) RGB composites for basic nowcasting; 2) volcanic ash products; 3) a combination of satellite global precipitation products (GEO + LEO) for advanced nowcasting; and 4) products for sand and dust forecasting. He also highlighted the following future steps in SCOPE-Nowcasting:

- Continuation of current pilot projects into 2016
- Ongoing team meetings via three-monthly teleconferences
- Project review at IPET-SUP in February 2016 (consideration of additional pilot projects)

The more information is at [http://www.wmo.int/pages/prog/sat/scope-nowcasting\\_en.php](http://www.wmo.int/pages/prog/sat/scope-nowcasting_en.php)

3.2.1 Mr Nguyen Manh Linh from National Hydro-Meteorological Service (NHMS) of Viet Nam delivered a presentation on the activities of the Regional Forecasting Support Center (RFSC) at Hanoi, including efforts to provide NMHSs in Southeast Asia with global and regional forecast products derived from numerical weather products and satellite products. The short and medium range guidance, map, table products for SWFDP are also provided. As future activities, he introduced the collaboration with RMSC Tokyo for releasing the guidance of tropical cyclones, and with JAXA for updating GSMaP and the nowcasting of GSMaP up to three hours.

3.2.2 Mr Wim van Dijk from MetService of New Zealand gave an overview of the Severe Weather Forecasting and Disaster Risk Reduction Demonstration Project (SWFDDP; a regional

subproject of SWFDP in RA V), highlighting regular in-country training for forecasters and experts. He explained the meteorological information are transferred via MetConnect Pacific among Global centers, Regional centers and Pacific Island NMHSs. He also mentioned it is important to assure the access to various real-time Himawari products with limited bandwidth, although it is challenging for SWFDDP to sustainably provide enough information using small bandwidth because bandwidth is a common bottleneck in the area.

### 3.3 Relevant training activities in cooperation with RA II and RA V

Dr Dohyeong Kim, KMA, introduced the training activities conducted by KMA and the plan of 3-year (2016-2018) training programme with the support of KOICA. Ms Agnes Lane pointed out the importance to use the web-based training effectively in collaboration with the relevant countries in RA II/V.

## 4. SYNTHESIS AND FUTURE PROJECT WORK PLAN

### 4.1 Collaboration with “Joint RA II/RA V WIGOS Satellite data project”

Dr Dohyeong Kim gave an outline of the Joint RA II/V Workshop on WIGOS for Disaster Risk Reduction (Jakarta, Indonesia, 12 – 14 October 2015). Attendees at the workshop approved the establishment of the Joint RA II/RA V WIGOS Satellite data project in collaboration with this WMO RA II WIGOS Project and the RA V Task Team on Satellite Utilization. The overall goals of the joint project are.

- All Members should receive and be able to interpret/use geostationary satellite data as full spatial, spectral and temporal resolution subsets.
- Satellite operators should develop a protocol for the request, receipt and processing of event-driven rapid-scan geostationary satellite data for disaster risk reduction.

The Coordinating Group of the joint project shall be composed of (i) the Co-coordinators of the existing RA II WIGOS Project to Develop Support for NMHSs in Satellite Data, Products and Training (JMA and KMA), (ii) the Chair of the RA-V Task Team on Satellite Utilization (AuBoM). Its task shall be;

- (a) To identify the requirements of NMHSs of WMO Members participating in the “Joint RA-II/RA-V WIGOS Satellite Data Project” regarding satellite imagery, data and products in support of their weather services, including forecasts and warnings;
- (b) To develop an inventory of the capabilities of the NMHSs listed under (a), in particular those from developing Members, in the areas of (i) satellite data reception, (ii) satellite data processing, (iii) satellite data interpretation and utilisation;
- (c) To provide a gap analysis in which the capabilities under (b) are matched against the requirements under (a); To develop an action plan to close the gap identified under (c);
- (d) To devise a protocol under which individual Members can request event-driven rapid-scan satellite data covering their national area of interest for Disaster Risk Reduction;
- (e) To report progress on this project to the RA-II and RA-V Management Groups

