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INTER-PROGRAMME COORDINATION TEAM ON SPACE WEATHER

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UPDATE ON THE WMO INFORMATION SYSTEM

(Submitted by Secretariat)

Summary and Purpose of Document

WMO Information System became operational in January 2012. This paper summarises recent developments that are of relevance to ICTSW

ACTION PROPOSED

The Inter-Programme Coordination Team is invited to note that WIS is now operational and consider how it can be used to further the development of Space Weather activities and services.

UPDATE ON THE WMO INFORMATION SYSTEM

1 INTRODUCTION

The WMO Information System (WIS) encompasses systems and procedures used by WMO Members to collect and share information. It incorporates the WMO World Weather Watch Global Telecommunications System (GTS), opening the GTS to all WMO programmes that wish to use this highly reliable private telecommunication system, while allowing Members to make better use of alternative communication systems, in particular the Internet. WIS also provides Discovery, Access and Retrieval (DAR) services to users of WMO data, products and services. A key to WIS has been the provision of Discovery Metadata describing data, product and services available from contributors

2 PROGRESS ON WIS IMPLEMENTATION

WIS implementation is divided into two main areas. Part A is the continued evolution of the GTS and Part B is the implementation of the new functionality of WIS.

Part A has progressed with the completion of the Main Telecommunication Network (MTN) being migrated into the MPLS network that supports WMO Region VI (RMDCN) and now connecting all Global Information System Centres (GISCs) as the WIS Core Network. The GTS has also established methods for better use of the Internet in places such as South America where they have established MPLS type connectivity between GTS centres using Virtual Private Networks (VPN) over the Internet. Part A of WIS included the continued development of the Integrated Global Data Distribution System (IGDDS) for satellite data and products, as reported in Section 3 below.

Part B of WIS implementation has also progressed with three GISCs (Beijing, Offenbach and Tokyo) beginning formal operations in January 2012. GISCs Exeter and Toulouse are now also operational and GISCs Melbourne and Seoul have passed the CBS pre-operational audit and plan to be operational in first quarter 2013. Operational GISCs can be accessed from <http://www.wmo.int/giscs>. The new functionality of WIS was further progressed with the formal linking between WIS and the Global Earth Observation System of Systems (GEOSS) going operational in July 2012. See http://www.wmo.int/pages/prog/www/WIS/wiswiki/tiki-view_blog_post.php?postId=65.

The fifteenth session of the WMO Commission of Basic Systems (CBS 15), in September 2012, identified the first 223 National Centres (NCs) to be in WIS, bringing the total number of WIS centres to 358. These NCs will be presented to WMO Executive Council in June 2013 and those that are officially designated as NCs will be added to the Manual on the WMO Information System. CBS also reviewed the list of Principal GISCs for each NC in preparation for publication in the Manual on the WIS, but still has to take into consideration the input from WMO Regional Associations II and VI before finalising the list for consideration by Executive Council 65. The current functionality of WIS and designated centres are available in the Manual on the WMO Information System (WMO-No. 1060) available online. A full list of centres identified in WIS, including the NCs identified by CBS is also online (http://www.wmo.int/pages/prog/www/WIS/centres/index_en.php).

CBS made good progress on documentation and guidelines for the creation and management of WIS discovery metadata for inclusion in the Manual on WIS (WMO No. 1060) and the Guide to WIS (WMO No. 1061). These will be published in 2013, meanwhile the proposed new material will be available in the Report on CBS 15 online at http://www.wmo.int/pages/governance/tc/tc_reports_en.html.

CBS-15 endorsed version 1.3 of the WMO Core Profile of the ISO 19115 metadata standard; this updated the earlier version to include items that are essential for the operation of the WIS. The Inter-Programme Expert Team responsible for maintaining the metadata standard (now called IPET-MDRD) agreed in June 2012 that the next major release of the WMO Core Profile will address the opportunities offered by ISO19115-1 (expected to be approved in 2014) and ISO19115-2:2009; major releases are those that require changes to software if the metadata records are to be interpreted correctly. ISO 19115-2:2009 was designed for describing the derivation of gridded and imagery information, including that from satellites, and is of relevance to the work of ICTSW.

3 CONCLUSION: SUGGESTED ACTIONS/RECOMMENDATIONS

WIS is now able to offer benefits to providers of information related to meteorology, climate and water, including space weather, through facilitating access by a wider group of users, including the GEOSS community. ICTSW members are encouraged to continue the preparatory work for participating in the WIS, including registering of their centres in WIS and provision of discovery metadata to WIS GISCs.