



WMO



IOC



Ocean Applications and JCOMM matters

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TT-SAT established

- As part of JCOMM Crosscutting **activities** a **Task Team on Satellite Data Requirements (TT-SAT)** was established at the 8th JCOMM Management Committee meeting (MAN-VIII) in November 2010. In September 2011 MAN received a report on the activities of the TT-SAT and noted with appreciation and reviewed a detailed work plan of TT-SAT, leading to the preparation of a final draft report by early 2012 for presentation to JCOMM-IV (23-31 May 2012, Republic of Korea) and for documenting the findings of the Task Team, including recommendations for improving the integration and comparison of satellite and *in situ* data.



TT-SAT Focus

•MAN-IX (13-16 September 2011, Geneva) agreed that JCOMM TT-SAT should focus on **refining the satellite products, through gap analysis if necessary, so that they better comply with end-user requirements**. In this context, MAN-IX advised that the TT-SAT should focus its efforts on products and **the integration of *in situ* and satellite data** to improve such products (e.g. *in situ* input to satellite cal/val, blended products). MAN-IX recommended that JCOMM TT-SAT should play an active role **in enhancing dialogue between *in situ* and satellite communities** to activate these activities.



GHRSSST

- A good example is GHRSSST, which has successfully made focused efforts for improved products for the important measurement **Sea Surface Temperature (SST)**, which has great utility for a wide range of meteorological and ocean services and for studies of the weather-to-climate continuum of ocean-atmosphere interactions. GHRSSST is strongly supported by the space agencies, including the Committee on Earth Observation Satellites (CEOS), which has established a Virtual Constellation for SST with management oversight by GHRSSST, and is making progressive working relationship with the *in situ* community such as the JCOMM Data Buoy Coordination Panel (DBCP).



GHRSSST presentation to CGMS-39

- The successful GHRSSST approach was presented by the Intergovernmental Oceanographic Commission (IOC) to the 39th meeting of the Coordination Group for Meteorological Satellites CGMS-39 on 6 October 2011 (CGMS-39 IOC paper available from cgmssec@eumetsat.int).
- See also (<https://www.ghrsst.org/>)



Extending the GHRSSST approach to OSVW

- Noting that integrated *in situ* and satellite Ocean Surface Vector Winds (OSVW) products would substantially improve the operational applications (including those of NWP, sea state forecasting and warnings, and coastal applications) that provide socio-economical benefits, MAN-IX instructed the **TT-SAT to set up a plan to establish a SVW group to function like the GHRSSST, in close collaboration with the interested satellite and *in situ* communities**, to be submitted to JCOMM-IV.



JCOMM interaction with existing mechanisms

- MAN-IX agreed that JCOMM should maximize interacting with, and utilize, the existing mechanisms for dealing with satellites and satellite products (e.g. CBS ET-SAT and ET-SUP, CEOS, CGMS), in order to streamline its activities in this area and to efficiently deliver the requirements identified for ocean data acquisition and improved applications for service delivery. In particular, the Committee agreed that better linkage was required between JCOMM and the various CEOS Virtual Constellation groups (e.g. tide gauge expert participation in the surface topography Virtual Constellation and the CEOS surface vector wind Virtual Constellation for the OSVW activity).



Integrating *in situ* and satellite observations

- JCOMM has noted with appreciation that the WMO Observing Requirements Database now contained a new subset relevant to marine meteorology and operational oceanography, allowing an accurate assessment of how the existing *in situ* ocean observing system is addressing JCOMM's own service requirements for such data.
- The JCOMM Services and Forecast Systems Program Area (SFSPA) will ensure that the set of observational data requirements to support met-ocean applications continues to be reviewed, together with the existing Statement of Guidance (SoG) for Ocean Applications and the Rolling Review of Requirements (RRR).



Coastal Hazards Forecasting and Warnings

- Both WMO and IOC noted **the increasingly proactive approach of JCOMM to address priority issues under the disaster management programs, in particular related to coastal and marine hazards.** JCOMM's key role is described as the coordination/support for developing and improving forecasting capabilities and service delivery in coastal risk reduction.
- In order to address the need for improved information/products from satellite, in support of applications for coastal zones, JCOMM through its WMO Secretariat prepared and submitted a working paper to CGMS-39 on requirements on coastal hazard forecasting and warnings (WMO-WP-30).



Related needs

- Needs for **improved surface wind data from satellite (e.g. scatterometer)**, as well as **wave heights/water level near coasts from altimeter**, were emphasized. CGMS members agreed to consider these requirements. CGMS members also agreed on the **importance of coordinated training on the use of satellite products**, and agreed to identify opportunities and coordinate with WMO for training on satellite product application to forecasting and warning for storm surges and coastal inundation, such as the EUMETSAT/IODE Training Course on Applications of Satellite Wind and Wave Products for Marine Forecasting (5-9 December 2011, Oostende, Belgium).



Action proposed (1)

- The sixth session is invited to:
 - a) Endorse and bring its **support to the development of ocean products and the integration of *in situ* and satellite data to improve such products** (e.g. *in situ* input to satellite cal/val, satellite input to *in situ* cal/val, blended products);



Action proposed (2)

- (b) **Endorse the development by the JCOMM Task Team on Satellite Data Requirements (TT-SAT) of an activity similar to the GHRSSST (Group for High Resolution Sea Surface Temperature for ocean surface vector winds (OSVW), as integrated *in situ and* satellite OSVW products would substantially improve the operational applications (including those of numerical weather prediction (NWP) (e.g. tropical cyclone development), sea state forecasting and warnings, and coastal applications (e.g. forecasts of storm surge and oil spill trajectory) that provide socio-economical benefits.**



Action proposed (3)

- (c) **Endorse and support JCOMM plans to support improved use of satellite products for coastal applications**, and associated coordination activities for training/technology transfer.