# Final Report ET-GDDP 4

1. The following document is a report of the fourth session of theET-GDDP provided for background to

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| WORLD METEOROLOGICAL ORGANIZATION  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  CBS ET-GDDP  (EXPERT TEAM ON GISC-DCPC DEMONSTRATION PROCESS)  Fourth SESSION  Boulder, USA, 28 November -1 December 2011 |  | ET-GDDP-4/Report  (05.III.2012)  \_\_\_\_\_\_\_\_\_\_\_  Final Report  ENGLISH only |

**Final Report**

# Opening of the meeting

1. Dr. Don Middleton, head of Scientific Computing Division's (SCD) Visualization and Enabling Technologies Section, opened the fourth session of the ET-GDDP at 9am Tuesday 29 November 2012 at NCAR, Boulder, Colorado, USA. He welcomed all participants to NCAR and wished the group a successful meeting.
2. The chair, Mr. Matteo Dell’Aqua, thanked Dr. Middleton for NCAR’s hosting of the meeting and welcomed all participants. He presented the key objectives of the meeting as follows:
   1. Review list of GISCs to be audited before EC 64 and start assessment;
   2. Review list of DCPCs to be assessed (internal and external to GISCs);
   3. Review assessment process, demonstration test and evaluation matrix based on experience;
   4. Develop a work plan to ensure meeting Cg XVI’s requirements for EC 64;
   5. Start defining the process for WIS demonstration:
      1. How to ensure that a new centre coming online will not break the system;
      2. How to ensure completeness and uniqueness of Catalogue;
   6. Start investigating mechanisms for regular service review for all GISCs and define control procedure
   7. Preparation for CBS 2012.

He further noted that the meeting would need to consider some questions passed to it from other groups on the WMO interim metadata management system.

1. The meeting agreed on an agenda (see Appendix 1) and working arrangements, including the need for parallel working groups to assess the online questionnaires for GISCs and DCPCs. A list of documents is provided in Appendix 2 and a list of participants is in Appendix 3. Links to the documents are available on the ET-GDDP meeting web page at <http://www.wmo.int/pages/prog/www/ISS/Meetings/ET-GDDP-Boulder2011/DocPlan.html>.

