

*Report on Activities of the Commission for Hydrology's
Quality Management System Working Group*

Prepared by

CHy QMS Working Group:

Ted Yuzyk (Canada)
Jan Kubat (Czech Republic)
John Fenwick (New Zealand)
Robert Mason (United States)

Background

The Commission for Hydrology (CHy) at its Thirteenth and Fourteenth Sessions made advancing the implementation of a QMS by National Hydrological Services (NHSs) one of their key priorities. Jean-Francois Cantin was assigned the lead for the CHy Advisory Working Group for this particular priority. Under the direction and guidance of Mr. Cantin and Dr. Paul Pilon of the World Meteorological Organization (WMO) the CHy QMS Working Group was established to address the work plans that had been developed by the CHy Advisory Working Group.

The small working group, formed in the Fall of 2015, comprised the following members:

- Mr. Ted Yuzyk (Canada)
- Mr. Jan Kubat (Czech Republic)
- Mr. John Fenwick (New Zealand)
- Mr. Robert Mason (United States)

Working Group Tasks

The working group was assigned the following five tasks:

1. Develop and distribute a questionnaire to the NHSs to determine the status of QMS implementation in their respective agencies.
2. Compile and assess the responses and provide WMO with an overview of the state of QMS implementation globally.
3. Undertake a number of case studies to show how NHSs have implemented a QMS in their organization and make the QMS documentation readily available for other NHSs.
4. Develop a QMS checklist for NHSs to easily follow that focusses on implementing an ISO 9001 QMS.
5. Provide WMO with recommendations on how to move QMS implementation forward in the NHSs.

Deliverables (identified in bold font)

A QMS *questionnaire* was developed and distributed to 124 NHSs in January 2016. By the end of February 2016, after one extension, the working group had received a total of 44 responses. The responses were compiled and the information compiled in one *data base*.

The working group assessed all the input and produced a short report entitled, “*State of Quality Management System Implementation in the National Hydrological Services*” based on this limited data set. The report also provided recommendations on actions that can be taken by WMO to move QMS implementation forward in the NHSs. These recommendations are captured at the end of this activities report.

Four *case studies* were produced:

- Yuzyk, T. R., Thomson, C., Cantin, J-F., (2016). *Case Study on the Development of Canada’s National Hydrological Service’s Quality Management System. (ISO certified)*
- Kabat, J., (2016). *Case Study on Quality Management System (QMS) in the Czech Hydrological Service. (ISO certified)*
- Fenwick, J., (2016). *Case Study Development of a Quality Management System for the Hydrological Service of the National Water and Atmospheric Research Ltd. (New Zealand) (ISO certified)*
- Lipscomb, S., (2016) *A Case Study on the Quality Management System for the U.S. Geological Survey’s National Streamgaging Program. (Formal Internal QMS)*

The working group prepared a QMS checklist for NHSs to easily follow that focusses on implementing an ISO 9001 QMS. This checklist, along with guidance on undertaking each of the steps is available in the document entitled, “*Checklist for Developing a Quality Management System for a National Hydrological Service*”.

Finally, all of these documents and products will be made available on the WMO website under a CHy tab that focuses on Quality Management Systems.

Recommendations on Moving QMS Implementation Forward in the NHSs

1. It may be worthwhile to provide an orientation/training session on QMS development at the next Session of CHy, to be held in December 2016, to more effectively engage the NHSs in this priority.
2. Identifying one NHS to champion QMS in each RA may help to build momentum and be cost-effective if any travel is involved. Building upon the NHSs that have indicated that they are prepared to provide advice and assistance on development of QMS could be the first step.
3. It may prove more effective to structure advancing QMS along other common UN languages, such as French, Spanish, etc., so that the communications and sharing of documents will be more meaningful. Undertaking additional case studies and compiling QMS documentation in these other major languages to supplement the work that has been done by CHy to date will certainly help advance QMS development globally.

4. NHSs that have a mature QMS in place should be encouraged to provide opportunities to allow other NHSs to participate in one their internal reviews/audits and observe and learn firsthand what is involved in QMS implementation.