### 4.2 Synthesis of user requirements

Mr Toshiyuki Kurino presented a draft plan for collaborative development to improve access to Rapid Scan observation data from Himawari-8 in RA-II/RA-V in order to support response to the second goal of above-said joint RA II/RA V WIGOS Satellite data project. He noted that there is the unique meteorological and geophysical nature of the Asia/Oceania region which is characterised by frequent high-impact phenomena such as tropical cyclones, severe convective weather and volcanic eruptions. He also pointed out it is necessary to protect lives and property in this densely populated region, and NMHSs should play the vital role. He outlined how the Himawari-8 rapid scan observation target area is essentially focused on tropical cyclones in the RSMC Tokyo — Typhoon Center’s area of responsibility and on volcanic eruptions for the Tokyo Volcanic Ash Advisory Center (VAAC Tokyo). However, JMA remains committed to supporting NMHSs in the region to the maximum extent possible by providing rapid-scan observation data at the request of

NMHSs. As an initial step, JMA and AuBoM will embark on a joint feasibility study toward the development of a protocol for the request of Himawari-8 Rapid Scan observation data.

#### 4.3 Work plan 2015 – 2016

On the basis of discussions conducted at the meeting, the following work plan for 2015 – 2016 was proposed and agreed upon:

- Support for the preparation of satellite data users in relation to the new generation of geostationary meteorological satellites
- Establishment of close coordination between the ongoing RA II WIGOS Project to Develop Support for NMHSs in Satellite Data, Products and Training and the RA-V Task Team on Satellite Utilization
- Successful hosting of the 7th Asia/Oceania Meteorological Satellite Users' Conference by KMA and co-hosting by the American Meteorological Society
- Ongoing issuance of quarterly newsletters

### 5. SUMMARY OF THE MEETING

Mr Toshiyuki Kurino presented the action items in light of the discussion as follows:

- Based on the results of the questionnaire on the utilization of data from the new generation of geostationary meteorological satellites, the more comprehensive questionnaire will be developed to assess requirements, expectations and challenges of WMO RA-II and RA-V Members for new generation of geostationary meteorological satellites.  
(Actionees: JMA, KMA and AuBoM; Deadline: Sep. 2016)
- JMA and AuBoM will start a joint feasibility study toward the development of an implementation plan to utilize the 2.5-minute rapid scan observation for tropical cyclones and volcano eruptions. The results will be reported at the next meeting for further discussion.  
(Actionees: JMA and AuBoM; Deadline: March 2016)
- The Co-coordinators of the existing "RA II WIGOS Project to Develop Support for NMHSs in Satellite Data, Products and Training" and the Chair of the "RA-V Task Team on Satellite Utilization" will attend at the respective meeting on a reciprocal basis, and consider the division of the roles played by the projects including the new Joint RA-II/RA-V WIGOS Satellite data project.  
(Actionees: JMA, KMA and AuBoM)

### 6. CLOSING

6.1 Dr Anthony Rea thanked the co-coordinators, Mr Takeshi Otomo and Dr Dohyeong Kim, and also expressed his appreciation to related JMA staff for their hard work on organizing the meeting and the 6<sup>th</sup> Asia/Oceania Meteorological Satellite Users' Conference. He also thanked Mr Toshiyuki Kurino in particular for his work as co-chair with co-coordinators of the RA II WIGOS Project on guiding the work of the meeting.

6.2 The Third Coordinating Group Meeting for Regional Association II (RA II) WIGOS Project to Develop Support for National Meteorological and Hydrological Services (NMHSs) in Satellite Data, Products and Training was closed at 1400 on Saturday, 14 November 2015.

**THE 3<sup>RD</sup> MEETING OF THE COORDINATING GROUP OF THE RA II WIGOS PROJECT  
TO DEVELOP SUPPORT FOR NMHSS IN SATELLITE DATA, PRODUCTS AND TRAINING  
(Tokyo, Japan, 14 November 2015)**

**List of Participants**

**CO-COORDINATORS**

Japan	Mr Takeshi OTOMO	Satellite Program Division Observations Department Japan Meteorological Agency 1-3-4 Otemachi, Chiyoda-ku Tokyo 100-8122, Japan	Tel: +81-3-3212-8677 Fax: +81-3-3217-1036 ootomo@met.kishou.go.jp
Korea	Dr Dohyeong KIM	Korea Meteorological Administration National Meteorological Satellite Center 64-18, Guaml, Gwanghyewon, Jincheon Chungcheongbuk, 27803, Republic of Korea	Tel: +82-70-7850-5705 Fax: +82-43-717-0210 dkim@kma.go.kr

