

UPDATE ON IGDDS

With reference to Recommendation 34.23 and Actions 34.24 and 35.32

This document informs CGMS on the status of the Integrated Global Data Dissemination Service (IGDDS) project, in the light of the conclusions of the second meeting of the IGDDS Implementation Group and the fourth meeting of the Expert Team on Satellite Utilization and Products (ET-SUP-4).

The Implementation Group reviewed draft IGDDS standards for DVB-S services and reaffirmed the importance of compliance with WMO Information System (WIS) standards, in particular as concerns data description by metadata and catalogue interoperability through search interface standards.

The Implementation Group welcomed the progress in the implementation of the global Digital Video Broadcast by Satellite (DVB-S) infrastructure, of inter-regional data exchange mechanisms and of user support arrangements.

The Implementation Group however reaffirmed the high priority to be given to identifying data requirements for each regional DVB-S service and to ensuring quasi-global DVB-S dissemination coverage responding to these requirements on a sustainable basis.

This was reinforced by ET-SUP-4 who requested that WMO Secretariat brings this point to the attention of CGMS-36, highlighting the value of the EUMETCast-America's service to South American NMHSs and encouraging agencies to find a way to ensure the associated requirements continue to be met in the future for this region.

Recommended actions:

- All CGMS operators to actively pursue the implementation of dissemination components meeting the IGDDS functional requirements;
- NOAA, EUMETSAT, in consultation with WMO, to take steps to ensure a sustainable DVB-S coverage of South America with meteorological satellite data.

UPDATE ON IGDDS

1 BACKGROUND

CGMS-34 was informed of the Integrated Global Data Dissemination Service (IGDDS) Implementation Plan and adopted Recommendation 34.23 which states: CGMS operators should support the objectives of the IGDDS Implementation Plan.

WMO then established the IGDDS Implementation Group (IGDDS-IG) with representation of operators of IGDDS components. The IGDDS-IG held its first meeting on 8 and 9 July 2007.

CGMS-35 reviewed the progress of IGDDS through the outcome of IGDDS-IG-1 and noted that particular attention was required on:

- The formulation of data dissemination requirements for each region;
- The achievement of a robust and sustainable DVB-S dissemination architecture, with quasi-global coverage;
- The provision of appropriate user support arrangements;
- The adoption of WIS file naming and metadata standards.

CGMS-35 agreed that Action 34.24 namely *“EUMETSAT, NOAA together with WMO to develop a EUMETCast to NOAA ADM transition plan for users in South America and report details to CGMS”* was still outstanding, pending the implementation of a South American broadcast service that should satisfy meteorological requirements on a sustainable basis.

CGMS-35 also agreed Action 35.32: *“CGMS Members involved with the IGDDS to consider applying as DCPCs within the context of the IGDDS and WIS, in consultation with WMO.”*

The second IGDDS-IG meeting was held on 21 and 22 May 2008. Its final report is available on the WMO Space Programme web site at URL: <http://www.wmo.int/pages/prog/sat/documents/IGDDS-IG2FinalReport.pdf>. As for IGDDS-IG-1, a representative of the GEONetcast Implementation Group participated in the meeting in order to maintain full coordination between the IGDDS and GEONetcast initiatives.

The joint fourth meeting of the Expert Team on Satellite Systems and Satellite Utilization and Products (ET-SAT/SUP-4) reviewed the status of IGDDS in September 2008.

2 IGDDS-IG-2 HIGHLIGHTS

The scope of the IGDDS project is to enhance the circulation and availability of satellite data and products within the WMO Information System (WIS) taking into

account all appropriate dissemination means including direct broadcast, DVB-S broadcast, point-to-point transmission over the GTS, and data retrieval via the Internet. Emphasis is however put on DVB-S broadcast, i.e. broadcasting through telecommunication satellites following the Digital Video Broadcast standard, with the specific objective to implement a DVB-S dissemination infrastructure achieving quasi-global coverage for meteorological satellite data and products.

The Implementation Group reviewed draft IGDDS standards for DVB-S services and reaffirmed the importance of compliance with the standards agreed for the WMO Information System (WIS) and in the context of the Group on Earth Observation (GEO) Global Earth Observation System of Systems (GEOSS), in particular as concerns data description by metadata and catalogue interoperability through search interface standards.

It was noted that catalogue interoperability could be achieved on the basis of the EUMETSAT Product Navigator that will be shared by NOAA and CMA in the context of their joint involvement in GEONETCast. An action was agreed by EUMETSAT to set up an interface to allow the remote query of the Product Navigator in the catalogue "harvesting" process and the standardization of the catalogue information formats.

The Implementation Group confirmed the following other two actions to be addressed in priority:

Establishing data dissemination requirements for each dissemination service; for this action, since the needs are differing with every region taking into account the meteorological context and the technical capabilities, it was recommended to actively involve the regional Rapporteurs for the Space Programme.

