

Introduction to Backup Concept

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Agenda

- Operation coordination
- Technical support
- Capacity-building support
- GISC back-up procedures
- Backup Services
- User Information
- Networks
- Procedures for changing principal GISC
- Guidelines for migrating WIS discovery metadata records from on GISC to another GISC
- Procedures on rolling review of WIS centres
- Example

- Reference
- [CBS 2014](#)

Operation coordination

- 6.2.2 Each GISC should organize regular meetings with the WIS National and WIS Centre Focal Points for those centres belonging to its AMDCN to coordinate the implementation, operation and improvement of the AMDCN to ensure it meets WIS requirements.
- 6.2.3 Each GISC should maintain business continuity plans and handover arrangements to ensure continued service to the NCs and DCPCs in its area of responsibility, especially for the collection and distribution of data and products.

Technical support

- 6.2.4 Each GISC should provide technical consultation on implementing and improving WIS functionality, such as search and management of metadata, to the centres in its area of responsibility.
- 6.2.5 Each GISC should support the centres in its area of responsibility in creating and maintaining WIS discovery metadata, in adopting recommended data formats as well as in monitoring activities.

Capacity-building support

- 6.2.6 Each GISC should develop and provide training courses with reference to the WIS Competencies and the WIS Training and Learning Guide to meet the capacity-development requirements of the centres in its area of responsibility.

GISC back-up procedures

- 6.3.1 Paragraph 3.5.9.2 of WMO No. 1060 Manual on WIS requires GISCs to maintain arrangements with one or more back-up GISCs that include, as a minimum, the collection and dissemination of information to/from its AMDCN to be taken up by another GISC in case of an incapacitating system failure.

Note: Responsibilities of the backup GISC are limited to those centres allocated to it in the backup agreement between the GISC and its backup GISC.

Backup Services

- 6.3.2 Data collection and distribution must continue without interruption to and from centres in the GISC area being backed up. Where a centre's routine receipt of data is through subscription (e.g. GTS push), the backup GISC must have a current list of data to be sent to each centre or provide a place for the centres to come and get the data (e.g. GISC Cache).
- 6.3.3 Centres may be unable to change their GTS subscriptions during a period of back up operation, and any changes to subscriptions might not be maintained when normal operations resume.
- 6.3.4 Changes to metadata will not be possible during a back-up period
- 6.3.5 Any ad hoc changes made during a back-up period may need to be redone after return to normal operations.

User Information

- 6.3.6 If there is a need to exchange user information between GISCs in support of back-up, proper security measures should be taken based on the agreement on the two GISCs. However, the centres should ensure that the backup GISC has sufficient information for sending and collecting data from centres being supported during a back-up period.
- 6.3.7 Ad hoc changes to subscriptions, including additions or deletions of subscribers should be avoided while in backup mode. Any ad hoc changes made during a backup period may need to be redone after return to normal operations.

Networks

- 6.3.8 GISCs need to ensure network connectivity to centres in the AMDCN of the GISC it is backing up. This may be through dedicated links, such as GTS, or over the Internet. Such connectivity should be in line with the Guide to IT Security (WMO No 1115) and Guide on VPN via the Internet (WMO No 1116) as applicable.

Procedures for changing principal GISC

- 6.4.1 The principal GISC for each centre is listed in Appendix B of WMO No. 1060 Manual on WIS. The recommended procedure for NCs and DCPCs changing their principal GISC is provided in the Annex to this Paragraph (See Appendix A).
- 6.4.2 Once notified that the new principal GISC is ready, the centre shall start using the WIS services of the new principal GISC, in particular the service of uploading and managing the WIS discovery metadata for its data and products.

Guidelines for migrating WIS discovery metadata records from one GISC to another GISC

- 6.5.1 A side effect of Section 4.10 of WMO No. 1060 Manual on WIS that defines how GISCs should exchange metadata is that any NC or DCPC can upload its metadata records only to its principal GISC. Not applying this rule will lead unnecessary duplication of WIS discovery metadata.

The annex to this paragraph (see Appendix A) describes the agreed procedures that a centre and affected GISCs should follow in the cases of a centre changing its principal GISC.

- 6.5.2 The principles defined in the Annex to paragraph 6.5.1 can also apply to a GISC providing temporary back-up metadata management services to a centre's principal GISC.

6.5.1 / Annex 1 - Guidelines for migrating metadata records from one GISC to another GISC

- 1. Scenario and use case
- 1.1 Consider the migration of metadata between two GISCs: GISC A and GISC B. GISC B is becoming newly operational and starting metadata management for National Centre X as its principal GISC. Accordingly, GISC A, which has been providing the WIS Interim Metadata Management Service (WIMMS) for National Centre X, is ending the service. Practically, a set of metadata records owned by National Centre X needs to be moved from the OAI set that is provided by GISC A (labelled in what follows as WIS-GISC-A) to that of provided by GISC B (WIS-GISC-B).
- 2. Operational guidelines
- 2.1. Give notice to other GISCs
- GISC A and B jointly give one-week prior notice to other operational GISCs that they will transfer the metadata management from GISC A to B, with the list of location identifiers CCCC, in case of metadata records that are associated with GTS messages. This notification is necessary because other GISCs need to make configuration changes so that each CCCC belongs to specific OAI sets, before they start harvesting new records.