**SATELLITE OPERATORS**

China	Dr FANG Xiang	National Satellite Meteorological Centre China Meteorological Administration 46 Zhongguancun South Street, Beijing 100081, China	Tel: +86-10-68406553 fangxiang@cma.gov.cn
-------	---------------	---	--

**NMHSS (RA II)**

Bahrain	Khaled Sayed Husain Yaseen	Ministry of Transportation &Telecommunication, Civil Aviation, Meteorological Directorate Flat 21, Building 32, Road 29, Block 729, Jurdab, Kingdom of Bahrain	Tel: +973 39630005 Fax: +973 17320630 Kyaseen@caa.gov.bh
Bangladesh	Mr Muhammad Arif Hossain	Bangladesh Meteorological Department (BMD) 381, Senpara Parbata, Mirpur-10, Kafrul, Dhaka, 1216, Bangladesh	Tel: +88-01673003310 Fax: +88-028118230 arif78ctg@gmail.com
Bhutan	Mr Phuntsho Namgyal	Department of Hydromet Services, Ministry of Economic Affairs, Royal Government of Bhutan MoEA Complex, Doebum Lam, Thimphu, Bhutan	Tel: +975 17584698 Fax: + 975 2 327624 / +975 2 327202 phuntsho.dhms@gmail.com
Cambodia	Mr So Im Monichoth	Department of Meteorology # 364. Monivong Blvd Phnom Penh, Cambodia	Tel: +855-11-274-458 Fax: +855-23-726044 monichoth@gmail.com
Hong Kong, China	Dr WONG Wing-tak	Hong Kong Observatory 134A Nathan Road, Kowloon Hong Kong ,China	Tel: (852)-2926-8430 Fax: (852)-2311-9448 wtwong@hko.gov.hk
Kyrgyzstan	Mr Asankhodhaev Ryskeldi	Deputy Director of Agency on Hydrometeorology under the Ministry of Emergency Situations of Kyrgyz Republic 1, K.Kerimbekou Street, Bishkek, 720017, Kyrgyz Republic	Tel: +996-777-900399 Fax: +996-312-314663 inter@meteo.kg
Laos	Ms Sinthaly CHANTHANA	Department of Meteorology and Hydrology (DMH) Souphanouvong Avenue Akath village Sikhottabong Distric, Vientiane Capital, 2903 Lao PDR	Tel: +856-21-21-50-10, 26- 36-57 Fax: +856-21-22-34-46, 52- 00-38 sinthaly2@gmail.com chanthana12@yahoo.com



Maldives	Mr Ali SHAREEF	Deputy Director General Meteorology Maldives Meteorological Service Ibrahim Nasir International airport, Hulhule 22000, Maldives	Tel: +960-332-6200 Fax: +960-332-0021 shareef@meteorology.gov.mv alisharyf@gmail.com
Myanmar	Ms Chaw Su Hlaing	Department of Meteorology and Hydrology Office No (5), Ministry of Transport, Department of meteorology and Hydrology, Nay Pyi Taw, 15001, Myanmar	Tel: +95931075143, +95 67411526 Fax: +95 67411527 chawsuhlaing.dmh@gmail.com
Oman	Mr Mahmood Rashid Al-Khayari	Directorate of Meteorology (met Office) Public Authority for Civil Aviation (PACA) Mubailah, Muscat, 111, the Sultanate of Oman	Tel: +968 99243282 mahmwood@gmail.com
Pakistan	Ms Humeira Hafeez	Pakistan Meteorological Department Institute of Meteorology & Geophysics (IMG), Pakistan Meteorological Department, University Road Karachi, 75270, Pakistan	Tel: +92-345-2363337 Fax: +92-21-99261405 humeirahafeez@yahoo.com
Sri Lanka	Mr Siri Ranjith Jayasekera	Director, Forecasting and Decision Support Department of Meteorology 383 Bauddhaloka Mawatha, Colombo-07, Colombo, Sri Lanka	Tel: +94-0094-71-6281134 Fax: +94-011-26-2693811 Siriranjith1957@gmail.co
Thailand	Mr Archevarahuprok Boonlert	Thai Meteorological Department 4353 Sukhumvit Road, Bangna, Bangkok, 10260, Thailand	Tel: +662-399-1423 Fax: +662-383-8827 boonlert.arc@tmd.go.th
Uzbekistan	Mr VALIEV Klimentiy	Centre of Hydrometeorological Service at Cabinet of Ministers of the Republic of Uzbekistan (Uzhydromet) 1 st Bodomzor yuli str., 72 Tashkent 100052, Uzbekistan	Tel: +998-71-1508624, 2342341, 2360758, 1508627 Fax: +998-71-2343845 klmnvly@gmail.com uzhymet@meteo.uz
Viet Nam	Mr Nguyen Manh Linh	Forecaster NWP and Remote Sensing Division, National center for Hydro-Meteorological Forecasting, NHMS, Vietnam No. 4 Dang Thai Than, Hanoi, 100000, Viet Nam	Tel: +84 -98-426-9692 Fax: +84-43-825-4278 linhnguyennchmf@gmail.com