Implementing a quasi-global DVB-S dissemination coverage on a sustainable basis.

The Implementation Group welcomed the progress in the implementation of a Digital Video Broadcast by Satellite (DVB-S) dissemination infrastructure, whereby a quasi-global coverage is now available with EUMETCast (Europe, Africa, and America services), FengYunCast, Geonetcast-Americas and, in the future, MITRA. It also welcomed the mechanisms set up among EUMETSAT, NOAA and CMA for an inter-regional exchange of data and products to be fed into these regional broadcast services. The dissemination services listed above are contributing to GEONETcast. Effort should be made to ensure that they are responding to the WMO data dissemination requirements of each region and that a consultation mechanism exists to adapt, as far as possible, to evolving user requirements.

The outcome of IGDDS-IG-2 will be incorporated in an update of the IGDDS Implementation Plan that will be provided for the third meeting of IGDDS-IG, which will be hosted by JMA on 5 and 6 February 2009.

3 COVERAGE OF SOUTH AMERICA

3.1 ET-SAT/SUP-4 conclusions

ET-SAT/SUP-4 stressed that the coverage of the Americas by EUMETCast is only committed for a limited period (currently until 2010) and the GEONETCast-Americas service provided by NOAA is not fully considered as an IGDDS component since it is not currently aimed at fulfilling meteorological requirements. While the regional data requirements are not yet fully documented, it is considered that the requirements will include at least the most frequent level 1 imagery data from geostationary satellites relevant to the region.

ET-SUP-4 has requested that WMO Secretariat raise the attention of CGMS-36 to the significant value of the EUMETCast-Americas service to South American NMHSs and encourage agencies to find a way to ensure the associated requirements continue to be met in the future.

3.2 EUMETCast Americas

It is recalled that EUMETCast Americas currently contains a wide range of products which are listed on the EUMETSAT web site at URL: http://www.eumetsat.int/products/indexer_list.html when selecting "EUMETCast Americas" as the dissemination means.

This list includes a number of meteorological and environmental products generated by EUMETSAT and other organizations (such as CMA, NASA, NOAA, etc) as well as level-1 satellite imagery from two sources:

Meteosat/SEVIRI imagery with a 15-minute repeat cycle;
GOES-East and GOES-West imagery with a three-hour repeat cycle.

While South American users greatly appreciate the opportunity of accessing a wide range of products from different organizations through a single and inexpensive receiving system, they also express concern that the long-term availability of such a system is not guaranteed and that its dissemination contents does not currently include frequent imagery from GOES.

3.3 GOES-10

GOES-10, located at 60° West, provides excellent coverage of the South American continent with a 15-minute repeat cycle. The GOES-10 imagery data available through direct broadcast is important to South American users; however, there could be wider use and an even greater benefit if GOES-10 imagery was also available either through EUMETCast-Americas or GEONetcast Americas.

Besides the convenience of accessing multiple data through a single system (one-stop-shop) and with limited user investment, it is recalled that the use of a DVB-S dissemination service is particularly helpful in the case of an aging geostationary satellite with increasing orbit inclination. Since the receiving antenna is pointed at the telecommunication spacecraft, it does not require any re-pointing, regardless of the status and inclination of each particular meteorological satellite that generates the data.

3.4 Recommendation

WMO strongly encourages NOAA and EUMETSAT to find a way to ensure that the requirement for the provision of frequent geostationary imagery and other meteorological products through a DVB-S service can be met in the future for South America on a sustainable basis, in accordance with CGMS Action 34.24.

4 OTHER DEVELOPMENTS

With reference to CGMS Action 35.32 recalled above, it is underlined that a letter was sent out by WMO in October 2008 to all WMO Members as well as ECMWF and EUMETSAT in order to initiate the identification of candidate components of the WMO Information System: Global Information Service Centres (GISC), Data Collection and Product Centres (DCPC) and National Centres (NC). The letter recalls that functional requirements are available at <http://www.wmo.int/pages/prog/www/WIS-Web/RefDocuments.html>. It is anticipated that satellite operators will express an intention to apply as DCPC for the provision of satellite data and products in the framework of IGDDS and WIS.

Two other activities of direct relevance to IGDDS are reported in dedicated working papers of CGMS-36:

A report on the Task Force on Satellite Data Codes is in WMO-WP-08;
An update on the Regional ATOVS Retransmission Service (RARS) is in WMO-WP-09 and WMO-WP-11.

5 CONCLUSION

WMO greatly appreciates the significant progress made towards the implementation of robust and efficient regional dissemination means addressing global needs in an integrated way. All CGMS operators are invited to actively pursue this implementation in accordance with the IGDDS functional requirements in the context of the WMO Information System.

NOAA and EUMETSAT are invited to take steps in consultation with WMO in order to ensure, in particular, the availability of a sustainable DVB-S coverage of South America with meteorological satellite data.