



CGMS-40 WMO-WP-13
V1, 23 October 2012

Prepared by WMO
Agenda Item: VI
Discussed in: Plenary

OUTCOME OF CBS REGARDING USER UPTAKE OF SATELLITE DATA

Submitted by WMO Secretariat

This document reports on the outcome of the fifteenth session of the Commission for Basic Systems (CBS-15) regarding the uptake of satellite data by users.

Of particular importance is the timely preparation of the user community for new generation satellites. This is particularly relevant in the perspective of upcoming new geostationary systems (INSAT-3D, Himawari-8, FY-4A, GOES-R, MTG-I1, GEO-KOMPSAT-2A) in the coming years. The CBS therefore adopted a “*CBS Guideline for Ensuring User Readiness for New Generation Satellites*” contained in Annex to this document.

Preliminary results of the WMO 2012 survey on the access and use of satellite data by WMO Members, including their training needs, are also presented.

Actions/Recommendations proposed:

Recommendation: CGMS Satellite operators are invited to actively support user readiness projects as part of the implementation of their new generation satellite systems, following best practices recommended in the “*CBS Guideline for Ensuring User Readiness for New Generation Satellites*”.

Outcome of CBS-15 Regarding User Uptake of Satellite Data

The 15th session of the WMO Commission for Basic Systems (CBS) was held on 10-15 September 2012 in Jakarta, Indonesia. As part of its deliberations, the Commission discussed the utilization of satellite data and the preparation of users for new generation satellites.

1 PREPARATION FOR NEW SATELLITE GENERATIONS

The Commission recognized the need for appropriate and timely preparation of satellite data users to the planned introduction of several next generation geostationary satellite systems by the operators in the 2014-2018 timeframe (INSAT-3D, Himawari-8, FY-4A, GOES-R, MTG-I1, GEO-KOMPSAT-2A). This will affect all WMO Regions. Preparation should involve user training, guidance to upgrade processing software and hardware, information and tools. Emphasizing that optimal utilization of the new operational satellite systems should be assured and the risk of disruption for operational users be mitigated, the Commission endorsed the *CBS Guideline for Ensuring User Readiness for New Generation Satellites*, as contained in the Annex 1. CGMS is encouraged to embrace this guideline as a CGMS best practice.

2 USER SURVEY

The Commission confirmed the need to monitor the progress of satellite data access and use by WMO Members. The 2012 survey on the use of satellite data by WMO Members, which was performed online from June to September, provided 217 responses by National Meteorological and Hydrological Services, other operational agencies, and research institutions, from 96 countries in total (see Table 1). The survey provided useful feedback on the relative importance of the various satellite observations and products for a wide range of applications. Preliminary results regarding data access, key challenges and training needs are summarized in Figures 1 and 2 and Table 2 below. The full survey report will be published in January 2013.

Table 1: Geographic distribution of responses to WMO Survey on Satellite Data Use

	Region I Africa	Region II Asia	Region III South America	Region IV North and Central America	Region V South-west Pacific and Oceania	Region VI Europe	All
NMHS and other operational users	32	27	10	21	16	53	159
Research and Academia	5	7	4	23	1	18	58
Total	37	34	14	44	17	71	217

3 CONCLUSION

CGMS Members are invited to take note of the feedback provided and the challenges reported by users through the WMO survey. CGMS satellite operators are invited to actively support user readiness projects as part of the implementation of their new generation satellite systems, and well ahead of their deployment. This should be done following best practices recommended in the “*CBS Guideline for Ensuring User Readiness for New Generation Satellites*”.

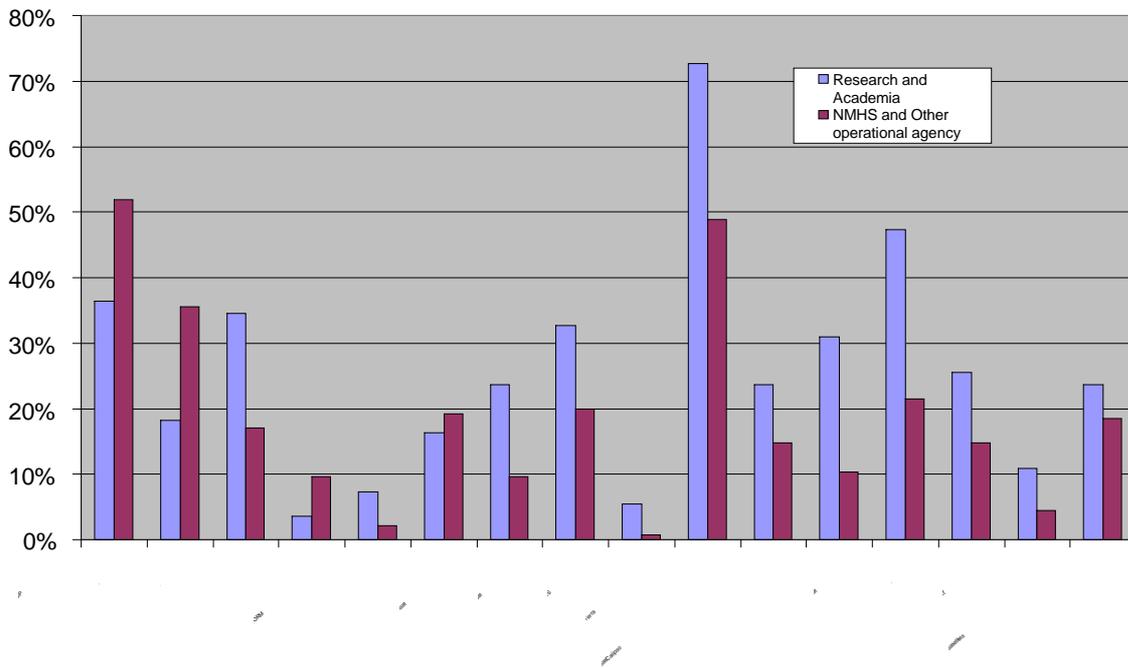


Figure 1: Use of LEO satellites by operational/research users (all regions)