**Update since report of 3rd session of ET-GDDP, including outcomes of CBS and Congress**

1. The chair provided an introduction of the work done to date. He noted ET-GDDP had met three times previously (Toulouse, March 2009; Beijing, September 2009 and Geneva, May 2010) and had successfully worked to a very demanding schedule. Achievements had included the establishment of the demonstration process, the online interactive submission system, and the successful review of 5 GISCs and 37 DCPCs. On site GISC audits had been completed in China, Germany and Japan prior to CBS Ext(10) and in France and the UK before EC-63 (2011).
2. The secretariat briefed the meeting on the outcomes of Congress XVI (ET-GDDP-4-Document 2). He noted that Congress had approved all the recommendations from CBS-Ext(10) by adopting Resolution 4 (Cg-XVI) – Report of the extraordinary session (2010) of the Commission for Basic Systems relevant to Technical Regulations concerning the Global Telecommunication System, data management and the WMO Information System.
3. The secretariat highlighted that Congress had accepted all the candidate GISCs and DCPCs identified by CBS and designated them as WIS centres to be listed in the manual on WIS. Congress also recognized the importance of the work of ET-GDDP by conditionally designating centres subject to demonstration of meeting the pre-operational compliance requirements of CBS. Any centre that has not demonstrated pre‑operational compliance by EC-64 will have its conditional designation removed. Congress further emphasized that any centres that have not been designated by EC-64 and who want to be recognized as a DCPC or GISC, must demonstrate that they meet the pre-operational compliance requirements and be endorsed by the CBS before the Executive Council decides whether or not to designate that centre in the requested role. This decision can now be referred to as Resolution 51 (Cg-XVI).
4. ET-GDDP-4-Document 1 contains the list of GISCs and DCPCs, as defined in Resolution 51 (Cg-XVI), mapped to the appropriate format for Appendix C of the Manual on WIS. These will be published early in 2012 with the first official release of the Manual on WIS (WMO No. 1060). The meeting noted that Congress indicated that after this initial designation of WIS centres, further designation will be performed by EC through the review of the Manual on WIS.
5. The meeting was concerned with the high number of centres conditionally designated by Congress that will expect to be reviewed before EC-64 which includes 10 GISCs and 50 DCPCs. Completing this in time for EC-64 was not going to be possible, even if all the centres were ready early so that ET-GDDP could optimize the scheduling of reviews and audits. In particular, the meeting noted that although several centres were likely to be using OpenWIS as a solution, it is unlikely these would be ready for review in the first quarter of 2012. This further compresses the ET-GDDP workload into the second quarter. It recognized that one possible strategy for reviewing the DCPCs was to delegate this task to the principal GISC, certainly in the longer term. This matter is addressed further under agenda items 7 and 8.
6. Participants noted some minor editorials in ET-GDDP-4-Document 1. In particular, South Africa should have an asterisks, as should the RTHs in Brazil and Iran. The meeting requested the secretariat to correct before publishing if possible. (Action: David Thomas)
7. In considering the decision of Congress on accepting the CBS report, the meeting reviewed the latest status of the RMDCN renewal project. It received a brief presentation from the chair describing the ITT process presently under way and noted that ECMWF has established a tender evaluation team and, in collaboration with the secretariat, will be holding a two day workshop in mid May for all RMDCN connected and interested Members. It further noted that the RMDCN now formally includes the MTN of the GTS and is the core network of WIS connecting all GISCs.
8. The secretariat advised that, in addition to the RMDCN workshop, several important meetings will be coming up in the first half of 2012. These include the RMDCN TT/ROC joint meeting immediately adjacent to the RMDCN workshop, an ET-WISC meeting in March, an ET-CTS meeting in April/May, and an ET-OI in May and ICT-ISS in June. The meeting noted that the run of meetings in preparation for CBS in 2012 will further affect the availability of ET-GDDP members to undertake audits and reviews of GISCs and DCPCs.

**Feedback and lessons learned from GISC audit and DCPC evaluation teams.**

1. The chair led a round table review of the audits and demonstrations for GISCs and DCPCs, starting with a review of the audit report. Auditors should only visit the site once they are certain that all is ready onsite. Auditors are given two days onsite and are required to prepare a two part report. The first part is the global report, which is available to the President of CBS, the WIS secretariat and to the ET-GDDP. The second part is a detailed and confidential report that is only provided to centre being audited, with a copy to the President of CBS, the Director of WIS and to the Chair of ET-GDDP. A draft auditor report template is available online at <http://wis.wmo.int/doc=917>. The meeting also reviewed and consolidated the auditor checklist. This checklist is to be used by auditors to ensure they address all issues and to guide auditors to consider and report on the same depth of issues.
2. The meeting found that for GISC audits:
   1. Ensuring the centre’s and auditor’s expectations are aligned early in the process is extremely important;
   2. Centres need to be very well prepared for audit, with extensive pre-visit interaction with auditors;
   3. Be prepared for two very difficult days with too much to do;
   4. Complete as much as possible before site visit, including test cases;
   5. Avoid long introductions by candidates during site visit;
   6. Visit should include time for interviews with operational staff as well as with managers;
   7. Centre and auditors should make better use of online form.
3. The meeting found that for DCPC reviews:
   1. The length of time required for the review can vary significantly between sites.
   2. Test cases alone, can be a days work (Expect 5-6 hours to work through, if no problems)
   3. The review/demonstration should not be used as a test case for the system. This should be completed internally by the centre.
   4. Test should not rely on ET-GDDP tester having fixed IP address.
   5. Because of the ET-GDDP regional separation policy of tester from centre, centres should be adaptable to working across disparate time zones and facilitate quick responses.
   6. Demonstration guidelines should be continuously improved. Feedback from testers and centres should be used to improve the guidelines to make testing more effective and streamlined.

