

WORLD METEOROLOGICAL ORGANIZATION

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

EXPERT TEAM ON SATELLITE UTILIZATION AND PRODUCTS

ITEM: 3

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GUIDANCE FROM THE CHAIR OF OPAG-IOS

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Summary and Purpose of Document

This document contains information about other activities of WMO and of the apce agencies that are relevant to the work of ET-SUP.

ACTION PROPOSED

The seventh session is invited to take note of the contents of this document in their discussions throughout the meeting

DISCUSSION

1. WIGOS

In spite of various difficulties, especially as concerns resource allocation, the WIGOS implementation appears to be proceeding largely according to plans. The Inter-Commission Coordination Group on WIGOS (ICG-WIGOS) had a very successful meeting in Geneva in March 2013 where good progress was reported on a number of important issues, in particular the development of the necessary WMO Regulatory Material, on Quality Management and on Regional Implementation initiatives. Of particular relevance to the ET-SUP members is the development of a national check-list toward WIGOS implementation (see [Final Report, ICG-WIGOS-2](#)). This document lists a number of important elements and steps that are necessary for WIGOS and it is expected to serve as a useful reference for all parties involved in this activity.

Good progress is noted in the Secretariat in implementing the databases supporting the Rolling Review of Requirements, and the Team members are invited to familiarize themselves with this important resource and feed back any concerns or questions to the relevant Secretariat staff. The ET-SUP members are also invited to carefully review the requirements database and to update it accordingly. While this database is “technology free” by construction, it is nevertheless clear that some of the requirements listed in it can realistically only be met via the operation of space-borne observing systems, and the input from ET-SUP is therefore important.

It is important to note that while the initial implementation and development efforts have been very successful, the plans for sustaining, maintaining and updating the databases still need to be further developed. Discussions with Meteo-Suisse concerning the longer-term future of these resources are ongoing. Given the importance of these databases to the Rolling Review of Requirements – and hence to WIGOS - ET-SUP and the other OPAG-IOG teams are invited to carefully monitor the continued progress towards sustainability.

2. WMO Impact Workshop

In the time span since ET-SUP-6, an important event that deserves to be mentioned was the “Fifth WMO Workshop on the Impact of Various Observing Systems on NWP” which took place in Sedona in May of 2012. These Impact Workshops have developed into being the premier venue for comparing the impacts of all major components of the Global Observing System on numerical weather prediction (NWP) skill, and they are typically attended by all major NWP centres around the world and by other relevant experts. It is important to point out due to the power and versatility of NWP diagnostics, these meetings are important not just to NWP practitioners but to all stake-holders interested in assessing and developing observing systems.

Once again, the overarching message from the Impact Workshop was that collectively, satellite data are critical to maintaining and improving NWP skill, since they provide the only practical way to achieve truly global data coverage. In contrast to previous meetings, however, the consensus is that the impact of individual sensors and systems is becoming increasingly difficult to isolate, a fact which is due to the proliferation of satellites and satellite sensors.

A recurring theme throughout several presentations and discussion session held during the Workshop was the need for additional direct wind observations. Wind measurements of any type were found to have the largest impact on forecast skill of all observation types. This was interpreted by the Workshop participants to indicate that the current Global Observing System may be heavily biased toward mass observations, and that additional wind observations are required, especially over the oceans and in the Southern Hemisphere.

The Final Report from the Workshop can be found on the WMO website at http://www.wmo.int/pages/prog/www/OSY/Meetings/NWP5_Sedona2012/Final_Report.pdf.

3. New satellite missions; ADM/Aeolus

Several new satellite systems will be launched over the coming years, including a new generation of geostationary satellites with new capabilities and new requirements in terms of data processing and telecommunications.

The ET-SUP members are invited to take note of ESA's ADM/Aeolus mission in particular. This is a technology demonstration mission developed by ESA and it is unique in the sense that the data from the mission will be made available to the NMHS users in near-real time as part of the Global Observing System once the satellite is past the commissioning phase. The satellite is now just over two years away from launch. In contrast to many other new missions, ADM/Aeolus is not an incremental improvement over existing capabilities but a demonstration of a brand new measurement principle, namely direct active sensing of the atmospheric flow using a space-based UV lidar. It is therefore to be expected that the learning curve for both data product generation and data utilization will be longer than for other new space missions. The ET-SUP members are invited to follow the final development and pre-launch phases of this mission and to keep their national stake-holders informed about data access, processing software and Cal/Val plans.

4. ET-SUP and ET-SAT

Due to the scheduling of this year's meetings, ET-SUP-7 provides a unique opportunity for interaction between the two OPAG-IOS Expert Teams dealing with satellite matters, ET-SAT and ET-SUP. The ET-SUP members are invited to take advantage of this opportunity and to bring to the direct attention of the space agencies any concerns regarding data access, data latency, data impact and plans for transition to new satellite data.
