

WMO/CIMO Perspective

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One of the purposes of WMO, as described in the WMO Convention, Part II, Article 2, is to facilitate worldwide cooperation in the establishment of networks of stations for the making of meteorological observations as well as hydrological and other geophysical observations related to meteorology, and to promote standardization of meteorological and related observations and to ensure the uniform publication of observations and statistics.

Eight technical commissions of the World Meteorological Organization were established by WMO Congress and their structure and Terms of Reference are described in Annex III to the General Regulation of WMO. The General Terms of Reference of technical commissions describe their responsibility for the development of international standards. Within the terms of responsibility and within the provisions of the General Regulations, each technical commission shall, among others, “Develop, for consideration by the Executive Council and Congress, proposed international standards for methods, procedures, techniques and practices in meteorology and operational hydrology including, in particular, the relevant parts of the Technical Regulations, guides and manuals”.

WMO Congress and the Executive Council adopt Regulatory Materials that define meteorological practices and procedures to be followed by Members. In this respect, the Technical Regulations of the World Meteorological Organization are determined by Congress in accordance with Article 8(d) of the Convention. Their purpose of is to (a) Facilitate co-operation in meteorology and hydrology between Members; (b) Meet, in the most effective manner, specific needs in the various fields of application of meteorology and operational hydrology in the international sphere; and (c) Ensure adequate uniformity and standardization in the practices and procedures employed in achieving (a) and (b) above. The WMO Technical Regulations (WMO-No. 49) is a mandatory publication and has four volumes and six annexes:

- (a) Volume I: General Meteorological Standards & Recommended Practices,
 - (b) Volume II: Meteorological Service for International Air navigation,
 - (c) Volume III: Hydrology,
 - (d) Volume IV: Quality Management (approved by EC-LXII following a proposal of Inter-Commission Task Team on WMO Quality Management Framework ICTT-QMF),
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- (a) Annex I: International Cloud Atlas (WMO-No. 407), Volume I - Manual on the observations of clouds and other meteors,
 - (b) Annex II: Manual on Codes (WMO-No. 306),
 - (c) Annex III: Manual on the Global Telecommunication System (WMO-No. 386),
 - (d) Annex IV: Manual on the Global Data-processing System (WMO-No.485),
 - (e) Annex V: Manual on the Global Observing System (WMO-No. 544),
 - (f) Annex VI: Manual on Marine Meteorological Services (WMO-No. 558).

While WMO Manuals describe standard practices and procedures, a number of WMO Guides have been developed to describe recommended practices and procedures. WMO has concluded cooperation agreements and working arrangements with international standardization bodies, such as International Standardization Organization (ISO) and International Committee for Weights and Measures (CIPM). The standardization effort of WMO has led to recognition of WMO as an International Standardization Body by ISO.

Details of CBS and CIMO standardization efforts are provided based on the above mandate as well as in the context of WMO high priority areas, such as the WMO Integrated Global Observing System and its effort to further standardize practices relevant to instrument and methods of observation, exchange of data and metadata, and end product quality.

Examples of standard practices and recommended procedure are presented with a view to guide possible improvement in quality of surface and upper-air observations in the Region II (Asia) with the emphasis on quality assurance and quality control of observational data. The role of regional bodies, such as the Regional Instrument Centres, in quality management is brought to the attention of participants and the Coordination Group of the RA II Pilot project to enhance the availability and quality management support for NMHSs in surface, climate and upper-air observations.

Several decision of the Fifteenth WMO Congress are also brought to the attention of participants of the Workshop, especially a request to NMSs to quality control on-site observations and to ensure the traceability of measurements to recognized world standards approved for the use of WMO Members.