6.5.1 / Annex 1 - Guidelines for migrating metadata records from one GISC to another GISC

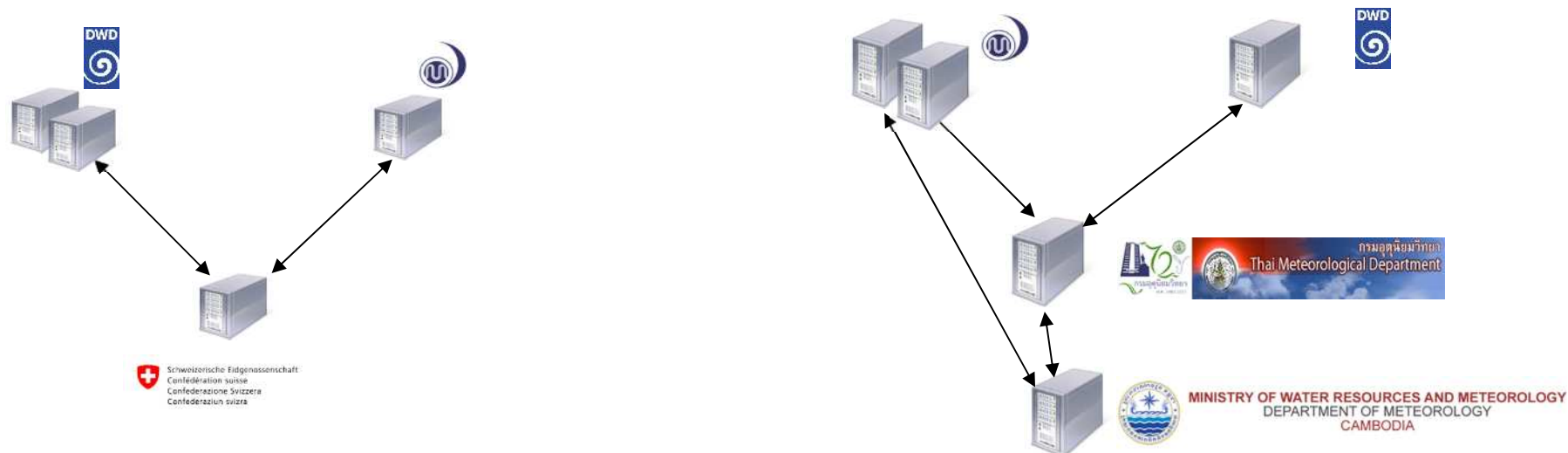
- 2.2. Delete and add records at GISC A and B
- A) GISC A - delete records from WIS-GISC-A
- This should be done using the “deleted records” procedures in OAI-PMH, not the simple deletion of records from the database, so that harvesters of other GISCs can harvest the deletion information through the ordinary incremental harvesting. The specifications for deleted records are described in section 2.5.1 of The Open Archives Initiative Protocol for Metadata Harvesting (<http://wis.wmo.int/oaiprotocol>).
- In the case that GISC A needs to delete these records completely from its database, GISC A must only do so after it makes sure that other GISCs have completed harvesting the deletion.
- B) GISC B - add records to WIS-GISC-B set
- This should be done with an accurate datestamp, which allows harvesters of other GISCs to gain the added records through the ordinary incremental harvesting.
- 2.3. Track harvesting by other GISC
- GISC A and B make sure that other GISCs harvest the change correctly, and if not they need to give notice and ask for manual adjustments.
- 3. References OAI metadata harvesting protocol: <http://wis.wmo.int/oaiprotocol>

Procedure on rolling review of WIS centres

- 6.6.1 Sections 2.2.4 and 2.3.4 of WMO No. 1060 Manual on WIS define how GISCs and DCPCs are required to demonstrate to CBS their capability to provide WIS services in compliance with the GISC or DCPC functions and responsibilities.
- 6.6.2 CBS, recognizing that for WIS to remain fully functional, requires regular reviews of each NC, DCPC and GISC ensuring their on-going compliance with the Manual on WIS. Recommended practices for this rolling review process are provided in the Annex to this paragraph (see Appendix A).

Summary

- Idea/Requirement: Continued services to the NCs and DCPCs in case of an outage
- In particular for the collection and distribution of data and products
- In a backup case not everything is possible:
 - 6.3. 3 Centres may be unable to change their GTS subscriptions during a period of back up operation, and any changes to subscriptions might not be maintained when normal operations resume.
 - 6.3.4 Changes to metadata will not be possible during a back-up period
 - 6.3.5 Any ad hoc changes made during a back-up period may need to be redone after return to normal operations.



Q&A