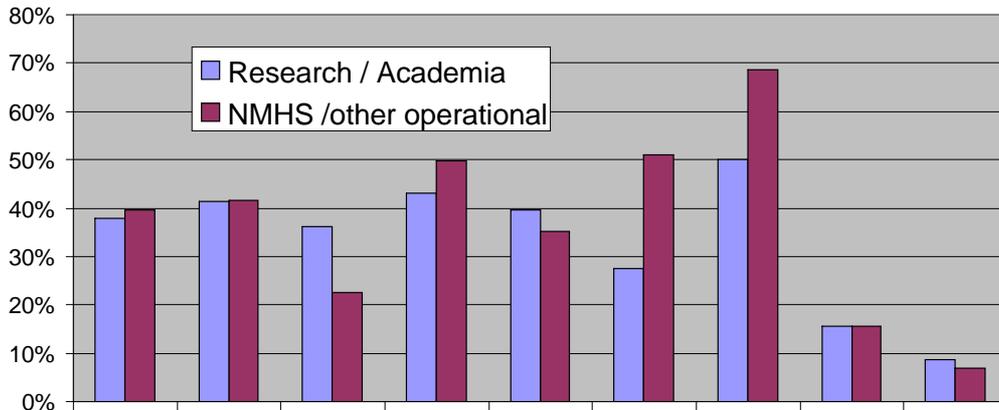


Figure 2: Challenges in the use of satellite data (all regions)

Table 2: Areas where NMHSs and other operational users indicate that training is needed but not delivered (regional breakdown; absolute number of responses)

WMO Region	NMHSs and other operational agencies						
	Total responses	Equipment operation & maintenance	Image interpretation	Use of software tools	Product utilization and interpretation	Physical basis for remote sensing	Preparation for new generation satellites
RA I	32	11	7	15	14	14	17
RA II	27	5	3	8	6	7	13
RA III	10	4	5	6	7	4	6
RA IV	21	4	5	8	6	5	8
RA V	16	9	6	11	10	10	13
RA VI	53	13	9	16	15	14	19
All	159	46	35	64	58	54	76

ANNEX 1

CBS GUIDELINE FOR ENSURING USER READINESS FOR NEW GENERATION SATELLITES

Noting:

- (1) The essential importance of data from geostationary and low-earth orbiting satellites for operational activities of WMO Members;
- (2) The planned introduction of several new generation satellite series by operators in the 2014-2018 timeframe, affecting all WMO Regions;
- (3) The experience of extensive user preparedness projects undertaken by different satellite operators, e.g. the NOAA Proving Ground programme for GOES-R and JPSS missions, or the Prepare the Use of MSG in Africa (PUMA) project of EUMETSAT in RA I for Meteosat Second Generation;
- (4) The Manual on GOS stipulating that, *“for smooth transition to new satellite capabilities, provisions should be made for appropriate preparation of the users through training, guidance to upgrade receiving equipment and processing software, and information and tools to facilitate the development and testing of applications”*¹;
- (5) That the provisions of the Manual on the GOS are applicable to all satellite operators contributing to the Global Observing System;
- (6) That optimal utilization of new operational satellite systems should be assured and the risk of disruption for operational users be mitigated.

All WMO Members and satellite operators should assist users in preparing them for using the new generation of operational satellites, through the following activities:

- (1) Establishing and maintaining a dialogue between providers of the new generation satellites and prospective users, and raising awareness on new capabilities through user conferences, workshops and test beds;
- (2) Maintaining portals for updated information on development status of the new systems, instrument and data format specifications, and technical documentation;
- (3) User training, including the development of training material and training events, through the satellite provider–training centre partnerships established in the WMO-CGMS Virtual Laboratory, and other established mechanisms such as COMET, MetEd, and EUMETTrain;
- (4) Development of learning and decision-support tools, demonstrating the added value of new products;

¹ Manual on the GOS, Part IV: Space-based Subsystem, updated version approved by CBS-XV.
Page 5 of 6

- (5) Provision of proxy data sets, tools, and products;
- (6) Indication of the maturity status of products (operational, development, experimental);
- (7) Guidance on the transition of receiving hardware;
- (8) Planning a parallel dissemination in old and new dissemination formats or protocols;
- (9) Planning an appropriate overlap period between the operation of current and new satellites to allow intercomparison and validation of products, smooth migration of operational applications and downstream service delivery;
- (10) Considering using multi-mission dissemination systems such as GEONETCast Systems, to allow for flexibility in accommodating new data streams, without the technical, financial, and schedule constraints related to setting up a receiving facility specific to the new satellite system;
- (11) Establishment by each concerned NMHS or other operational user organization, of a user readiness project focused on the introduction of new satellite data streams into operations (to be initiated ~5 years prior to launch);
- (12) Supporting user community-building through collaborative mechanisms, such as regular online briefings and social media.