#### NMHSs (Observer RA V)

Australia	Ms Agnes LANE	Australian Bureau of Meteorology GPO Box 1289, Melbourne, 3001, Australia	Tel: +61-3-9616-8319 A.Lane@bom.gov.au
Fiji	Mr Leonard Bale	Fiji Meteorological Service Korowai Road, Caaf Compound, Namaka, Nadi, NAP0351, Fiji	Tel: +679-6724888 Fax: +679-6720430 Leonard.Bale@met.gov.fj
Indonesia	Ms Ana Oktavia Setiowati	Meteorological, Climatological and Geophysical Agency (BMKG) Jl. Angkasa 1 No.2, Kemayoran, Jakarta Pusat, 10720, Indonesia	Tel: +62-21-4246321 ext. 3400 Fax: 62-4246703 Ana_via32@yahoo.com
Indonesia	Mr Sugeng Indarto	Meteorological, Climatological and Geophysical Agency (BMKG) Jl. Angkasa 1 No.2, Kemayoran, Jakarta Pusat, 10720, Indonesia	Tel: +62-21-4246321 ext. 3400 Fax: 62-4246703 Indarto_sugeng@yahoo.co.id
Malaysia	Ms Mahani Binti Abillah	Meteorological Officer Malaysian Meteorological Department Jalan Sultan, Petaling Jaya, Selangor, 46667, Malaysia	Tel: +603- 79678000/79678155 Fax: +603-79578046 mahani@met.gov.my

Micronesia	Mr Sosten Sos	Weather Service Specialist, IT Weather Service Office, Chuuk, FSM Airport Road, Weno, Chuuk, 96942, Federated States of Micronesia	Tel: +691-330-2548 Fax: +691-330-4494 sosten.sos@noaa.gov
New Zealand	Mr Wim van Dijk	Meteorological Service of New Zealand PO Box 722, Wellington, 6140, New Zealand	Tel: +64-4-4700752 data.manager@metservice.com
Papua New Guinea	Mr Anthony Kalai	Papua New Guinea National Weather Service Seven Mile ( Skidrow street ), Port Meresby, Papua New Guinea	Tel: +675-325-2788 Fax: +675-325-5544 ASolok@gmail.com
Philippines	Mr Vicente P. Palcon Jr.	Assistant Weather Services Chief Weather Division, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) WFFC Building BIR Road, Diliman, Quezon, 1101, Philippines	Tel: +632-9204070 Fax: +632-9204070/9263167 vppalconjr@yahoo.com, vppalconjr@pagasa.dost.gov.ph
Solomon Islands	Ms Linda Tonawane	Solomon Islands Meteorological Service PO Box 21, Honiara, Solomon Islands	Tel: 27658 Fax: 23029 linda.tonawane@gmail.com
Timor Leste	Mr Terencio T. T. Fernandes Moniz	Senior official at National Directorate of Meteorology and Geophysics under Ministry of Public Works, Transports and Communications Avenida Bispo de Madeiros, Dili, 1000, Timor Leste	Tel: +670-772301218 tfmoniz.moniz@gmail.com
Tonga	Mr Moleni Tu'uholoaki	Tonga Meteorological Services Fua'amotu Airport, Nukialofa, Tonga	Tel: +676+35355 Fax: +676-35123 molenit@met.gov.to
Tuvalu	Mr Richard Gokrun	Meteorological Observer & Assistance Forecaster Tuvalu Meteorological Services Ministry of Communication & Transport Vaiaku, Funafuti, Tubalu	Tel: +688-20736 richardgorkrun@gmail.com