**Review of Candidate GISCs**

1. The meeting divided into workgroups and reviewed the ET-GDDP online questionnaires for candidate GISCs; Brasilia, Casablanca, Tehran, Jeddah, Melbourne, Moscow, New Delhi, Pretoria, Seoul and Washington. ET-GDDP feedback was reviewed in plenary and entered into the ET-GDDP online form for consideration of the GISC candidates. The meeting requested the secretariat to advise the candidate GISCs that their online forms have been updated, and request candidate GISCs to follow up accordingly. (Action: David Thomas)

**Review of Candidate DCPCs**

1. The meeting divided into workgroups and reviewed the DCPC entries in the online questionnaires and provided feedback for the following 25 Members’ centres (number in brackets is the centre reference number): Belgium (119 ), Brazil (117), Canada (17), Czech Republic (99), Finland (16), Hong Kong, China (118), India (100), Italy (97, 98), Norway (10, 115), Republic of Korea (52, 53, 54), Rome (73), Russian Federation (84 - 86, 88, 90-92), Sweden (11, 82, 83). The meeting requested the secretariat to advise the candidate DCPCs that their online forms have been updated, and request the DCPCs to follow up accordingly. (Action: David Thomas)

**Feedback from Audited GISCs**

1. Presentations were provided by Mr. Siegfried Fechner (GISC Offenbach), Mr. Hiroyuki Ichijo (GISC Tokyo) and Ms Xiang Li (GISC Beijing) reporting on their experiences in being audited. All reported that the GISC audit process had been very strenuous, and had identified issues for them to address. In this way, the audit report form is seen as a very useful aid for infrastructure developers to encourage management support that allowed the GISC implementers to address any weaknesses or opportunities identified during the audit process. The meeting noted that many of the improvements to the audit guidelines, checklist and to the audit report form addressed by the Group based on feedback from the auditors had already improved some of the workload issues highlighted in the GISC feedback presentations.
2. Of special interest to the participants was the message that the GISC audits had been very helpful in educating their organization on WIS. Also the meeting was pleased to note Japan’s experience that national uptake of WIS has been very successful. This is consistent with the aim of WIS that implementing WIS functionality is as much of a national benefit as a contribution to the international community. The meeting encouraged Japan to share this message with other centres preparing to offer a GISC and who need further evidence of national benefits that flow from their investment in WIS.
3. The meeting noted that both Japan and Germany were serving national metadata in their national language as well as the mandatory English. This highlighted one of the essential features of the ISO19115 metadata standard in that it could allow nations to better serve their national users, while maintaining compliance with WIS. The meeting agreed this achievement should be reported to the IPET-MDI and ET-WISC, and asking them to address what should be the procedure if a WIS centre wished to provide their own translations of other nations’ metadata. (Action: David Thomas) Should the translated metadata be shared through WIS, and how should the governance framework operate between translator and the owner of the original metadata?

**Review of assessment and evaluation matrix**

1. The meeting utilized the information from the previous discussions to review the assessment and evaluation matrix. Mr Ichijo consolidated the feedback, compressed the list of items and updated the GISC audit checklist. The meeting requested the secretariat to upload this checklist to the ET-GDDP restricted working area on the wiki[[1]](#footnote-1) alongside the updated GISC audit template. (Action: Hiroyuki Ichijo and David Thomas)
2. The meeting reviewed the test cases and guidance. It requested Markus Heene to provide guidelines for the running of WIS Demonstration Test Case 2, especially related to “add and delete metadata” elements. (Action: Siegfried Fechner). There was also concern about WIS Demonstration Test Case 3. It was decided that it was sufficient to ensure that GISC operators were appropriately alerted and acted on cases where a new product arrives before the metadata is registered. Further discussion took place about providing a worksheet for user acceptance testing. It was agreed for Lothar Wolf to provide a version based on the EUMETSAT acceptance testing document and to update the guidelines accordingly. (Action: Lothar Wolf)
3. Ms Xiang Li led a discussion on metadata validation for DCPCs by GISCs. The meeting agreed that GISCs only have to validate the metadata that is being published to the GISC. The centre may continue to use its own metadata standards for its own users as is the case of EUMETSAT.

