

Group 1 – tasks supporting the RA-VI Hydrometry Task Team: Harmonization of methodologies, quality control and access to data.

Introduction

The RA-VI Hydrology Forum 2012 highlighted significant successes made by NHSs in recent years in both improvement of hydrometric networks and enhanced national and international cooperation. However, the Forum also identified ongoing difficulties in relation to hydrological data management and a need to develop optimal data standards and implement more efficient data acquisition, processing and dissemination. The need for improvements to data control, databases and development of rating curves were amongst a range of issues highlighted. Above all, the Forum identified the potential benefits of NHSs tackling such issues through increasing international cooperation at a practical level to ensure exchange good practice, provide mutual technical assistance and develop of common methods/operational solutions.

A number of existing international initiatives are already developing outputs which will assist NHSs in improving their operations in the above mentioned areas. The RA-VI Hydrology Forum should not duplicate these efforts. The ongoing development of operational hydrology guidance/hydrometric standards by WMO and international standards bodies (ISO, CEN) provide a technical basis for improving hydrometric monitoring and data management. In relation to access to data, current work by the joint OGC (Open Geospatial Consortium)/WMO Hydrology Domain Working Group is providing data standards to improve information exchange. However, the demand identified by NHSs for further practical assistance/collaboration in these areas suggests a gap may exist between the development of such standards/guidance and their practical implementation in an operational setting. The RA-VI Hydrology Forum provides an opportunity to address this.

This area of the Forum's proposed activities links well with items outlined in the CHy Programme of Work for 2013-16. In particular activities under Theme Area 1: Quality Management Framework – Hydrology (e.g. provision of background material to NHSs explaining why they should use standardised methods in their data collection; review of ISO and other standards used in hydrology with a view to joint ISO/WMO standards; provision of guidance material on the calculation of rating curves) and Theme Area 2: Data Operations and Management (e.g. monitor and report on new developments dealing with data management issues). As CHy and RA-VI Hydrology Forum work programmes are taken forward linkages should be explored to see how the Forum's activities can contribute to and aid implementation of CHy's expected outputs in these areas.

Objectives

This area of activity aims to strengthen networking amongst RA-VI NHSs in relation to exchange of methodologies for hydrological data management, processing and quality control. The proposed objectives are to:

- a) Assess NHSs requirements surrounding operational implementation of existing hydrometric data management standards/guidance and specific future areas for harmonization;
- b) Provide a means for sharing technical solutions to hydrometric data management problems and exchange of good practice.

The proposed activities outlined below will hopefully improve the operational take-up of the outputs of other harmonization work. However perhaps more importantly, improved communication between NHSs across RA-VI on practical operational hydrometry matters will provide a forum for sharing (and jointly developing) new ideas, methods and tools going forward and contribute to CHy Theme Areas 1 and 2.

Within the first two year RA-VI Hydrology Forum period this area of activity will concentrate on methodologies for hydrological data management and quality control. Progression in these areas will have an inherent impact on harmonising data access and should help provide the 'practical requirements' for current and future data exchange initiatives. However, it is expected that the RA-VI Hydrology Forum's main activities in relation to improving data sharing and simplifying data exchange will come through the dedicated area of work under Group II.

Tasks

- 1) Needs assessment of the practical issues surrounding; a) implementation within RA-VI NHSs of existing WMO guidelines/standards for hydrometric data processing, quality control and management and b) future operational needs in these areas (e.g. requirements for technical assistance, priority areas of knowledge exchange, possible sharing of tools). Conducted using NHS questionnaire. Written report. *Target delivery: September 2013.*
- 2) Based on the priority areas established in (1) establish online community forum for exchanging best practice idea and national level procedures. *Target delivery: Dec 2013.*

A status report from this area of activity will be presented to the next RA-VI Hydrology Forum, expected to be held in 2014. Depending upon the focus and format of the 2014 Forum, and demand from Member, a short workshop on hydrological data management & quality control methods/tools could be held to further promote the exchange of current practices.