#### **WMO SECRETARIAT**

Dr Anthony Rea	Australian Bureau of Meteorology 700 Collins St, Docklands, 3008, Australia	Tel: +61-3-9669-4222 Fax: +61-3-9669-4168 a.rea@bom.gov.au
----------------	--	--

#### **JMA**

Mr Kenji AKAEDA	Director-General, Observations Department Japan Meteorological Agency 1-3-4 Otemachi, Chiyoda-ku Tokyo 100-8122, Japan	Tel: +81-3-3211-6017 akaeda@met.kishou.go.jp
Mr Yoshiro TANAKA	Scientific Officer, Administration Division Observations Department Japan Meteorological Agency 1-3-4 Otemachi, Chiyoda-ku Tokyo 100-8122, Japan	Tel: yoshiro.tanaka@met.kishou.go.jp
Mr Toshiyuki KURINO	Director, Satellite Program Division Observations Department Japan Meteorological Agency 1-3-4 Otemachi, Chiyoda-ku Tokyo 100-8122, Japan	Tel: +81-3-3212-8677 Fax: +81-3-3217-1036 tkurino@met.kishou.go.jp

Mr Tomoo OHNO	Senior Supervisor for Satellite Operations Satellite Program Division Observations Department Japan Meteorological Agency 1-3-4 Otemachi, Chiyoda-ku Tokyo 100-8122, Japan	Tel: +81-3-3212-8677 Fax: +81-3-3217-1036 tom.ohno@met.kishou.go.jp
Mr Yasushi IZUMIKAWA	Scientific Officer, Satellite Program Division Observations Department Japan Meteorological Agency 1-3-4 Otemachi, Chiyoda-ku Tokyo 100-8122, Japan	Tel: +81-3-3212-8677 Fax: +81-3-3217-1036 y-izumikawa@met.kishou.go.jp
Mr Yukihiro KUMAGAI	Scientific Officer, Satellite Program Division Observations Department Japan Meteorological Agency 1-3-4 Otemachi, Chiyoda-ku Tokyo 100-8122, Japan	Tel: +81-3-3212-8677 Fax: +81-3-3217-1036 kumagai_y@met.kishou.go.jp
Mr Hitomi MIYAMOTO	Director, Data Processing Department Meteorological Satellite Center, Japan Meteorological Agency 3-235 Nakakiyoto, Kiyoseshi Tokyo 204-0012, Japan	Tel: h_miyamoto@met.kishou.go.jp
Mr Kotaro BESSHO	Head, System Engineering Division Data Processing Department Meteorological Satellite Center, Japan Meteorological Agency 3-235 Nakakiyoto, Kiyoseshi Tokyo 204-0012, Japan	Tel: +81-424-934-970 Fax: +81-424-922-433 kbessho@met.kishou.go.jp
Mr Toshiyuki SAKURAI	Senior Scientific Officer, System Engineering Division, Data Processing Department Meteorological Satellite Center, Japan Meteorological Agency 3-235 Nakakiyoto, Kiyoseshi Tokyo 204-0012, Japan	Tel: +81-424-934-981 Fax: +81-424-922-433 sakurai@met.kishou.go.jp

**The 3rd Meeting of the Coordinating Group of the WMO RA II WIGOS Project to  
Develop Support for NMHSs in Satellite Data, Products and Training  
Tokyo, Japan, 14 November 2015)**

**AGENDA**

09:00

1. OPENING

- 1.1 Welcome address
- 1.2 Opening address
- 1.3 Adoption of the agenda

2. STATUS OF PROJECT

- 2.1 Accomplishments, current status and work plan of the Project
- 2.2 Information on relevant activities
- 2.3 WMO Space Programme update
- 2.4 Review of AOMSUC-6 results

10:30-10:45

(Coffee Break)

3. USER AND PROVIDER PERSPECTIVES

- 3.1 User requirements for satellite data utilization
- 3.2 Requirements for SCOPE-Nowcasting and Severe Weather Forecasting (SWFDP)
- 3.3 Relevant training activities in cooperation with RA II and RA V

12:00-13:00

(Lunch Break)

4. SYNTHESIS AND FUTURE PROJECT WORK PLAN

- 4.1. Synthesis of user requirements
- 4.2. Collaboration with “Joint RA-II/RA-V WIGOS Satellite data project”
- 4.3. Work plan 2015-2016

14:30-14:45  
(Coffee Break)

5. SUMMARY OF THE MEETING

6. CLOSING  
15:30

---