**Development of a work plan to ensure meeting Cg-XVI’s requirements for EC 64**

1. The meeting reviewed the list of GISCs and DCPCs not yet submitted to ET-GDDP. It agreed to the following for DCPC reviews:
   1. Centres will have to submit the online forms as per the standard operating procedures agreed to by CBS and Congress. ET-GDDP will monitor the online database and review off-line as has been the practice to date.
   2. For DCPCs not internal to a GISC, ET-GDDP will task the Principal GISC associated with the DCPC to undertake the testing. If the Principal GISC is not operational, the ET-GDDP team will allocate someone to review the DCPC.
   3. For DCPCs internal to a GISC, the DCPC review will be picked up as a part of the GISC audit and tested by the GISC when ready.
   4. The meeting noted that as ICG-WIS will cease to be from January 2012, subject to confirmation from the Chair of ICT-ISS, the secretariat will liaise with ICT-ISS to carry over the authorization and notification roles of ICG-WIS subgroup who reviewed candidate nominations prior to ET-GDDP acting on them, pending further decisions from CBS on how the ICG-WIS role will be replaced.
   5. Noting that the British Antarctic Survey has recently been nominated by the UK as a DCPC, the meeting agreed that GISC Exeter will review the compliance of the BAS centre to WIS and report back to the ET-GDDP accordingly. (Action: Matteo Dell’Aqua to liaise with Chris Little)
2. The meeting reviewed the GISC audit timetable, noting that no centres are going to be ready before March 2012. The chair will liaise with the secretariat, GISCs and relevant audit teams in the first quarter of 2012 to arrange. (Action: Matteo Dell’Aqua and David Thomas)

**Preparation for CBS**

1. The meeting noted that CBS was likely to be in Indonesia around September 2012. The major concerns for preparation for CBS are to address the issues of the Review Process for WIS centres. It noted that CBS-TECO will be on Severe Weather Demonstration Projects and suggested that it would be beneficial if one of the operational GISCs featured in this TECO.
2. There was much discussion as to whether the service review process should be cyclic (e.g. once every 4 or 8 years) or event driven (e.g. WIS monitoring detects an underperforming centre, or complaints are received by CBS about a centre). The meeting agreed that a cyclic review would fit better WIS requirement as it is the case for quality assurance certification. Event driven review would not give on a long run a global view of the performance of WIS. A control procedure should be defined and proposed to CBS. The meeting added that a list should be created of items or elements that need to be monitored, including an indication of frequency if appropriate. Relevant expert teams (ET-CTS, IPET-MDI, IPET-DRC, etc) could provide metrics relevant to their areas for ET-OI and ET-WISC to establish comprehensive performance monitoring metrics. The results of these consultations should be passed to ICT-ISS for consideration. (Action: Matteo Dell’Aqua)
3. Another issue to be addressed is that of GISC backup requirements. The meeting noted that all GISCs audited didn’t have a real backup in place but stated their intention to set-up a backup with another GISC. All mentioned during the audit that they were in discussion with another GISC to define the backup process. At present, according to ICG-WIS, the main element of backup is the collection and distribution of information from an AMDCN and with other GISCs. The meeting agreed that backup functions of the GISC and procedures in place should be reviewed in the process of the regular Service Review
4. Given the priority and timelines provided by Cg-XVI to have all WIS centres operational by 2016, including those from all WMO Programmes, it is clear the role of the ET-GDDP will need to continue for the remainder of this Congress intersessional period. However, the decision of which group will undertake this task is one for CBS to make. In its considerations of the mandate for activities for ET-GDDP, ICT-ISS should consider other aspects such as quality assurance,the review process and the associated control procedure, and the processes for WIS acceptance ( completeness and uniqueness of the metadata catalogue, completeness of the Cache).

**Other business - WIMMS**

1. The chair led a discussion on the establishment of a WMO Interim Metadata Management Service (WIMMS) aimed at providing all Members with access to metadata management pending the availability of their associated GISC. ET-WISC had asked if ET-GDDP needed to audit WIMMS providers. The meeting agreed that such a service would be of benefit to Members but strongly recommended that WIMMS should only be provided by operational GISCs. The chair will respond to ET-WISC advising:
   1. WIMMS should only be provided by operational GISCs.
   2. If WIMMS was to come from an already audited GISC, then there would be no need to audit WIMMS centres.
   3. If the WIMMS centre was not an operating GISC, then the centre would need to demonstrate its WIS compliance as if it was a DCPC offering metadata management services.
2. The meeting further discussed the architecture of WIMMS in WIS, emphasizing that although WIMMS centres should provide their metadata to GISCs as a part of the GISC synchronization process, they should not try to emulate a GISC by harvesting metadata from other GISCs or maintaining copies of metadata from other GISCs.
3. The meeting suggested that the Service Level Agreement for WIMMS need only be non-critical in nature (i.e. The portal could be down for a day or so). Furthermore, it questioned how long the “interim” component of the WIMMS will be. It agreed that the chair would respond to ET-WISC passing on the ET-GDDP advice. (Action: Matteo Dell’ Aqua). It also noted that there will be an RA II WIS meeting the following week in Beijing attended by D/WIS and recommended that a side meeting on WIMMS be held there. (Action: David Thomas and Xiang Li).

**Vis Lab Demo**

1. NCAR provided a demonstration of the visualization lab activities including spectacular 3D visualization of meteorological phenomena. The demonstration was appreciated by all participants.

**Next meeting**

1. The meeting noted the need of another formal meeting to work on the regular service review and its control procedure. However considering the workload and timeframe it was agreed that there was no need for a formal meeting in 2012, although the chair may call the occasional Webex teleconferences when required. Post 2012 will be necessary and depend on the outcomes and decisions of CBS XV in September 2012.

**Closure of meeting**

1. The chair thanked Dr Middleton and the Vis Lab staff for their excellent support during the meeting, and asked Dr Middleton to share our appreciation with those who were unable to be at the last session because of the heavy snow. He especially thanked Mr. Al Kellie, Director of the Scientific Computing Division, for his support to WIS and in hosting this meeting. He wished SCD all the best for the opening of their new centre and wished all participants a safe return home.

**Appendix 1**

**Agenda**

1. Update since report of 3rd session of ET-GDDP, including outcomes of CBS and Congress
2. Feedback and lessons learned from GISC audit and DCPC evaluation Teams
3. Review of list of GISCs to be Audited before Executive Council
4. Review of list of DCPCs to be reviewed (Internal and external to GISCs)
5. Feedback from Audited GISCs
6. Review of assessment and evaluation matrix based on experience
7. Development of a work plan to ensure meeting Cg XVIs requirements for EC 64
8. Preparation for CBS 2012
9. Other Business
10. Next Meeting

**Appendix 2**

**List of documents**

* Inf(1) – Information for Participants
* Inf(2) – Document Plan and Agenda
* Inf(4) – ET-GDDP wiki site (ET-GDDP access only)
* Doc 01 – Updates for WMO No:1060. Manual on WIS, Appendix C.
* Doc 02 – Cg-XVI/PINK 11.4, WMO Information System, Report to Plenary on Item 11.4
* ET-GDDP online database – Interactive questionnaires and submissions from candidate GISCs and DCPCs (Registered user access only)

**Appendix 3**

**List of participants**

LIST OF PARTICIPANTS

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## References

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1. <http://www.wmo.int/pages/prog/www/WIS/wiswiki/tiki-index.php?page=ET-GDDP> [↑](#footnote-ref-1)